PERMEABLE REACTIVE BARRIER EVALUATION REPORT FINAL

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

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CONTRACT NO. W912DY20D0073
TASK ORDER NO. W912DY22F0104

September 2024

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Glenville, New York

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Prepared for

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25 September 2024

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September 2024
FINAL

* EA Engineering, P.C. is affiliated with EA Engineering, Science, and Technology, Inc., PBC (EAEST, Inc. PBC) who does business as EA Science and Technology in the State of New York. EAEST, Inc. PBC is executing the task order on behalf of the EA-Wood Joint Venture.

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LIST OF ACRONYMS AND ABBREVIATIONS

ºC	Degrees Celsius
µg/L	Microgram(s) per liter
%	Percent
APP	Accident Prevention Plan
AWQS	Ambient Water Quality Standard
bgs	Below ground surface
CMQ/OE	Certified Manager of Quality/Operational Excellence
CSIA	Compound specific isotope analysis
CSM	Conceptual Site Model
CVOC	Chlorinated volatile organic compound
DCE	Dichloroethene
DO	Dissolved oxygen
DUSR	Data Usability Summary Report
EA	EA Engineering, P.C. and its affiliate EA Science and Technology
EPA	U.S. Environmental Protection Agency
ESS	Environmental sequence strategy
EWP	Evaluation Work Plan
ft	Foot (feet)
ft^2	Square foot (feet)
ft/day	Foot (feet) per day
ft/ft	Foot (feet) per foot
GSA	U.S. General Services Administration
IDW	Investigation-derived waste
K	Hydraulic conductivity
LARC	Lighter, Amphibious Resupply, Carrier
lb	Pound(s)
LTM	Long-term monitoring
mg/L	Milligram(s) per liter
mL/min	Milliliter(s) per minute
MNA	Monitored natural attenuation
mS/cm	MilliSiemen(s) per centimeter
mV	Millivolt(s)
No.	Number

LIST OF ACRONYMS AND ABBREVIATIONS *(continued)*

NTU	Nephelometric turbidity unit
NA	Not applicable/available
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
P.E.	Professional Engineer
P.G.	Professional Geologist
ppb	Part(s) per billion
PRB	Permeable reactive barrier
PVC	Polyvinyl chloride
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
ROD	Record of Decision
Site	Former Scotia Navy Depot
Stone	Stone Environmental, Inc.
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
UFP	Uniform Federal Policy
USACE	U.S. Army Corps of Engineers
VOC	Volatile organic compound
ZVI	Zero valent iron

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1. INTRODUCTION

1.1 PROJECT OBJECTIVE

1.1.1 The EA-Wood-2 MP Joint Venture (Contractor) was contracted by the U.S. Army Corps of Engineers (USACE) to perform an evaluation of the existing zero valent iron (ZVI) permeable reactive barrier (PRB) that was installed at the Former Scotia Navy Depot (Site) in November 2016 as part of the remedy outlined in the March 2010 Record of Decision (ROD) (New York State Department of Environmental Conservation [NYSDEC 2010]) (**Figures 1-1 and 1-2**). The remediation goal for the PRB at the Site as listed in the ROD was to eliminate or reduce, to the extent practicable, exposures of persons at or around the Site to volatile organic compounds (VOCs) in groundwater.

1.2 SITE LOCATION

1.2.1 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 (**Figure 1-1**). 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.

1.3 SITE HISTORY

1.3.1 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. The parcel originally consisted of approximately 337 acres. The facility mostly stored large items such as boilers, turbines, and reduction gears, and was the home of the Navy's Landing Craft Maintenance and Battle Damage Program and the Navy's Automotive and Handling Equipment Spare Parts Program. Employment peaked in 1945 at 2,342 personnel. On 1 January 1960 the Navy turned the facility over to the U.S. General Services Administration (GSA).

1.3.2 During the period between early 1966 and approximately 1973, USACE/Army Material Command leased buildings for the fabrication and storage of vehicles as well as other military equipment. GSA records indicate that these included the LARC (Lighter, Amphibious Resupply, Cargo) V Amphibious Lighter. These operations were predominantly conducted in buildings 404, 405 and 406 by the Army Military Command contractor, Consolidated Diesel Electric Company, who conducted open surface dip tank operations. Additionally, between 1967 and 1969, GSA and the Navy leased buildings 202 and 203 to the United States Army/Defense Supply Agency. The agreement indicates these buildings were used for the "preservation and rail loading of trucks; storage of trucks and ten 6x6 AIC vehicles."

1.3.3 Portions of the original Site 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 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 REMEDIAL HISTORY

1.4.1 In the late 1980s, trichloroethene (TCE) was detected at low level concentrations of less than 1 part per billion (ppb) (the NYS Drinking Water Standard is 5 ppb) in the town of Rotterdam and city of Schenectady well fields. 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 that are 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 the primary VOC detected in the NYS Route 5 residential well water samples at concentrations up to 320 ppb. 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.

1.4.2 Subsequent to the NYSDOH residential groundwater sampling, six subsurface investigations were completed to identify the possible source of TCE in the residential wells and possibly the town of Rotterdam and city of Schenectady municipal well fields 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 Site. During the investigations, two areas thought to represent possible TCE source areas, including a former burn pit and the Sacandaga Road Landfill, were evaluated. Data suggested that although these areas may be contributing to minor amounts of groundwater contamination, they do not represent TCE source areas. Instead, 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. Based on these investigations, an ROD was approved by NYSDEC in March 2010. The remedial goals in the ROD are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to VOCs in groundwater
- The release of contaminants from groundwater beneath structures into indoor air through soil vapor intrusion

1.4.3 Further, the remedial goals for the Site include attaining to the extent practicable:

- Ambient groundwater quality standards
- The air guidelines provided in the Guidance for Evaluation Soil Vapor Intrusion in the State of New York, dated October 2006

1.4.4 To address the remediation goals, Alternative 5 (PRB) was selected to address the groundwater. Additional land use controls and soil vapor mitigation requirements were also included in Alternative 5. While no remediation timeframe or remedial concentration goals were

specified in the ROD, it was noted that the PRB was expected to be effective for 30 years and was intended to reduce chlorinated volatile organic compound (CVOC) concentrations from up to 800 micrograms per liter (µg/L) to below the MCLs of 5 µg/L (GeoSierra 2017). Effectiveness of the ZVI PRB remedy was evaluated by monitoring groundwater VOC concentrations in compliance monitoring wells located upgradient and downgradient of the PRB (MW-28/MW-29, MW-30/MW-31, MW-32/MW-33, and MW-34/MW-35). Based on long-term monitoring (LTM) data generated since installation of the ZVI PRB, there are concerns that the PRB and its groundwater treatment are not as effective at reducing VOC concentrations as designed.

1.5 IMPLEMENTATION OF REMEDIAL ACTION

1.5.1 PRB Installation

1.5.1.1 The PRB, installed in 2016, consists of 2 continuous segments extending approximately 900 ft on a northwest-southeast alignment and is adjacent to a right-of-way easement between National Grid and the Glenville Business & Technology Park. The PRB is positioned in the vicinity between 3rd and 5th Streets to the north and south and Avenues B and C to the west and east, located within the current Glenville Business & Industrial Park (**Figure 1-2**). The PRB was installed using vertical inclusion propagation technology, which includes a series of conventionally drilled boreholes along the PRB alignment, with specialized expansion casings grouted into the boreholes. The PRB was constructed by injection of iron filings into these expansion casings with quality assurance (QA) monitoring of the injections to quantify the PRB geometry and iron loading densities. The final 900-ft PRB was designed to be a 250-ft shallow PRB that is 15 ft high (65-80 ft below ground surface [bgs]), and a 650-ft PRB, which is 45 ft high (65-110 ft bgs) (**Figures 1-3 and 1-4**).

1.5.2 Long-Term Groundwater Monitoring Program

1.5.2.1 In 2015, a baseline groundwater sampling event was conducted to document the Site conditions prior to the PRB installation (AECOM 2015, 2016). The installment of the PRB was completed in November 2016 (GeoSierra 2017). A total of 15 groundwater LTM events have been conducted since installation of the ZVI (eight quarterly, six semi-annual, and one annual). The first post-PRB installation LTM event was conducted in December 2016, 1 month following the installation of the ZVI PRB, with subsequent events conducted on a quarterly basis through September 2018. The first semi-annual sampling event was conducted in December 2018, with subsequent events occurring in June and December of each year through June 2021 (AECOM 2021). The first annual sampling event was conducted in October 2022.

1.5.2.2 The groundwater monitoring well locations are shown on the Site layout plan (**Figure 1-2)**. Historical groundwater elevation data to date indicate seasonal variability in groundwater levels at the Site, likely influenced by the seasonal variation in the level of the Mohawk River located downgradient of the Site. The Mohawk River is controlled by locks and flood gates which introduces variability into historic groundwater measurements, however, groundwater flow at the site is consistent with discharge to the river. Analysis of the historic groundwater level data indicates that even though seasonal variability exists, the direction of groundwater flow through the ZVI PRB from the northeast to the southwest remains consistent.

1.5.3 Description of Groundwater Plume

1.5.3.1 On the Defense Logistics Agency/Defense National Stockpile Center property, the highest TCE concentrations (up to 800 µg/L) historically have been detected in monitoring well GEP-2 (Stone Environmental Inc. [Stone] 2013) **(Figure 1-2**). The Site was initially investigated because there were detections of trace levels (less than 1 µg/L) of TCE in the city of Schenectady and the town of Rotterdam municipal well fields which are located on the opposite side of the Mohawk River from the Site (Stone 2013). It is questionable whether TCE detected in these municipal water supply wells is from site contamination because they are in a different watershed.

1.5.3.2 Groundwater profiling conducted during the 2013 Pre-Design Investigation indicated that the TCE plume extended from the water table to depths of 105 to 130 ft bgs and is at least 1,000 ft wide. Groundwater concentrations gradually increase with depth. The core of the TCE plume is located at the bottom of the plume around 100-110 ft bgs and is approximately 250 ft wide. During the most recent sampling event conducted in October 2022, TCE was detected at the deepest monitoring wells installed at the site, including MW-24 located immediately downgradient from the PRB, (screened 90-100 ft bgs; TCE concentration of 6.3 µg/L) and downgradient plume boundary wells MW-27 (screened 100-110 ft bgs µg/L).

1.5.3.3 Results from the October 2022 sampling event (EA Engineering, P.C. and its affiliate EA Science and Technology [EA] 2023a) are presented on **Figure 1-5** and summarized below. LTM data for VOCs and water quality parameters (including natural attenuation parameters) from 2015 through 2022 are presented in **Table 1-1**.

- TCE, the primary contaminant of concern, was detected in all eight of the compliance wells, seven of which were above or equal to the Ambient Water Quality Standard (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. 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 PRB. These two CVOCs are generally considered by-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 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 µg/L in June 2021. The TCE concentration in October 2022 decreased to 6.3 µg/L, however the concentration 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 PRB (130 to 340 µg/L). TCE was detected for the first time in October 2022 at MW-B-3 upgradient of the PRB (estimated 0.57 µg/L), MW-11R north of the PRB (estimated 0.41 µg/L), and MW-26 downgradient of the PRB (estimated 0.59 µg/L). Additionally, TCE was detected at MW-16 southwest of the PRB (estimated 0.8 µg/L) for the first time since November 2015. MW-B-3, MW-11R, and MW-16 are considered boundary monitoring wells of the TCE plume, because while there are still TCE detections, their magnitude is small and much less than the core of the 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.

1.6 ZVI PRB EVALUATION

1.6.1 This ZVI PRB evaluation was conducted in response to NYSDEC comments made in a letter dated 6 July 2021. LTM data generated since ZVI PRB installation suggested that the PRB had not been effective at reducing CVOC concentrations (primarily TCE) in some portions of the PRB, specifically at two monitoring well series (MW-29/MW-28 and MW-33/MW-32) (**Figure 1-2**). A ZVI PRB Evaluation Work Plan (EWP) was prepared in August 2022 outlining the proposed actions to assess potential ZVI PRB performance issues (EA 2022a). The EWP presented the following:

- Current conceptual site model (CSM) including Site location and history, hydrogeologic setting, and a description of the groundwater plume

- Overview of the PRB including remedial technology overview, a description of the treatability and remedial design, PRB installation and construction, and current status

- Potential PRB performance issues/problems.

1.6.2 Remedial system optimization activities proposed in the EWP were completed in 2023 to assess potential PRB performance issues and optimize the PRB remedy at the Site, including the following:

- Vertical aquifer groundwater grab sample profiling

- Installation of supplemental monitoring wells further downgradient of the PRB

- Laboratory analyses of groundwater samples for isotopic fractionation
- Collection and examination of iron cores from the PRB, including laboratory analyses of samples
- Identification of mass flux zones

2. ZVI PRB INVESTIGATION ACTIVITIES

2.1 This section describes the ZVI PRB investigation activities conducted at the Former Scotia Navy Depot in May through June 2023. The investigation activities were conducted in accordance with the approved Uniform Federal Policy (UFP) – Quality Assurance Project Plan (QAPP) (EA 2023c) and UFP-QAPP Addendum (EA 2023d), unless as otherwise discussed. Field activities were conducted in two events as follows:

- May 2023 profiling point advancement/sampling and monitoring well installation event
- June 2023 groundwater sampling event

2.2 Health and safety procedures and monitoring of field investigation personnel were conducted in accordance with the Accident Prevention Plan (APP) Revision 3 (EA 2023b) and Site Safety and Health Plan included as **Appendix E** of the APP. A Site Safety and Health Officer was on-site throughout the field investigation program to ensure personnel were protected from both physical and chemical health hazards. Appropriate protective clothing (Level D including steel-toe boots, safety glasses, and nitrile gloves) was worn by all field personnel for protection against contamination.

2.3 Copies of field logbooks and daily field reports used during each round of RI field investigation activities are provided in **Appendix A**. Field forms are provided in **Appendix B**.

2.4 MAY 2023 PROFILING POINT ADVANCEMENT/SAMPLING AND MONITORING WELL INSTALLATION EVENT

2.4.1 The May 2023 profiling point advancement/sampling and monitoring well installation event included the following field activities (**Figure 2-1**):

- Subsurface utility clearance
- Synoptic gauging of 20 existing wells within the vicinity of the PRB
- Advancement of 10 vertical aquifer groundwater grab sample profiling points for the collection of in situ groundwater samples for field screening of PCE and daughter products TCE, *cis*-1,2-DCE, and vinyl chloride (VC) as well as off-site laboratory analysis of VOCs
- Installation of four nested monitoring well pairs, each comprised of two wells (eight wells total), with screened intervals selected based on in situ screening data
- Development of newly installed monitoring wells
- Advancement of one angle boring to intercept the ZVI PRB and collect samples to assess the ratio of ZVI to soil to compare with design criteria, and to evaluate the passivation of ZVI.

2.4.2 Utility Clearance

2.4.2.1 Dig Safely New York was contacted the week of 24 April 2023 and utility clearance was completed by 2 May 2023 prior to drilling activities. Initial proposed drilling locations were adjusted in the field based on utility clearance.

2.4.2.2 Additional utility clearance activities were conducted on 10 May 2023 due to optimizing of several proposed drilling locations based on groundwater field screening results.

2.4.3 Synoptic Gauging

2.4.3.1 Synoptic gauging was performed on 2 May 2023 at each of the 20 existing monitoring wells within the vicinity of the PRB (**Figure 2-1**). Gauging was conducted using an electronic water-level meter with an accuracy of 0.01 ft.

2.4.4 Vertical Aquifer Groundwater Grab Sample Profiling Point Advancement

2.4.4.1 Vertical aquifer groundwater grab sample profiling and grab sampling was conducted to evaluate the spatial delineation of the plume and refine the installation of monitoring well pairs. A total of 10 vertical aquifer groundwater grab sample profiling points (PRO-01 to PRO-10) were advanced to a maximum depth of 147 ft bgs between 3-24 May 2023 (**Figure 2-1 and Table 2-1**). Initial profiling locations were selected based on historical groundwater data and known obstructions associated with overhead powerline and subsurface utilities. Locations were adjusted in the field based on results of field screening of groundwater samples per discussion with USACE, NYSDEC, and GSA.

2.4.4.2 Vertical aquifer groundwater grab sample profiling points were advanced by Cascade Environmental under the full-time supervision of an EA field geologist. Each vertical aquifer groundwater grab sample profiling point location was hand-cleared to 5 ft bgs before the borehole was advanced using rotosonic drilling methods. A push ahead sampler was used to advance into each profiling interval and then a bailer was used to collect groundwater samples. One profiling location (PRO-8 at the 70-ft interval) was sampled using a monsoon pump after purging three well volumes following a premature advancement to 80 ft.

2.4.4.3 Continuous soil cores were collected in 10-ft to 20-ft intervals and soil was visually inspected and logged by the EA field geologist. Soil headspace was screened at 1-ft intervals with a photoionization detector (ppb RAE 3000) with a detection range between 1 to 10,000 ppb. The following information was recorded: dates/times drilling occurred, subsurface interval, recovery, lithological characteristics (color, moisture, texture, grain size, sorting, lithology, etc.), and total borehole depth. Soil boring logs generated at each location are provided in **Appendix B**.

2.4.4.4 *NOTE*: During advancement of PRO-10 on 13 May 2023, a minor amount (less than 1 gallon) of non-hazardous hydraulic oil was released due to a hydraulic line leak on the drill rig. USACE was notified immediately, and as a precaution NYSDEC was also contacted; case number 2301216 was assigned to the event by NYSDEC. In addition, the affected area was cleaned up immediately by Cascade Environmental, and an NYSDEC technician who visited the Site that afternoon; no further action was required by NYSDEC.

2.4.4.5 Vertical aquifer groundwater grab sample profiling point borings were proposed to be advanced to maximum depths of 105 ft bgs as based on historical groundwater data. However, field screening results obtained on 3 May 2023 (PRO-07) and 4 May 2023 (PRO-06) showed elevated concentrations of TCE across the 4 designated sampling intervals (65-75 ft, 75-85 ft, 85-95 ft, and 95-105 ft bgs), with the highest concentrations detected in the deepest sample interval (771 ppb at PRO-07 and 867 ppb at PRO-06). Following discussion with USACE, the PRO-06 boring was advanced to a depth of 125 ft bgs in the attempt to locate an aquitard (anticipated to be encountered at a depth of 100 ft bgs). No evidence of an aquitard was observed. Based on a review of historical documents, the aquitard was defined as glacial till at a depth of approximately 200 ft bgs. In addition, previous drilling attempts by others as deep as 164 ft revealed the presence of "flowing" sands, with no aquitard encountered.

2.4.4.6 Rather than continue to look for the aquitard, it was decided that subsequent vertical aquifer groundwater grab sample profiling points borings (PRO-01 through PRO-05 and PRO-08 through PRO-10) would be advanced to deeper depths, if necessary, and additional field screening samples would be collected and analyzed to determine the base of contamination (the depth at which TCE was no longer detected in field screening samples). As a result, boring depths at PRO-01, PRO-02, PRO-03, PRO-05, and PRO-10 and the number of groundwater field samples collected from these locations were increased due to TCE concentrations at the final targeted depths presented in the UFP-QAPP Addendum. Final boring depths and sample intervals are presented in **Table 2-2**.

2.4.5 Groundwater Field Screening

2.4.5.1 Discrete in situ groundwater samples were collected at targeted depths for field screening groundwater of PCE, TCE, DCE, and VC from the same borings as the vertical aquifer profiling points. A total of 48 samples were collected using either the push-ahead sampling and/or the IsoFlow^{TM} method, with up to 9 samples from each vertical aquifer groundwater grab sample profiling point location as presented in **Table 2-2**. Field screening results were used to modify profiling locations and sample intervals, and to assess locations and screened intervals monitoring wells.

2.4.5.2 Field screening of groundwater samples was conducted using a gas chromatography field tool (FROG-5000^{TM}) with a chlorinated alkenes setting to detect PCE, TCE, DCE, and VC within the 1 to 10,000 ppb range. The FROG-5000^{TM} was calibrated by the vendor for site specific VOCs prior to initiation of field activities to ensure proper analysis and maintain consistent percent recovery of VOCs. The calibration for the FROG-5000^{TM} is expected to be accurate for up to one month.

2.4.5.3 QA/quality control (QC) samples collected for groundwater field screening samples included equipment blanks, instrument verification checks, and field duplicates. Equipment blanks were utilized to confirm that the instrument was clean prior to analyzing each sample. Equipment blanks were collected by analyzing a clean baseline sample of deionized water. Samples were analyzed until no VOCs were detected in the equipment blank.

2.4.5.4 Daily instrument verification checks were utilized during field activities to check for calibration drift. Additional volume from the first sample of the day with detectable concentrations

of VOCs were held for re-analysis at the end of the day, and results were compared to those of the initial sample to see if the concentrations were still the same (relative percent difference within 50 percent [%]).

2.4.5.5 Field duplicates were collected at a rate of a rate of 10% of samples with detectable concentrations (1 per 10 of samples with detectable concentrations). A total of three field duplicates were collected as presented in **Table 2-2**.

2.4.5.6 Water quality parameters for each sample, including pH, specific conductance, temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity, were measured using a calibrated multiparameter water quality meter (Horiba U-52). Water quality parameters were not collected at one profiling location (PRO-07) due to field error. Calibration forms are provided in **Appendix B**.

2.4.6 Confirmatory Groundwater VOC Samples

2.4.6.1 A total of 21 confirmatory groundwater VOC samples were collected for off-site laboratory analysis to compare with field screening results, with 2 to 3 samples collected per vertical aquifer groundwater grab sample profiling point (**Table 2-2**). Sampling intervals were selected based on field screening results. QA/QC samples were collected at the frequency detailed in the UFP-QAPP Addendum (EA 2023d) and included VOC sample duplicates, VOC matrix spike/matrix spike duplicate samples, VOC equipment blanks, and VOC trip blanks.

2.4.7 Monitoring Well Installation

2.4.7.1 Four nested monitoring well pairs (MW-EVAL-01S/D, MW-EVAL-02S/D, MW-EVAL-03S/D, and MW-EVAL-04S/D), each comprised of two wells (eight wells total), were installed in four vertical aquifer groundwater grab sample profiling boreholes (PRO-04, PRO-08, PRO-10, and PRO-09, respectively) to supplement the existing downgradient monitoring well network. Locations for the nested well pairs and screened intervals for each monitoring well were determined based on the results of groundwater field screening and following consultation with USACE (**Figure 2-2**). Vertical aquifer groundwater grab sample profiling boreholes in which a well was not installed were backfilled to grade with a cement/bentonite mixture.

2.4.7.2 Monitoring wells were constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 10 slot PVC well screen. Shallow wells were installed with 10-ft well screens, while deep wells were installed with 5-ft screens. A #0 US Silica gravel pack was installed from the base of the boring to approximately 2 ft above the top of the lower well screen. A bentonite seal was installed above the sand pack to approximately 1 ft below the bottom of the upper well screen. A second gravel pack consisting of #0 US Silica (or equivalent) was installed above the bentonite seal to approximately 2 ft above the uppermost well screen. A second bentonite seal was installed to a minimum thickness of 2 ft above the upper sand pack. The remaining annular space of the borehole was filled with a bentonite/cement grout mix. Each nested monitoring well pair was completed at ground surface with a 10-inch diameter flush mount protective surface completion equipped with a water-tight gasket and bolt access well protector cover. The cover was bolted down following installation. A concrete pad was installed around the well protective casing

to seal it in place. Well construction details are summarized in **Table 2-3** and well construction diagrams are provided in **Appendix B**.

2.4.8 Monitoring Well Development

2.4.8.1 Newly installed monitoring wells were developed using surge and purge techniques with a 2-inch diameter submersible pump. Field parameters including pH, specific conductance, temperature, ORP, DO, and turbidity were monitored throughout development using a multi-parameter water quality monitor with flow-thru cell and recorded in 5-minute intervals using a calibrated multiparameter water quality meter (Horiba U-52) with flow cell. Water levels and well depths were measured using an electronic water-level meter with an accuracy of 0.01 ft prior to the start development. In addition, water levels were monitored throughout development, and a photoionization detector was used to monitor vapor concentrations throughout development. Water levels and water quality parameters were recorded on well development logs presented in **Appendix B**.

2.4.8.2 Wells were considered developed when purge water was visibly clear of fine-grained material, turbidity of less than 50 nephelometric turbidity units (NTUs) was achieved, water quality parameters had stabilized, and a minimum of 3 to 5 times the standing water volume in the well (to include the well screen, casing, plus saturated annulus, assuming 30% annular porosity) was removed. Water quality parameters were considered stable as follows:

- pH: within 0.1 standard units
- Specific conductance: ±3%
- Temperature: readings remained consistent for three consecutive readings
- ORP: ± 10 millivolts (mV)
- DO: ± 0.3 milligrams per liter.

2.4.9 Angle Boring and PRB Evaluation

2.4.9.1 One angle soil boring was advanced between 23 and 24 May 2023 to intercept the PRB and collect iron material for visual examination and off-site laboratory analysis (ReSolution Partners, LLC.) to assess the ratio of ZVI to soil (weight of iron versus the weight of soil), and to evaluate ZVI passivation. The location of the boring is presented on **Figure 2-1** and a more detailed presentation is presented on **Figure 2-3**. The angle boring was drilled perpendicular with respect to the orientation of the PRB, and at a 70-degree angle relative to the surface, starting approximately 28.5 ft west of the PRB. The drilling angle was determined by EA using a Husky magnetic digital level placed upon a straight segment of the drill mast. Approximately 95 linear ft were drilled (depth of approximately 90.6 ft bgs). The PRB was intercepted at 85 to 87 linear ft (depths of approximately 80 to 82 ft bgs), as based on the presence of iron filings observed in the field using a magnet. Soil and iron material were collected from the 84-85, 85-86, and 86-87 linear ft (depths of approximately 79-80, 80-81, and 81-82 ft bgs) intervals and submitted to ReSolution Partners, LLC.

2.5 JUNE 2023 PRB EVALUATION GROUNDWATER SAMPLING EVENT

2.5.1 A total of 16 wells were purged and sampled during the 2023 PRB evaluation groundwater sampling event as follows:

- Eight (8) monitoring wells installed during the May 2023 PRB evaluation profiling point and monitoring well installation event (MW-EVAL-01S/D through MW-EVAL-04S/D) and two (2) previously existing wells (MW-22R and MW-6) for off-site laboratory analysis of VOCs and monitored natural attenuation (MNA) parameters (**Figure 2-2**)

- Four (4) monitoring wells installed during the May 2023 PRB evaluation profiling point and monitoring well installation event (MW-EVAL-03S/D, MW-EVAL-04S/D) and six (6) previously existing wells (MW-22R, MW-31, MW-30, MW-33, MW-32, MW-6) for off-site laboratory analysis of analyses of compound specific isotope analysis (CSIA) of chlorinated VOCs in groundwater (**Figure 6-4)**

- Two (2) wells (MW-8 and MW-18) that were inaccessible during the October 2022 annual groundwater sampling event for off-site laboratory analysis of VOCs (EA 2023a).

2.5.2 Selected wells, analyses, and sampling rationale are presented in **Table 2-4**. A summary of the sampling event including sample locations, identifications, collection dates/times, and laboratory analyses is presented in **Table 2-5**.

2.5.3 Groundwater Purging

2.5.3.1 Groundwater sampling was performed in accordance with U.S. Environmental Protection Agency's (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 1996). 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. Monitoring wells were purged and sampled via low-flow methodologies using a submersible Geotech Geosub 2 stainless steel pump 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.

2.5.3.2 Field parameters were monitored and 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 [ºC])
- pH
- Specific conductance (milliSiemens per centimeter [mS/cm])
- DO (milligrams per liter [mg/L])
- ORP (mV)
- Turbidity (NTU)

2.5.3.3 Water levels were monitored using an electronic water level meter. Water quality parameters were monitored using a calibrated Horiba-U-52 water quality meter equipped with a flow-through cell. Well sampling forms are provided in **Appendix B**.

2.5.3.4 Groundwater samples were collected following stabilization of groundwater quality parameters. Stabilization was achieved when three consecutive readings were within the limits as follows:

- Drawdown less than 0.3 ft; or stable drawdown if the minimal drawdown exceeded 0.3 ft
- pH readings within ± 0.1 pH units
- Water temperatures within ± 3%
- ORP within ± 10 mV
- DO within ± 10% for values greater than 0.5 mg/L; if three DO values were less than 0.5 mg/L, the values were considered stabilized
- Specific conductance within ± 3%
- Turbidity within ± 10% for values greater than 5 NTUs; if 3 turbidity values were less than 5 NTUs, the values were considered stabilized.

2.5.4 Groundwater Sample Collection

2.5.4.1 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. Groundwater samples were collected for off-site laboratory analysis of VOCs, MNA parameters (alkalinity, anions [chloride, nitrate, and sulfate], total organic carbon, iron [total and dissolved] and dissolved gases [methane, ethane, and ethene]), and/or CSIA. QA/QC samples were collected at the frequency detailed in the UFP-QAPP Addendum (EA 2023d) and included VOC sample duplicates, VOC matrix spike/matrix spike duplicate samples, VOC equipment blanks, and VOC trip blanks (**Table 2-5**).

2.6 EQUIPMENT DECONTAMINATION

2.6.1 Downhole drilling equipment used during profiling point advancement and monitoring well installation activities was decontaminated between each location to prevent cross-contamination. Decontamination methods for drilling equipment included steam cleaning, washing with Alconox®, and rinsing with potable water.

2.6.2 Non-dedicated development and groundwater sampling equipment (i.e., water level meters and submersible pumps) was decontaminated between each location to prevent

cross-contamination. Equipment was decontaminated with a non-phosphate laboratory detergent (Alconox®) and potable water solution, rinsed with deionized water, and allowed to air dry.

2.6.3 All decontamination fluid was contained in 5-gallon buckets and transferred to the frac-tank staged at the Site, as discussed under Section 2.7.

2.7 INVESTIGATIVE DERIVED WASTE

2.7.1 Drill cuttings generated during well installation activities were containerized in a roll-off as assumingly non-hazardous waste pending laboratory analysis and off-site disposal. Liquid investigation-derived waste (IDW) generated during drilling, development, and sampling activities, and decontamination fluids generated during decontamination activities were containerized in a frac tank as assumingly non-hazardous waste pending laboratory analysis and off-site disposal. The roll-offs and frac tank were staged on-site at a location approved by USACE.

2.7.2 Liquid and solid samples were collected for Toxicity Characteristic Leaching Procedure (TCLP) analysis as required by the disposal facility. Following review of TCLP analytical results, the soil IDW roll-off and frac tank were transported by the IDW subcontractor (LAND Remediation) to an off-site treatment and disposal facility for proper disposal after the material was confirmed to be non-hazardous. Waste manifests are provided in **Appendix C**.

2.8 SURVEY

2.8.1 Drilling locations from the May 2023 PRB evaluation profiling point and monitoring well installation event (vertical aquifer groundwater grab sample profiling point locations, newly installed monitoring wells, and the angle boring location) and select features in the vicinity of the PRB (building corners and select previously existing wells) were surveyed on 12-13 June 2023 by MJ Engineering and Land Surveying, P.C., a state-licensed surveyor, under the oversight of EA. Surveying included the natural ground surface (not the top of the grout collar) of monitoring wells and the highest point on the riser casing rim of the uncapped well casing and the protective casing. Vertical control will be established to the nearest +/-0.1 ft for all ground surface elevations. Elevations were determined relative to the North American Vertical Datum of 1988, with reference made to an existing monument in the vicinity of the site. Horizontal control was established by traverse runs to establish locations with respect to the New York State planar horizontal coordinate grid system and provided in New York State Plane (North American Datum of 1983). Horizontal traverses were tied into established permanent benchmarks. Horizontal traverse runs were tied back to initial control points as a check for closure and error of closure was recorded. Survey data and deviations from previous survey events are provided in **Appendix D**.

2.9 SAMPLE HANDLING

2.9.1 Laboratory samples collected during the ZVI PRB investigation activities were labeled, handled, and packaged in accordance with the protocols and procedures detailed in the UFP-QAPP (EA 2023c) and UFP-QAPP Addendum (EA 2023d). QA/QC samples were collected at the frequency detailed in the UFP-QAPP Addendum. Samples were collected using clean nitrile gloves and placed in laboratory supplied bottle ware containing appropriate preservatives. Samples were placed on ice in sample coolers immediately after collection to ensure proper preservation.

Pertinent sample information was recorded on the associated chain-of-custody, and samples were shipped off-site under secure chain-of-custody protocol to off-site laboratories for analysis as detailed in the subsections below.

2.10 LABORATORY ANALYSIS

2.10.1 VOC and MNA Samples

2.10.1.1 Confirmatory groundwater VOC samples collected during the May 2023 profiling point advancement/sampling and monitoring well installation event and VOC and MNA samples collected during the June 2023 PRB evaluation groundwater sampling event were shipped via overnight delivery to ChemTech, located at 284 Sheffield Street, Mountainside, New Jersey, for analysis as follows:

- VOCs by SW8260D
- Alkalinity by SM2320B
- Anions by SW9056A
- Total organic carbon by SM5310B
- Iron (total and dissolved) by SW6010D
- Dissolved gases by RSK-175

2.10.1.2 Groundwater VOC and MNA parameter samples were processed and analyzed according to the sample chain-of-custody documents and the requirements of the UFP-QAPP (EA 2023c).

2.10.2 CSIA Samples

2.10.2.1 Groundwater CSIA samples collected during the June 2023 PRB evaluation groundwater sampling were shipped via overnight delivery to Microbial Insights, located at 10515 Research Drive, Knoxville, Tennessee, for analysis by MI-SOP-CSIA-C-INST. CSIA entails measurement of the ratios of different carbon isotopes ($^{13}C/^{12}C$) in the CVOCs in groundwater samples. Groundwater carbon isotope samples were processed and analyzed according to the sample chain-of-custody documents and the requirements of the UFP-QAPP Addendum (EA 2023d).

2.10.3 Soil ZVI Extraction and ZVI Passivation Samples

2.10.3.1 Soil aliquot from the PRB samples collected during the May 2023 profiling point advancement/sampling and monitoring well installation event were shipped overnight to ReSolution Partners, LLC., located at 967 Jonathon Drive, Madison, Wisconsin, for analyses as follows:

- Magnetic separation
- Passivation study.

2.11 DATA VALIDATION

2.11.1 Upon receipt of the analytical laboratory reports, a preliminary review of the data was performed by EA to verify that all of the necessary paperwork, such as chain-of-custodies, traffic

reports, analytical reports, and deliverable packages, were present. VOC, MNA, and CSIA results were then sent to an independent third-party validator, Environmental Data Services, for validation. Data validation included a review of pertinent QA/QC data such as sample extraction and analysis, holding times, calibration, a review of laboratory blanks and QA/QC sample results, and a review of the analytical case narrative. The analytical data were qualified and appropriately flagged by the data validator.

2.12 UFP-QAPP DEVIATIONS

2.12.1 Vertical Aquifer Groundwater Grab Sample Profiling Point Boring Depths and Field Screening Samples

2.12.1.1 Vertical aquifer groundwater grab sample profiling point borings were proposed to be advanced to maximum depths of 105 ft bgs as based on historical groundwater data. However, field screening results obtained on 3 May (PRO-07) and 4 May (PRO-06) showed elevated concentrations of TCE across the 4 designated sampling intervals (65-75 ft bgs, 75-85 ft bgs, 85-95 ft bgs, and 95-105 ft bgs), with the highest concentrations detected in the deepest sample interval (770.60 ppb at PRO-07 and 867.39 ppb at PRO-06). Following discussion with USACE, the PRO-06 boring was advanced to a depth of 125 ft bgs in the attempt to locate an aquitard (anticipated to be encountered at a depth of 100 ft bgs). No evidence of an aquitard was observed. Based on a review of historical documents, including the 2013 Pre-Design Investigation report (Stone 2013), the aquitard was defined as glacial till at a depth of approximately 200 ft bgs. In addition, previous drilling attempts by others as deep as 164 ft revealed the presence of "flowing" sands, with no aquitard encountered.

2.12.1.2 Rather than continue to look for the aquitard, it was decided that subsequent vertical aquifer groundwater grab sample profiling points borings (PRO-01 through PRO-05 and PRO-08 through PRO-10) would be advanced to deeper depths, if necessary, and additional field screening samples would be collected and analyzed to determine the base of contamination (depth at which TCE was no longer detected in field screening samples). As a result, boring depths at PRO-01, PRO-02, PRO-03, PRO-05, and PRO-10 and the number of groundwater field samples collected from these locations were increased due to TCE concentrations at the final targeted depths presented in the UFP-QAPP Addendum (EA 2023d). Final boring depths and sample intervals are presented in **Table 2-2**.

2.12.2 Vertical Aquifer Groundwater Grab Sample Profiling Point Boring Locations

2.12.2.1 PRO-10 was relocated from upgradient (east) of the PRB to downgradient (west) of the PRB at the request of USACE to help establish the leading edge of the TCE plume. The locations of PRO-08 and PRO-09 were shifted north and south, respectively, to accommodate the relocation of PRO-10. Borings were aligned north to south parallel to the PRB, with PRO-10 centered between PRO-08 and PRO-09.

2.12.3 June 2023 Monitoring Well Sampling Locations

2.12.3.1 Sampling locations presented in the UFP-QAPP Addendum (EA 2023d) were modified prior to mobilization for the sampling event based on discussion between USACE and EA as follows:

- Groundwater sampling locations proposed CSIA sampling and analysis in the UFP-QAPP Addendum included each of the eight monitoring wells installed during the May 2023 PRB evaluation profiling point and monitoring well installation event (MW-EVAL-01S/D through MW-EVAL-04S/D) and two existing wells (to be determined based on the results of field screening conducted during the PRB evaluation profiling point and monitoring well installation event and review of existing monitoring well analytical data). The specific locations for CSIA wells were modified to include a combination of select newly installed and previously existing wells along a transect extending upgradient to downgradient within the core of the plume (MW-22R, MW-EVAL-03S/D, MW-EVAL-04S/D, and MW-6) and select previously existing well pairs located directly upgradient and directly downgradient of the PRB (MW-31/MW-30 and MW-33/MW-32). The rationale for selected wells is provided in **Table 2-4**.

- Two additional previously existing monitoring wells (MW-22R and MW-6) were added to the PRB evaluation groundwater sampling event upon request by USACE for analysis of VOCs and MNA parameters to account for limited historic MNA data and to compliment the CSIA samples.

- Two monitoring wells that were previously inaccessible during the October 2022 annual groundwater sampling event (MW-8 and MW-18) were sampled during the 2023 PRB evaluation groundwater sampling event upon request by USACE. These wells were sampled for VOCs only in accordance with the UFP-QAPP (EA 2023b).

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3. PHYSICAL CHARACTERISTICS OF THE STUDY AREA

3.1 This Section presents the physical characteristics of the Former Scotia Navy Depot, including hydrogeologic setting, groundwater elevations and groundwater flow directions, and groundwater geochemistry, as based on previous investigations, regional data, and activities conducted during the ZVI PRB investigation.

3.2 HYDROGEOLOGIC SETTING

3.2.1 The Site overlies an EPA designated Sole Source Aquifer referred to as the Schenectady or Great Flats aquifer system, located adjacent to the Mohawk River and extending beneath the Mohawk River over a distance of approximately 12 miles in Schenectady County (USGS 1984). 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.

3.3 SUBSURFACE GEOLOGY

3.3.1 In most locations, the Great Flats Aquifer is predominantly comprised of unconsolidated, stratified, and well sorted outwash sand and gravel deposited by glacial meltwater (**Figure 3-1**) The thickest portion of the aquifer is over 200 feet thick in the region beneath and southeast of the Site (Alpha Geoscience 2001).

3.3.2 The sediments included as aquifer material range from very fine sand and silty sand to coarse pebble and cobble gravel (Brown 1981). The unconsolidated deposits include ice-proximal end moraine and esker gravel units which vary in thickness from less than a foot to more than 50 feet. The sand and gravel deposits are heterogeneous, with several sub-facies with lateral and vertical variation in grain size present, including zones of entirely coarse gravel and cobbles and fine sand and silty clay lenses. Coarser-grained units provide preferential contaminant migration pathway, while finer-grained deposits would inhibit vertical migration. Individual sand or silt lenses have been tracked to 250 to 500 feet laterally.

3.3.3 The aquifer is underlain by a dense glacial till deposit comprised of an unsorted mixture of clay, silt, sand, gravel, and boulders. The till has a relatively low hydraulic conductivity due to its clay and silt content and degree of compaction (Alpha Geoscience 2001). The underlying till has not been encountered in borings advanced at the Site, the deepest of which were advanced to 164 ft bgs during groundwater profiling conducted as part of a Pre-Design Investigation performed in 2013 to evaluate the vertical and horizontal extents of the plume in the area selected for remediation (Stone Environmental Inc. [Stone] 2013).

3.3.4 2023 Field Observations

3.3.4.1 The 10 ZVI PRB evaluation vertical aquifer groundwater grab sample profiling points (PRO-01 through PRO-10) were advanced to depths ranging from 92 to 147 ft bgs (**Figure 2-2** and **Table 2-1**). Soil boring logs are included in **Appendix B**.

3.3.4.2 Soil boring logs indicate that subsurface material above the water table interface consisted of medium to coarse sand with varying amounts of gravel, with individual zones of gravel and lenses of fine sand, silty sand, and silt. The water table interface was encountered at depths of 57 to 67 ft bgs. A transition of geologic media from that of a "medium to fine sand" to that of a "fine sand" was noted in borings for PRO-01 through PRO-07, PRO-09, and PRO-10 at between 63 and 87 ft bgs. Fine-grained material was not encountered at PRO-08, which was advanced to approximately 92 ft bgs. The underlying till was not encountered. In addition, while previous reports indicated an aquitard at a depth of 100 ft bgs, no evidence of an aquitard (silt/clay layer that would inhibit vertical migration of groundwater) was observed.

3.3.4.3 Some distinct interval measurements in vertical aquifer groundwater grab sample profiling points include the following:

- PRO-01: the transition to fine to medium sand occurs between 64 and 77 ft bgs
- PRO-02: the transition to fine to medium sand occurs between 78 and 87 ft bgs
- PRO-03: the transition to fine to medium sand occurs at 102 ft bgs
- PRO-04: the transition to fine to medium sand occurs at 78 ft bgs
- PRO-05: the transition to fine to medium sand occurs between 32 and 67 ft bgs
- PRO-06: the transition to fine to medium sand occurs at 69.5 ft bgs
- PRO-07: the transition to fine to medium sand occurs between 63 and 77 ft bgs
- PRO-08: the formation remained predominantly coarse sand with gravel to 92 ft bgs
- PRO-09: the transition to fine to medium sand occurs at 69 ft bgs
- PRO-10: the transition to fine to medium sand occurs at 60 ft bgs

3.4 GROUNDWATER ELEVATIONS AND GROUNDWATER FLOW DIRECTIONS

3.4.1 The Mohawk River is located approximately 1,500 feet (ft) west-southwest of the site and represents the major drainage feature of Schenectady County (**Figure 1-1**). Groundwater beneath the Site flows from east/northeast to west/southwest toward the Mohawk River (NYSDEC 2010). **Figure 2-4** includes the most recent contour map from May 2023 and **Figure 3-2** includes a more comprehensive potentiometric site map from October 2022.

3.4.2 Groundwater monitoring data collected from 2015 through June 2023 indicates that the water table beneath the Site is approximately 65 ft bgs (**Table 3-1**). Based on observed trends during the past sampling events, groundwater elevation at the site is subject to seasonal variability. Typically, the December and March sampling events exhibit lower groundwater elevations (Average Q4 groundwater elevation between 2017-2020: 224.3 ft amsl) than the June and September sampling events (Average Q2 groundwater elevation between 2018-2021: 226.9 ft amsl). The similarities between the winter events and summer events indicate a seasonal groundwater level trend.

3.4.3 Groundwater elevation data from May 2023 indicated that groundwater levels at MW-28/29 were below the top of the PRB, while groundwater levels at wells to the south (MW-30/31, MW-32/33, and MW-34/35) were slightly above the top of the PRB. This is consistent with the most recent LTM event conducted in October 2022 (EA 2023a). Similar or higher groundwater levels have been observed during LTM events conducted from 2018 through 2022, suggesting that the recent average groundwater level at the Site may be different from when the PRB was designed in

2013. The May 2023 potentiometric surface in relation to the PRB is shown in profile on **Figure 2-4** Additionally, historic potentiometric site maps have demonstrated similar trends as those observed in May 2023.

3.4.4 The hydraulic gradient is the change in hydraulic head, or water level, per unit distance. Data collected throughout the LTM program indicates a range of gradients from 0.001 to 0.006 feet per foot (ft/ft) measured at the Site. 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 PRB. This is likely an area with a flat gradient, which is probably responsible for the minor variability in groundwater levels.

3.4.5 The PRB was designed based on a hydraulic gradient of 0.004 ft/ft. Current groundwater flow conditions at the Site indicate that on average, the hydraulic gradient is consistent with the ZVI PRB design. The average hydraulic gradient at the Site in the vicinity of the PRB during June 2023 was determined to be 0.0019 ft/ft. The hydraulic gradient for the previous three sampling events was 0.0022 ft/ft in October 2022, 0.0058 ft/ft in June 2021, 0.0038 ft/ft in December 2020, and 0.0054 ft/ft in June 2020. The October 2022 event showed slightly higher groundwater elevations as compared with the June 2021, December 2020, and June 2020 events, but elevations were consistent with previous events in 2018 and 2019.

3.4.6 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 feet per day [ft/day] to 193.8 ft/day), and assuming a porosity of 0.2 (Parsons 2001), groundwater seepage velocity at the Site could vary between approximately 0.17 ft/day and 2.13 ft/day, which is within the range of estimated groundwater velocities used for the PRB design (0.128 ft/day to 2.83 ft/day).

3.5 GROUNDWATER GEOCHEMISTRY

3.5.1 Current site conditions were evaluated for groundwater quality parameters and MNA parameters to determine the potential metabolic characteristics of organisms in the subsurface environment and determine if biodegradation/natural attenuation processes of CVOCs are occurring.

3.5.2 Groundwater Quality Parameters

3.5.2.1 Groundwater quality parameters including pH, temperature, DO, ORP, conductivity, and turbidity were recorded for each field screening sample collected during the May 2023 profiling point advancement/sampling and monitoring well installation event and for each well sampled during the 2023 PRB evaluation groundwater sampling event. A summary of groundwater quality parameters recorded groundwater sampling events is presented in **Table 3-2**.

3.5.2.2 The range of groundwater quality parameters from May 2023 field screening are summarized below. It is important to note that turbidity measurements are not expected to be representative of groundwater quality because of the vertical aquifer profiling sampling method.

- pH: 4.03 to 7.97
- DO: 0.84 to 6.02 mg/L
- Temperature: 10.89 to 34.82ºC
- ORP: -431 to 152 mV
- Conductivity: 0.281 to 0.900 mS/cm
- Turbidity: 153 to >1000 NTU.

3.5.2.3 The range of groundwater quality parameters from June 2023 groundwater sampling event are summarized below.

- pH: 6.66 to 9.33
- DO: 0 to 7.75 mg/L
- Temperature: 15.07 to 22.86ºC
- ORP: -234 to 28 mV
- Conductivity: 0.23 to 0.770 mS/cm
- Turbidity: 0 to 70.5 NTU.

3.5.2.4 Field parameter readings (i.e., DO, ORP, pH, etc.) give insight as to subsurface groundwater conditions and can serve as indicators for environmental conducive conditions for enhanced reductive dechlorination. The following provides a narrative summary of the field parameter results.

- ORP values downgradient of the ZVI PRB wall are expected to be reducing (i.e., less than 0 mV), and ORP values were on average negative at the four new downgradient EVAL wells and were also negative at three of four compliance monitoring wells (MW-31/30, and MW-33) sampled during June 2023. More specifically, MW-32 exhibited an ORP of 22 mV, while the other three compliance wells ranged from -179 to -234 mV. The ORP measurements at MW-32 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 are expected to range from -300 to -400 mV. To date these expected values have not been observed on a consistent basis and no definitive trends on ORP measurements have been observed.

- During the June 2023 event, downgradient DO readings varied with several of the new EVAL monitoring wells exhibiting high DO (greater than 5 mg/L) (MW-EVAL-01S, -01D, and -04S), while others were 0.00 mg/L. The compliance monitoring well pairs MW-31/30, and MW-32/33 were 0.00 mg/L except for MW-33 which is upgradient of the PRB (2.80 mg/L).

- 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 during the June 2023 sampling event have mostly

remained within the expected range (ranging from 7-9) with the actual measurements ranging from 6.95 to 8.26.

3.5.3 Monitored Natural Attenuation Parameters

3.5.3.1 Groundwater samples from June 2023 were analyzed for MNA parameters, including TOC, alkalinity, anions (chloride, nitrate, and sulfate), dissolved gases (methane, ethane, and ethene), and total and dissolved (field-filtered) iron. MNA results are presented in **Table 3-3** and laboratory analytical report summaries are included in **Appendix E**. The range of MNA parameters are summarized below.

- Total organic carbon: 1.1 to 2.41 mg/L
- Alkalinity: 133 to 275 mg/L
- Chloride: 40.4 to 130 mg/L
- Nitrate: estimated 0.19 to 1.6 mg/L
- Sulfate: 10.3 to 27.2 mg/L
- Methane: non-detect to 385 µg/L
- Ethane: non-detect to estimated 1.3 µg/L
- Ethene: non-detect to estimated 6.9 µg/L
- Total iron: 84.9 to 3,140 µg/L
- Dissolved iron: non-detect to 69.4 µg/L

3.5.3.2 Groundwater MNA results from the June 2023 sampling event indicate the following:

- Methane concentrations were observed to vary greatly in the newly installed EVAL wells with the greatest concentration observed at MW-EVAL-01D (385 mg/L). MW-EVAL-02S and MW-EVAL-04D also exhibited elevated methane concentrations (324 and 168 µg/L respectively). 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; the inclusion of the newly installed EVAL wells further supports the trend of methane concentrations present in downgradient monitoring wells. 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 were measured at low or estimated concentrations during the June 2023 sampling event which is indicative that reductive dechlorination may not be occurring at a large scale.

- Nitrate and sulfate levels have been variable since the 2015 baseline sampling event. Decreases in nitrate concentrations from upgradient to downgradient wells are indicative of the occurrence of bioactivity and reduction across the PRB. 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). Nitrate concentrations measured during the June 2023 sampling event varied with several locations downgradient of the PRB exhibiting concentrations greater than historic upgradient concentrations (1.6 mg/L at MW-EVAL-04S compared with 0.82 mg/L at MW-35). Additionally, sulfate concentrations at the new EVAL monitoring wells were similar to historic concentrations observed at both upgradient and downgradient wells.

- Dissolved iron and total iron were sampled since 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. Dissolved and total iron was observed in the new downgradient EVAL wells; however, concentrations were low ranging from non-detect to 40.6 J µg/L.

3.5.4 CSIA Analytical Results

3.5.4.1 Groundwater samples collected from 10 locations were analyzed for $^{13/12}C$ isotope ratios for TCE, *cis*-DCE, and VC. CSIA results are presented in **Table 3-4** and laboratory analytical reports are included in **Appendix E.** The laboratory data were validated by a third-party validator and full Data Usability Summary Reports (DUSRs) were prepared (**Appendix E)**. The DUSRs indicated that all data points were usable, and that no data points were rejected. Further details on other data that required qualifications are provided in the DUSRs. $^{13/12}C$ isotope ratios are used to determine whether contaminant transformation is occurring on-site and is responsible for decreasing COC concentrations, compared to physical forces such as dispersion or dilution. $^{13/12}C$ isotope ratios ranged from -27.4 to -19.4‰, with the furthest upgradient well (MW-22R) exhibiting a ratio of -26.5‰, and the furthest downgradient well (MW-6) exhibiting a ratio of -24.1‰. The difference between the upgradient and downgradient monitoring wells indicates that some transformation is occurring on-site as the ratio decreased, or more specifically, the measured TCE became more enriched in ^{13}C at MW-6 compared to MW-22R.

3.5.5 ZVI Study

3.5.5.1 Samples containing mixtures of soil and ZVI material were collected from the angled boring at three different depth intervals and sent to a subcontracted laboratory (ReSolution Partners, LLC.); the mixtures were analyzed for magnetic mass fractionation and were also used in a passivation study. The maximum amount of ZVI material which would be expected (assuming a ZVI wall thickness of 3 inches) was calculated based upon values presented in the PRB installation report (GeoSierra 2017); the calculated amount of ZVI (5 pounds [lb]) is what was expected to be observed in the 1-ft interval collected from the angle boring where it intercepted the ZVI wall (**Appendix F**). The ZVI from the samples was also used for purposes of a passivation study, as it was anticipated that some passivation had occurred on the ZVI material since the PRB has been in place for approximately 7 years. Results from the mass fractionation and passivation studies are summarized in **Appendix G**.

4. VOC FIELD SCREENING AND LABORATORY ANALYTICAL RESULTS

4.1 This section summarizes the VOC analytical results for samples collected at the Site during the May 2023 vertical aquifer groundwater grab sample profiling and June 2023 groundwater sampling event. Field screening data are provided in **Appendix H**. Laboratory analytical reports for the May 2023 and June 2023 sampling events are provided in **Appendix E**. The laboratory VOC data were validated by a third-party validator and full Data Usability Summary Reports (DUSRs) were prepared (**Appendix E)**. The DUSRs indicated that all VOC 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 DUSRs.

4.2 FROG-5000*TM* FIELD SCREENING RESULTS

4.2.1 FROG-5000*TM* field screening PCE, TCE, *cis*-1,2-DCE, and VC results are presented in **Table 4-1**. A total of 53 samples, including field duplicates, were screened in the field using the FROG-5000*TM*. Additional QAQC measures were conducted during field screening and are summarized in **Table 4-2**. Field screening results were used to modify profiling locations and sample intervals real-time to limit remobilization to the site, and to determine final locations and screened intervals monitoring wells. The FROG-5000TM was pre-calibrated by the equipment vendor ahead of the field event to detect concentrations of PCE, TCE, *cis*-1,2-DCE, and VC within the following ranges: PCE, and TCE = 1 – 1,000 ppb; *cis*-1,2-DCE = 5 – 5,000 ppb; and VC = 20 – 10,000 ppb.

4.2.2 Field screening results are summarized as follows:

- PCE was detected in samples collected from 8 of 10 profiling locations, including PRO-02 through PRO-05 and PRO-07 through PRO-10, with concentrations ranging from 1 µg/L in the duplicate sample collected from PRO-05 at 71 ft bgs to 99 µg/L in the sample collected from PRO-08 at 71 ft bgs.

- TCE was detected in samples collected from each of the 10 profiling locations, with concentrations ranging from 0.4 µg/L in the sample collected from PRO-05 at 111 ft bgs to 1,214 µg/L in sample collected from PRO-01 at 89 ft bgs.

- *cis*-1,2-DCE was detected in samples collected from 7 of 10 profiling locations, including PRO-01 through PRO-06 and PRO-08, with concentrations ranging from 1 µg/L in the sample collected from PRO-01 at 89 ft bgs to 103 µg/L in sample collected from PRO-05 at 101 ft bgs.

- VC was detected in samples collected from 6 of 10 profiling locations, including PRO-03 through PRO-05 and PRO-08 through PRO-10, with concentrations ranging from 1 µg/L in the sample collected from PRO-09 at 91 ft bgs to 636 µg/L in the sample collected from PRO-05 at 101 ft bgs.

4.3 MAY 2023 CONFIRMATORY GROUNDWATER VOC ANALYTICAL RESULTS

4.3.1 May 2023 confirmation laboratory analytical results are presented in **Table 4-3**. TCE was the primary contaminant detected in groundwater confirmation samples, with TCE detected in 21 of 21 samples. Concentrations ranged from 0.42 to 570 µg/L, with concentrations in 16 samples reported above the NYSDEC AWQS of 5.0 µg/L. PCE was detected in 5 of the 21 groundwater samples at concentrations ranging from 0.38 to 11.2 µg/L, with concentrations in 3 samples reported above the NYSDEC AWQS of 5.0 µg/L. *Cis*-1,2-DCE was detected in 7 of the 21 samples at concentrations ranging from 0.73 to 2.8 µg/L, with no sample concentrations reported above the NYSDEC AWQS of 5.0 µg/L.

4.3.2 FROG-5000^{TM} field screening data was consistent with confirmatory laboratory analytical data where the sample intervals with the highest FROG-5000^{TM} concentrations agreed with the sample intervals with the highest laboratory confirmation concentrations **(Appendix H. Figure 1.)**. The confirmatory samples demonstrate that the newly installed monitoring wells, which were screened based on the FROG results, were installed at the correct intervals (i.e., shallow wells targeting the highest concentration intervals and deeper wells screened at the base of the plume). Relative percent difference values were calculated for each sample and are included in **Appendix H** as Table 1.

4.4 JUNE 2023 GROUNDWATER VOC ANALYTICAL RESULTS

4.4.1 June 2023 laboratory analytical results are presented in **Table 4-4** and on **Figure 2-4**. PCE was detected in four monitoring wells, including MW-18 (1 µg/L) and MW-22R (2.9 µg/L) located upgradient of the PRB and in newly installed shallow wells MW-EVAL-01S (estimated 0.37 µg/L) and MW-EVAL-02S (16.3 µg/L) located downgradient of the PRB. Only the concentration at downgradient well MW-EVAL-02S (screened 70-80 ft bgs) exceeded the NYSDEC AWQS of 5 µg/L.

4.4.2 TCE, the primary contaminant of concern, was detected in 11 of 12 samples collected (each well sampled except MW-8), with concentrations at 10 sample locations above or equal to the AWQS of 5 µg/L. TCE was detected in each of the two wells sampled upgradient of the PRB, with concentrations of 42.8 µg/L at MW-18 (screened 60-75 ft bgs) and 72 µg/L at MW-22R (screened 63-78 ft bgs). TCE concentrations detected in shallow wells downgradient of the PRB (installed to maximum depths of 80 ft bgs) ranged from 19.9 µg/L at MW-6 (screened 58.5-68.5 ft bgs) to 89 µg/L at MW-EVAL-01S (screened 65-75 ft bgs).

4.4.3 TCE concentrations were detected in each of the four newly installed deep monitoring wells located downgradient of the PRB, with concentrations ranging from 1.1 µg/L at MW-EVAL-02D (screened 91-96 ft bgs) to 240 µg/L at MW-EVAL-01D (screened 85-90 ft bgs). A TCE concentration of 130 µg/L was detected in the deepest monitoring well installed downgradient of the PRB, MW-EVAL-03D (screened 130-135 ft bgs).

4.4.4 *Cis*-1,2-DCE was detected in two newly installed monitoring wells downgradient of the PRB, including shallow well MW-EVAL-02S (1.7 µg/L) and deep well MW-EVAL-01D (2.4 µg/L).

Concentrations did not exceed the NYSDEC AWQS of 5 µg/L. VC was not detected in monitoring wells sampled in June 2023.

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5. PERMEABLE REACTIVE BARRIER HYDRAULIC PERFORMANCE

5.1 IDENTIFICATION OF MASS FLUX ZONES

5.1.1 Mass flux is the mass of a chemical (e.g., contaminants, amendments, tracers and other chemical additives) that passes through a defined cross-sectional area over a period of time. Simply put, mass flux combines two key features of a contaminant plume: how much contaminant is in the groundwater and how fast the water is moving through a defined cross-sectional area (i.e., the contaminant concentration and the groundwater flux). Mass flux is a vector quantity expressed as mass/time/area (e.g., grams per day per square foot [g/d/ft^2]) and is calculated as shown below:

$$Mass\ Flux\ (J) = (C)(K)(i)$$

Where: J = Mass Flux of a grid-plane (g/d/ft^2)

C = TCE concentration (micrograms per liter [µg/L])

K = Hydraulic conductivity of the geologic unit (foot [feet] per day [ft/day])

I = Hydraulic gradient (foot [feet] per foot [ft/ft])

5.1.2 Mass discharge is related to mass flux and represents the total mass of a solute (such as a contaminant) moving in the groundwater from a given source, expressed as mass/time (e.g., g/d) through a defined cross sectional area or grid plane (Interstate Technology and Regulatory Council 2010). Mass discharge is calculated as shown below:

$$Mass\ Discharge\ (D) = (J)(A)(T)$$

Where J = Mass Flux of the grid-plane (g/d/ft^2)

A = Area of the grid-plane (ft^2)

T = Time unit (days, year, etc.)

5.1.3 Mass flux was calculated using the 2015 and 2022 groundwater TCE concentrations across the PRB, while also using the same upgradient and downgradient compliance monitoring wells pairs (MW-28/MW-29, MW-30/MW-31, MW-32/MW-33, and MW-34/MW-35) (**Figures 5-1 through 5-4**). The mass flux model was used to evaluate both the location of high flow zones, as well as the magnitude of contaminant mass discharge in the flow across the transect. The hydraulic gradient and TCE concentrations used in the mass flux models for 2015 and 2022 have been presented in **Appendix I**.

5.1.4 For the purpose of modeling mass flux, the hydraulic conductivity was not expected to change between 2015 and 2022. The previous CSM identified two generalized groundwater flow regimes with corresponding aquifer K including: (1) shallow (65-80 ft bgs) with an average K of 181.1 ft/day, and (2) deep (65-110 ft bgs) with an average K of 46.3 ft/day. These two geologic units (shallow and deep) create a two-tiered hydraulic conductivity regime that has been observed to be relatively uniform within those units along the PRB. Previous investigations have confirmed the interbedded nature of the subsurface sand deposits that appear to range from 2 to 3 orders of magnitude in K (Stone 2013), however, the CSM is simplified here for the purpose of calculating mass flux. Due to the heterogeneity of the aquifer sediment layers and their corresponding Ks, there is the potential for less effective treatment in high flow zones in the event there is uneven

distribution of the ZVI both horizontally and laterally. Similarly, TCE concentrations do not change substantially between the two time points with any differences observed less than an order of magnitude. The hydraulic gradient does change between the two time points; however, the hydraulic gradient is determined as a snapshot in time using groundwater elevations observed during sampling events and can be influenced by the seasonality of the water table as evidenced by the variations in gradient across the PRB as shown in **Appendix I, Figures I-3 through I-6**.

5.1.5 Kriging, which is an interpolation method used within the mass flux model to predict data or values at locations in which data are unknown, was used to calculate mass flux between the compliance monitoring well pairs. Kriging was used because groundwater contaminant concentrations often possess an inherent anisotropy (meaning that the data are more correlated in one direction than in other directions) due to physical dynamics, such as groundwater flow and lithology, which may influence the spatial distribution of contamination. The correlation of the modeled data is quantified by calculating the variance between pairs of points across the dataset. When plotted against the distance between pairs, the set of points results in an experimental variogram model which describes how the data are correlated relative to each other. The regression curve which is selected to fit the data is referred to as the theoretical variogram model which is used to interpolate between known points. C-Tech Corporation's Earth Volumetric Studio was utilized to (1) sort and bin the data to produce the experimental variogram needed to interpolate between known points, and (2) to regress the theoretical variogram model to quantify the data. The two variograms for the 2015 and 2022 sample events are shown in **Appendix I**. For both 2015 and 2022, a spherical variogram model was used to fit the data after a horizontal to vertical anisotropy of 40 was applied to the data in a southwestern direction (18 degrees south of west), corresponding with the general groundwater direction across the site.

5.1.6 The mass discharge, a product of mass flux, was also evaluated across the PRB (using the mass flux model) for 2015 and 2022. The relative percent difference in mass discharge in 2015 across the "future" location of the PRB was negative (-0.52%), which is not necessarily indicative of an increase in mass discharge, as the relative percent difference is well within the range of modeling error. Additionally, it is important to note that since the PRB was installed in 2016, the 2015 mass discharge evaluation is used here as a baseline. In contrast, the relative percent difference in mass discharge in 2022 (+6.3%) indicates that, as expected, there is a decrease in mass across the PRB. However, the degree of decrease in mass discharge observed in 2022 is lower than what would be expected in order to effectively reduce plume concentrations to, or below, remedial goals.

6. EVALUATION OF PERMEABLE REACTIVE BARRIER

6.1 CVOC CONCENTRATIONS

6.1.1 Groundwater TCE concentrations measured in November 2015 before PRB installation (2016) show TCE concentrations ranging from 0.46 to 282 µg/L. Additionally, monitoring wells downgradient of where the PRB was installed also exhibited concentrations ranging from 0.68 to 189 µg/L which suggests that the plume extends to those wells and with a similar TCE concentration magnitude. Groundwater TCE concentrations measured in October 2022, approximately 6 years after the PRB was installed, demonstrate that no substantial change has occurred within the plume. The four compliance monitoring well pairs (MW-29/28, MW-31/30, MW-33/32, and MW-35/34) were evaluated and concentrations across the PRB have not exhibited a clear decreasing trend between the upgradient and downgradient pairs, except at MW-30/31 (**Figure 6-1**).

6.1.2 Groundwater TCE concentrations measured in June 2023 ranged from non-detect (< 0.26) to 240 µg/L and included 8 new evaluation wells installed downgradient of the PRB. The concentrations observed in these newly installed monitoring wells further suggest that the PRB is not proving effective as TCE concentrations are not reduced as the plume moves downgradient and are greater than previously known. A 3-D plume model of the most recent concentration data demonstrates that the plume with TCE concentrations greater than 50 ppb extends beyond the PRB and to further downgradient monitoring wells (**Figure 6-2**). Additionally, *cis*-1,2-DCE, a daughter product expected from the biotic transformation of TCE was not observed in high concentrations, ranging from non-detect to 2.4 µg/L in June 2023.

6.1.3 Additional analysis was performed to evaluate historical TCE trends across the Site to evaluate whether the PRB influenced TCE concentrations (**Figure 6-3**). A line of best fit was applied to TCE concentrations across the plume and the resulting trends were identified as either decreasing or increasing (**Appendix J**). The trends indicate that TCE concentrations are decreasing upgradient of the wall with statistical significance ($p < 0.1$) at several locations, and at many others without statistical significance ($p > 0.1$). Additionally, monitoring locations with less than five samples over time were not evaluated during the trend analysis. Of note, is that the rate of decrease is similar at several upgradient wells when compared with MW-30 which also exhibits a clear decreasing trend, yet is downgradient of the wall. Additionally, there are wells upgradient of the wall that exhibit increasing trends as well, for example GEP-4, with statistical confidence similar to MW-35 which is upgradient of the PRB. While individual trends do not indicate that substantial change is occurring across the plume, the lack of clear decreasing trends downgradient of the PRB, and the presence of decreasing trends upgradient of the wall suggest that TCE concentrations are not greatly influenced by the PRB.

6.2 COMPOUND SPECIFIC ISOTOPE ANALYSIS

6.2.1 CSIA results are used to demonstrate whether compounds have undergone degradation or dilution as they are transported downgradient. Measured isotope ratios of specific elements are compared to a standard reference material and reported as a comparison in units of per mil (i.e., ‰, or parts per thousand). This resulting difference of isotope ratios ($\delta^{13}C$) in collected samples can be directly compared to each other to evaluate degradation as a contaminant migrates through the subsurface.

6.2.2 The standard reference range of $\delta^{13}C$ for manufactured TCE is -31.9‰ to -27.4‰ (Shouakar-Stash et al. 2003). When TCE is degraded, either through biotic or abiotic reactions, $\delta^{13}C$ will increase (i.e., move closer to zero). Given that the precision of this analytical method is conservatively 0.5‰ for $\delta^{13}C$, any result for TCE with $\delta^{13}C$ > -26.9‰ would indicate that degradation had occurred. All but one sample, which was located upgradient, had a $\delta^{13}C$ > -26.9‰ (**Figure 6-4**). Additionally, all but one downgradient sample had more positive values of $\delta^{13}C$ compared to the three upgradient samples. Laboratory analytical data, screened intervals (i.e., top and bottom elevations presented in ft above mean sea level, and field geochemistry data are summarized in **Table 6-1**.

6.2.3 The upgradient/downgradient well pair that had measurable $\delta^{13}C$ values (MW-33/MW-32) evidenced a 21% decrease in TCE concentrations and an increase in $\delta^{13}C$ of 1.9‰, which indicates that the PRB is degrading TCE at this location. Locations where more positive $\delta^{13}C$ values are found generally correspond to samples where conditions are more reducing (i.e., negative ORP and low DO) and is typically found near the PRB within the deeper aquifer (**Figure 6-5**). The notable exception to this is MW-31, an upgradient location, that has reducing conditions and low TCE concentration but whose $\delta^{13}C$ value (-27.4‰) does not strongly indicate the occurrence of degradation. Together, these data indicate that degradation is occurring sitewide and continues to occur as the TCE is transported downgradient. Natural attenuation appears to significantly contribute to TCE degradation; however, the PRB promotes reducing conditions thereby promoting TCE degradation at the Site.

6.3 GEOCHEMICAL PARAMETERS

6.3.1 Groundwater field data and MNA data demonstrate consistency in the compliance well pairs throughout the expanse of the PRB (**Table 1-1**). If the PRB was performing as expected, greater differences should be observed between the upgradient and downgradient monitoring well pairs. For example, nitrate and sulfate are expected to be reduced across the PRB and as demonstrated on **Figures 6-6** and **6-7** there is no substantial difference between the upgradient and downgradient wells. Additionally, dissolved oxygen and ORP are expected to decrease in the downgradient wells after the PRB installation and similarly to nitrate and sulfate, no trend was observed between the upgradient and downgradient compliance monitoring wells (**Figures 6-8 and 6-9**). It was expected that pH may increase slightly following the installation of the PRB, and while pH is slightly greater than the expected range of groundwater pH values (grey dashed region), no trend was observed between the upgradient and downgradient compliance wells (**Figure 6-10**).

6.4 MASS FLUX ACROSS ZVI PRB

6.4.1 Mass flux analysis was performed at two transects comprised of four monitoring wells each, located upgradient (MW-29, 31, 33, and 35) and downgradient (MW-28, 30, 32, and 34) of the PRB. The mass flux analysis was conducted using TCE concentrations from 2015 and 2022 to evaluate the efficacy of the installed PRB as a cumulative mass discharge across the upgradient and downgradient monitoring well transects. As shown on **Figures 5-1 and 5-2** no substantial difference is observed or expected in 2015 as the ZVI PRB had not been installed and the results are included as a baseline measurement across the plane. The 2022 analysis is expected to demonstrate a decrease in mass flux across the downgradient transect after the PRB installation

(**Figures 5-3 and 5-4**). Mass discharge across the PRB decreased by +6.3%, however, the decrease suggests that much less mass is reduced across the PRB than expected. As mentioned before, since the hydrogeology has not changed substantially after the PRB was installed, the mass flux calculations are primarily a function of TCE concentrations, which, as described above, have not decreased substantially across the plume. These mass flux results further support the interpretation that the PRB is not performing as expected.

6.5 UNIFORMITY AND REACTIVITY OF PRB

6.5.1 The angle boring included the collection of three samples, which represented the depth expected to intercept the PRB (85-86 ft), and the two 1-ft intervals on either side of the expected intercept (84-85 and 86-87 ft). These angled depths were estimated to align with vertical depths of 79-80, 80-81, and 81-82 ft bgs, respectively. Intervals were screened in the field with a magnet and magnetic material was first detected in the 79-80 vertical ft bgs which is the expected top portion of the 3-inch-thick deeper section of the PRB. The 79-80 ft interval was also the sample with the highest mass percentage of magnetic material after analysis (4.1%) compared with the other two intervals, 80-81 ft bgs (2.2 %), and 81-82 ft bgs (3.0%). It is important to note that the other intervals are not substantially different as all three intervals contained less than 5% magnetic material by mass, therefore, the highest mass percentage was used for determining the expected amount of iron present in the sample (**Appendix G**). An expected mass of approximately 5 pounds of ZVI in 0.05 ft^3 of soil was estimated from design assumptions based on a review of the original design and the injected mass of iron recorded during PRB installation (GeoSierra 2017) (**Appendix F**). In addition, the expected mass of ZVI (4.91 lb of ZVI) determined using the injection volumes provided after PRB installation (GeoSierra 2017) is greater than the calculated soil mass expected using a bulk density for a sandy soil (4.74 lb) which is not a realistic assumption; this was taken into account as part of the calculations in **Appendix F**. It should also be noted that some "daylighting" of the ZVI material was observed at the ground surface as noted during injections (GeoSierra 2017) which likely indicates: 1) that the ZVI material was not constrained within the 3- or 6-inch intervals (as designed) for the wall, and in turn, 2) that the ZVI material may have been sporadically distributed (vertically, and horizontally) throughout the subsurface. Additionally, the magnetic mass determined as part of the PRB evaluation was approximately 0.3 pounds (79-80 ft bgs interval), which is well below the expected mass based on the design assumptions and further supports the observation that the expected ZVI distribution was not achieved in the targeted 3-inch thick portion of the PRB. The results of the mass fractionation indicate that less magnetic (i.e., ZVI) material is present than the design quantity expected within the transect.

6.5.2 The 85-86 ft interval was inspected using high resolution microscopy and compared with Sagwell ZVI, a similar ZVI standard to the Peerless ZVI used to install the PRB since Peerless ZVI was unavailable. The magnetically separated material was observed to have similar unreacted ZVI particles to the ZVI standard (Sagwell) which indicates that unreacted ZVI was present in the analyzed sample. The ZVI material observed was a mixture of unoxidized grey material, and a rust red material indicative of iron oxides.

6.5.3 To evaluate the reactivity of the magnetically separated material, a passivation study was conducted where 10 milligrams of magnetic material were combined with 100 mL of PCE spiked water (initial concentration: 16,500 µg/L). After 1 day of reaction the 10 milligrams of ZVI were

spent, as there was no additional decrease in PCE concentrations by day 9 of the study (**Figure 6-11**). An additional iteration of the passivation study was performed where magnetic material from all 3 intervals was composited (300 milligrams of magnetic material) and combined with 30 mL of PCE spiked water (initial concentration: 16,900 µg/L). The additional iteration was intended to evaluate whether a 100-fold increase in ZVI material contributed to greater extents of PCE reduction. After 9 days approximately 48% of the initial concentration of PCE had been reduced, which suggests that the ZVI present in the PRB is not passivated, and that to achieve greater PCE reduction in the passivation study, a greater amount of ZVI material would be necessary. The estimated half-life determined from the passivation study is approximately 228 hours, which is determined by the average PCE reduction observed after three days when the ZVI was determined to be spent. Compared with the half-lives presented in the Pre-Design Investigation (0.61 to 0.91 hours) following a column study, the result is much slower than what was determined during the design (Stone 2013).

6.5.4 The PRB's performance is expected to be influenced by both the uniformity and the reactivity of the injected ZVI material. One of the primary design considerations for the PRB was that of residence time between the contaminant and the barrier; based on results of the column study during the Pre-Design Investigation, a PRB thickness ranging from 3 to 6 inches was proposed and utilized in order to achieve the target residence time. As mentioned above, the results of the mass fractionation indicated that less magnetic (i.e., ZVI) material was present in the angle boring than what was expected within the transect, based on the original design (AECOM 2016). Since it appears that ZVI is not uniformly distributed throughout the aquifer, it is unlikely that the residence time associated with the three to six inch barrier, as proposed in the original design can be achieved. With respect to reactivity, it should be noted that an additional column study was performed using site groundwater during the Remedial Action Work Plan to evaluate mineral fouling of the ZVI material (AECOM 2016). The results of the column study indicated that some fouling was expected; however, a "safety factor" was incorporated into the design to account for the expected mineral fouling. Mineral fouling was expected during PRB implementation because oxidized species were known to be present in the aquifer, such as dissolved oxygen, sulfate, and nitrate which would result in the formation of iron oxide aggregates. As shown in the microscopy images from ReSolution Partners, LLC. (**Appendix G**), there are some oxidized aggregates present in the sample of material recovered from the angle boring. It is important to note that unreacted ZVI is also observed which, when paired with the degree of contaminant reduction observed during the passivation study, suggests that mineral fouling of the ZVI is unlikely to be a key contributor to the PRB's poor performance.

7. REFINEMENT OF CONCEPTUAL SITE MODEL

7.1. Data obtained and observations made during performance of the PRB evaluation proved valuable for refinement of the CSM which can be used for further remedial action at the Site. Refinement of the CSM addressed the following items:

- The till layer, previously thought to act as an aquitard on-site, was not encountered during May 2023 profiling activities which included borings advanced to approximately 160 ft bgs. As shown on **Figure 3-1**, regional cross sections indicate that there is a till layer present in local geology, however, as the till layer was not encountered during drilling activities it is unknown at what depth the plume is bound by a confining layer.

- No substantial changes have been observed for the hydraulic gradient on-site which suggests that the existing understanding of hydrogeology at the Site remains valid.

- The TCE plume appears to be stable as recent concentrations remain comparable to previous measurements; CVOC trend analysis indicates that there is a combination of increasing and decreasing trends at and upgradient of the PRB, and, that the plume appears to be stable as measured over the period of groundwater monitoring at the Site since 2015 (**Figure 6-2**). It is uncertain whether a relict source is present at the Site, however, the decreasing trends observed in CVOC concentrations upgradient of the PRB suggest that a relict source is not present. Overall, the plume is sufficiently bound for the purposes of this evaluation, since CVOC concentrations are well defined in the vicinity of the PRB.

- High mass flow through portions of the PRB have been identified via modelling of contaminant mass flux that better details the areas of the subsurface where there is preferential contaminant transport. This information could be used for future optimization of remedial activities (if required).

- The previously noted data gap within the plume downgradient from the PRB was reduced via the addition of the new "EVAL" monitoring wells (**Figure 2-2**), which exhibited CVOC concentrations similar to those observed at both upgradient and downgradient monitoring wells.

- Vertical delineation of the CVOC plume was improved using new data from the shallow and deep pairs associated with the "EVAL" monitoring well series. However, the vertical extent of the plume remains unclear, particularly at the furthest downgradient wells. TCE concentrations were found at depth during the advancement of PRO-10 (120 µg/L at 141 ft bgs), which suggests that the TCE plume extends below several of the screened intervals of the existing monitoring well network, and that the existing well network is inadequate to delineate the vertical extent of the plume. It is recommended that additional monitoring wells be installed, particularly further downgradient, to better delineate the vertical extent of the TCE plume.

- It appears installation/construction of the PRB did not achieve design parameters (specifically with respect to thickness of the ZVI) as the amount of magnetic material observed in samples obtained from the angled boring was considerably less than what was

estimated using design parameters (GeoSierra 2017). It is suspected that since daylighting was observed during ZVI injection, the material is not constrained to the targeted design dimensions (three or six inch continuous barrier) and is instead sporadically distributed (vertically and horizontally) throughout the subsurface. In addition, minimal to no reductions in CVOC concentrations have been observed subsequent to the 2016 PRB installation which further supports that it has not proven effective as a remedial measure. It is important to note that one angle boring was performed to evaluate the condition of the PRB. The single boring was assumed to be representative of the PRB's uniformity; however, additional borings would have aided in confirming the uniformity of the PRB.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

8.1.1 As described above, the results from the PRB Evaluation activities indicate that the PRB located at the Former Scotia Navy Depot is not performing as designed or expected, as evidenced by several different investigatory results. Multiple lines of evidence illustrate the poor performance of the PRB, which include the following:

- Downgradient CVOC concentrations have not substantially decreased over the past 7 years. In addition, historic trend analysis suggests concentrations are already decreasing upgradient of the PRB which make any reductions downgradient difficult to attribute to abiotic transformation within the PRB.

- Geochemical parameters have not changed as expected subsequent to the PRB installation in 2016. Specifically, nitrate and sulfate concentrations have not differed substantially at the compliance monitoring well pairs upgradient and downgradient of the PRB. Similarly, ORP measurements did not exhibit different conditions upgradient and downgradient of the wall as would be expected.

- Although CSIA results along the plume do demonstrate that some transformation is occurring at the Site, the lack of substantial $^{13/12}C$ isotope ratio changes across the PRB itself suggests that the PRB is not performing as designed or expected, and that any observed transformation is unlikely to be caused by abiotic pathways.

- Mass flux analyses used to determine the percent differences in TCE mass discharge across the PRB between 2015 and 2022 indicates that no substantial change has occurred since PRB installation in 2016.

- Physical samples of soil/ZVI material collected to intercept the PRB in the subsurface exhibited a significantly lower amount of magnetic material than expected based on the original design parameters (i.e., ZVI thickness), which suggests a lack of integrity along the PRB. The results of the passivation study of the ZVI material obtained from the subsurface suggest that magnetic material present in the PRB remains reactive towards CVOCs, which further supports that the PRB has not proven effective because of the poor integrity.

8.2 RECOMMENDATIONS

8.2.1 Other remedial technologies may be utilized to address CVOC contamination on-site and several have been previously evaluated as presented in the ROD (NYSDEC 2010). The remedial goals indicated in the ROD are as follows:

- Eliminate or reduce to the extent practicable the exposures of persons at or around the site to VOCs in groundwater; and the release of contaminants from groundwater beneath structures into indoor air through soil vapor intrusion.

- Attain to the extent practicable ambient groundwater quality standards, and air guidelines provided in the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH 2006).

8.2.2 Indoor air is already being addressed by the existing sub-slab depressurization systems in place at Buildings 201, 202, 203, and 204; therefore, the remaining remedy goal requires that groundwater concentrations be remediated to achieve ambient groundwater quality standards to the extent practicable. It is also important to note that as the plume is observed to be somewhat stable and there are no immediate exposure pathways on-site (i.e., dermal or ingestion), there isn't exposure to persons at or around the site to VOCs in groundwater.

8.2.3 The remedy evaluated, recommended in the Feasibility Study (Malcolm Pirnie 2010), and ultimately selected in the ROD (NYSDEC 2010) as Alternative 5: Permeable Reactive Barrier, was chosen because it could be implemented quickly and would be a passive and effective approach to addressing the groundwater VOC plume at the Site. During the Pre-Design Investigation, a column study was performed, which indicated that TCE would be reduced by the Peerless ZVI material (0.46 hour half-life), and that the PRB should prove effective at the Site (Stone 2013). Additionally, although mineral fouling was anticipated from the results of the column study performed in conjunction with development of the Remedial Action Work Plan, a safety factor was incorporated into the design to account for any likely decreases in performance caused by ZVI passivation.

8.2.4 Based on the results of this PRB evaluation, the inability to achieve the design thickness of the barrier (i.e., 3 to 6 inches) is the most likely culprit for the PRB's poor performance. It appears that the PRB installation method (Vertical Azimuth Inclusion) did not adequately emplace the ZVI material as originally intended (i.e., to achieve a continuous 3 to 6 inch barrier). For example, ZVI daylighting was observed which suggests that the ZVI material may have been distributed sporadically throughout the subsurface and not only within the targeted design intervals. In addition, the difficulty with the installation method was obfuscated by the presence of high voltage power lines in the vicinity of the PRB which created interference with the method used to confirm the proper installation of the PRB (i.e., resistivity measurements). Therefore, it is not recommended that any modification or amelioration of the wall be conducted because there is low confidence in the uniform distribution of ZVI in the PRB, and the efficacy of further ZVI injections is uncertain.

9. REFERENCES

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Tables

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Table 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	GEP-1 (Screened Interval = 59.6 - 74.6 ft bgs)							GEP-2 (Screened Interval = 60.6 - 75.6 ft bgs)							GEP-3 (Screened Interval = 59.6 - 74.6 ft bgs)							GEP-4 (Screened Interval = 60.15 - 75.15 ft bgs)						
		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	**0.38** **J**	0.5 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	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 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-B-3 (Screened Inteval = 47.5 - 67.5 ft bgs)						MW-5 (Screened Inteval = 62.5 - 72.5 ft bgs)							MW-6 (Screened Inteval = 58.5 - 68.5 ft bgs)							MW-7 (Screened Inteval = 61 - 71 ft bgs)							MW-8 (Screen Interval Unknown)			
		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 U	0.75 UJ	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	0.5 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 U	0.75 UJ	0.5 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.5 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	0.75 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 UJ	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	0.5 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 UJ	0.5 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.5 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	**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 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	0.75 U	**0.65 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.5 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	**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	0.75 U	**0.68 J+**	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 U	0.75 UJ	0.5 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.5 U	0.75 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	0.5 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 U	0.75 UJ	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
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 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-9 (Screened Inteval = 110 - 120 ft bgs)							MW-11 R (Screened Inteval = 65 - 80 ft bgs)				MW-12 R (Screened Inteval = 60 - 80 ft bgs)					MW-13 (Screened Inteval = 65 - 80 ft bgs)	MW-14 (Screened Inteval = 65 - 80 ft bgs)							MW-15 (Screened Inteval = 65 - 80 ft bgs)								
		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	12/8/2020	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	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**	**2.8**	**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	0.75 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	0.5 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	0.75 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	0.75 U	0.75 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	0.75 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	0.5 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
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**	**0.57 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	**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	0.75 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	0.5 U	0.75 U	0.75 U	0.75 U	0.5 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	0.75 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
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**	**59.8**	**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	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**	**212**	**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**	**25.6**	**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**	**0.64**	**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**	**10.6**	**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	1.6 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	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	**0.81 J**	**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	7.65	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	1.87	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	173.1	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	0.321	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	7.39	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	224.81	227.70	228.21

Table 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-16 (Screened Inteval = 55 - 70 ft bgs)									MW-17 (Screened Inteval = 60 - 75 ft bgs)							MW-18 (Screened Inteval = 60 - 75 ft bgs)						MW-19 (Screened Inteval = 62 - 77 ft bgs)						
		11/11/2015	12/12/2016	6/20/2017	6/19/2018	6/24/2019	6/16/2020	12/7/2020	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	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	0.75 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	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	0.5 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	0.75 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	0.75 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-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	0.5 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	0.75 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	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	0.75 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	0.75 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	0.75 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	0.75 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	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	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**248**	**312**	**322**	**317**	**303**	**258**	**280**	**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**	**4.4**	**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**	**1.0**	**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**	**46.4**	**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	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	2.6 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	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+**	1.0 U	**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	7.36	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	34.50	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	128.3	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	0.438	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	10.37	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	222.49	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 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-20 (Screened Interval = 63 - 78 ft bgs)							MW-22 (Screened Interval = 63 - 78 ft bgs)			MW-22 R (Screened Interval = 63 - 78 ft bgs)				MW-23 (Screened Interval = 63 - 78 ft bgs)						MW-24 (Screened Interval = 90 - 100 ft bgs)									
		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	12/8/2020	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	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	0.75 U	**26.5**	**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 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**	**4.9**	**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	0.75 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	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**	**3.7**	**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	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	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**	**192**	**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**	**31.6**	**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	0.14 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**	**13.9**	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**	**103**	**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**	**0.67 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	3.6 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+**	**1.2**	**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	7.83	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	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	-102.2	-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	0.278	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	0.45	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	223.27	226.30	227.17

Table 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-25 (Screened Inteval = 65 - 75 ft bgs)						MW-26 (Screened Inteval = 100 - 110 ft bgs)									MW-27 (Screened Inteval = 100 - 110 ft bgs)						MW-36 (Screened Inteval = 70 - 80 ft bgs)					
		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	12/8/2020	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	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	0.75 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	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	0.75 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	0.75 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	0.75 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	0.75 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	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	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	0.75 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	0.75 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	0.75 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	0.75 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	0.75 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	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	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**198**	NA	NA	NA	NA	NA	**204**	**197**	**223**	**225**	**174**	**205**	**168**	**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**	**22.4**	**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**	0.14 U	**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**	**11.2**	**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**	**5.7**	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	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	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**	**5.0**	**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	7.60	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	0.02	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	198.7	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	0.233	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	1.53	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	222.67	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 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-28 (Screened Inteval = 67 - 72 ft bgs)								
		12/1/2015	12/14/2016	6/27/2017	6/22/2018	6/19/2019	6/19/2020	12/9/2020	6/16/2021	10/19/2022
		Downgradient								
VOCs (ug/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	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**	**9.5**	**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	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	**0.34 J**	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**	**0.56 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	**0.42 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	0.5 U
Carbon Tetrachloride	5	**0.61 J**	0.75 U	0.75 U	**0.75 J**	**0.36 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**	**4.7 J+**	**4.9**	**5.8**	**3.8**	**4.6**	**0.73 J**	**3.3**
Tetrachloroethene (PCE; PERC)	5	**33**	**44.6**	**36.3 J+**	**38.7**	**31.9**	**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	0.5 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	**0.36 J**	**0.63 J**	**0.28 J**
Trichloroethene (TCE)	5	**182**	**196**	**195**	**214**	**172**	**140**	**143**	**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	0.75 U	0.5 U
MNA Parameters										
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	**2.7**	NA	NA	NA	NA
Acetylene	NS	NA	NA	NA	1 U	**<0.50**	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**352**	**316**	**352**	**422**	**325**	**367**	**243**	**291**	**325**
Chloride (mg/L)	NS	**22.1**	**32.4**	**29.0**	**33.1**	**41.6**	**31.1**	**39.6**	**60.6**	**39.1**
Nitrate (mg/L)	NS	0.06 U	**0.06 J**	**1.5**	**0.58**	0.20 U	**0.36**	**0.38**	**0.82**	**0.78**
Sulfate (mg/L)	NS	**22.4**	**20.9**	**13.0**	**23.1**	**13.6**	**20.5**	**21.2**	**30.0**	**37.3**
Methane (µg/L)	NS	**3.4**	**3.0**	**1.0**	**1800**	1.5 U	**471**	**28**	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	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	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**	**1.1**	**1.0**	**2.4**
Field Parameters										
pH (pH Unit)	NS	6.83	7.03	7.05	7.33	6.84	7.19	7.54	7.6	7.17
Turbidity (NTU)	NS	209	1.5	-3	1.32	0.02	2.11	0.97	0.9	1.90
ORP (MeV)	NS	273.2	71.2	97.4	11.1	176.4	23.1	86.5	100.1	117
Conductivity (mS/cm)	NS	0.324	0.366	0.554	7.33	0.613	0.085	0.441	0.578	0.871
Dissolved Oxygen YSI (mg/L)	NS	6.75	3.94	7.59	0.63	0.89	0.35	9.26	9.85	2.33
Groundwater Elevation (ft)	NS	227.07	225.41	229.79	228.07	227.62	226.56	222.67	226.33	227.95

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-29 (Screened Inteval = 67 - 72 ft bgs)								
		12/1/2015	12/14/2016	6/27/2017	6/22/2018	6/19/2019	6/17/2020	12/10/2020	6/16/2021	10/19/2022
		Upgradient								
VOCs (ug/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	NA
1,1,1-Trichloroethane (1,1,1-TCA)	5	**12.4**	**14.0 J+**	**11.8 J+**	**11.8**	**8.7**	**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 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 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**	**0.53 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	**0.57 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 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**	**0.64 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**	**4.0**	**0.95 J**	**3.3 J-**
Tetrachloroethene (PCE; PERC)	5	**33.2**	**30.8 J+**	**38.1 J+**	**35.4**	**29.7**	**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 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**	0.47 J	0.5 UJ
Trichloroethene (TCE)	5	**224**	**209 J+**	**264**	**248**	**161**	**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 UJ	0.5 UJ
MNA Parameters										
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	**1.5**	NA	NA	NA	NA
Acetylene	NS	NA	NA	NA	1.0 U	**<0.50**	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**327**	**301**	**361**	**370**	**342**	**282**	**244**	**213**	**309**
Chloride (mg/L)	NS	**28.2**	**28.4**	**49.4**	**28**	**38.9**	**34.7**	**42.9**	**41.9**	**42.7**
Nitrate (mg/L)	NS	**0.1 J**	**0.26**	**1.3 J**	**0.38**	**0.26**	**0.64**	**0.46**	**0.6**	**0.59**
Sulfate (mg/L)	NS	**29.2**	**24.9**	**13.8**	**21**	**12.9**	**16**	**21.3**	**22.4**	**20.7**
Methane (µg/L)	NS	**13.9**	**0.62**	0.05 U	**210**	1.5 U	1.5 U	1.6 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	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	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+**	**0.99 J**	**5.3**	**2.4**
Field Parameters										
pH (pH Unit)	NS	7.06	7.02	7.02	7.33	6.96	7.33	7.44	7.09	7.17
Turbidity (NTU)	NS	82.4	0.62	2.8	15.2	3.43	997.3	0.24	0	3.90
ORP (MeV)	NS	-25.1	60.9	120.2	52.3	169.6	110.7	165.9	-29.3	127
Conductivity (mS/cm)	NS	0.325	0.354	0.619	0.61	0.63	0.488	0.365	0.258	0.892
Dissolved Oxygen YSI (mg/L)	NS	4.29	6.17	7.12	2.98	2.23	5.25	9.31	2.21	1.43
Groundwater Elevation (ft)	NS	227.05	225.38	229.82	228.09	227.64	226.58	218.80	227.20	228.00

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-30 (Screened Inteval = 82 - 92 ft bgs)									
		12/1/2015	12/13/2016	6/26/2017	7/18/2018	6/19/2019	6/17/2020	12/8/2020	6/15/2021	10/19/2022	
		Downgradient									
VOCs (ug/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	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	0.5 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	
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	0.5 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	0.5 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	
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	0.5 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	
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	0.75 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	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	0.5 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	0.5 U	
Trichloroethene (TCE)	5	**25.2**	**42.3**	**24.3**	**8.1**	**5.0**	**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	0.5 U	0.5 U	
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	**8.5**	NA	NA	NA	NA	
Acetylene	NS	NA	NA	NA	1.0 UJ	**<0.50**	NA	NA	NA	NA	
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**143**	**319**	**154**	**58**	**65**	**48**	**70**	**106**	**42.5**	
Chloride (mg/L)	NS	**38.4**	**182**	**49.6**	**38.8**	**37.6**	**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	0.14 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**	**2.0 J**	**7.5**	**1.8 J**	
Methane (µg/L)	NS	**47.4**	**146**	**3210**	**3700**	**91.6**	**5630**	**6270**	**4280**	**2800**	
Ethane (µg/L)	NS	**4.7**	**5.4**	**36.7**	**52**	3.3 U	**29.7**	**25.9**	**20.2**	1.92 U	
Ethene (µg/L)	NS	**2.2**	**3.3**	**12.7**	**6.3**	2.4 U	**2.5**	**1.7 J**	**1.6 J**	**16.7 J+**	
Total Organic Carbon (mg/L)	NS	**2.2**	**225**	**75.2**	**9.7 J**	**7.7**	**5.4**	**5.1**	**3.3**	**3.2**	
Field Parameters											
pH (pH Unit)	NS	8.91	6.83	7.77	8.28	7.8	8.68	8.38	8.06	8.36	
Turbidity (NTU)	NS	58.2	3.55	3	950.5	0.81	1.45	1.12	0.3	20.01	
ORP (MeV)	NS	-278.4	-166.3	-173.3	12.1	-164	-202	-170.5	-182.3	-224	
Conductivity (mS/cm)	NS	0.21	1.41	0.32	0.238	0.23	0.06	0.210	0.313	0.279	
Dissolved Oxygen YSI (mg/L)	NS	3.7	0.29	0.48	0.98	0.28	0.05	0.38	0.41	0	
Groundwater Elevation (ft)	NS	226.98	225.35	229.44	227.80	227.52	226.19	224.17	226.70	228.39	

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-31 (Screened Inteval = 82 - 92 ft bgs)								
		12/1/2015	12/14/2016	6/26/2017	6/21/2018	6/19/2019	6/17/2020	12/9/2020	6/16/2021	10/19/2022
		Upgradient								
VOCs (ug/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	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	0.5 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
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	0.5 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	0.5 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
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	0.5 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
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	**0.55 J**	**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	0.5 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	0.5 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	0.5 U
Trichloroethene (TCE)	5	**42.7**	**38.2**	**29.0**	**20.6**	**26.2**	**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	0.5 U
MNA Parameters										
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	**2**	NA	NA	NA
Acetylene	NS	NA	NA	NA	1 U	**<0.50**	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**178**	**222**	**150**	**169**	**142**	**160**	**142**	**212.0**	**145**
Chloride (mg/L)	NS	**41.9**	**56.6**	**31**	**39.9**	**45.9**	**41.4**	**48.2**	**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	0.14 U	0.25 U
Sulfate (mg/L)	NS	**26.3**	**10.9**	**5.6**	**7.8**	**10.2**	**9.6**	**9.1**	**8.5**	**10.7**
Methane (µg/L)	NS	**20.7**	**3.5**	**56.5**	**120**	**99.3**	**354**	**737**	**178**	**136**
Ethane (µg/L)	NS	**0.91 J**	**0.84 J**	**3.2**	**2.4**	2.4 U	2.4 U	3.6 U	3.6 U	2.64 U
Ethene (µg/L)	NS	**2.1**	**43.9**	**2.8**	**2.1**	1.0 U	1.0 U	**0.72 J**	**1.8**	**1.3**
Total Organic Carbon (mg/L)	NS									
Field Parameters										
pH (pH Unit)	NS	7.80	7.20	9.79	7.83	7.8	7.81	8.03	7.51	7.97
Turbidity (NTU)	NS	51.7	8.03	4.6	2.6	0.69	14.42	0.83	0.00	1.9
ORP (MeV)	NS	-319.7	-163.1	-283.2	-155.1	-165.3	-148.0	-138.0	-141.2	-189.0
Conductivity (mS/cm)	NS	0.243	0.348	0.28	0.324	0.402	0.325	0.316	0.379	0.444
Dissolved Oxygen YSI (mg/L)	NS	1.29	0.28	0.7	0.22	0.15	0.91	0.51	0.4	0.00
Groundwater Elevation (ft)	NS	226.95	225.40	229.52	227.84	227.55	226.33	225.28	227.75	229.02

Table 1-1. Annual Site Wide Groundwater Sample Results

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-32 (Screened Inteval = 82 - 92 ft bgs)									MW-33 (Screened Inteval = 82 - 92 ft bgs)									MW-34 (Screened Inteval = 82 - 92 ft bgs)									MW-35 (Screened Inteval = 82 - 92 ft bgs)								
		11/30/2015	3/21/2017	6/26/2017	6/21/2018	6/20/2019	6/17/2020	12/10/2020	6/15/2021	10/19/2022	11/24/2015	12/14/2016	6/26/2017	6/21/2018	6/19/2019	6/17/2020	12/10/2020	6/15/2021	10/19/2022	11/24/2015	12/13/2016	6/26/2017	6/20/2018	6/20/2019	6/16/2020	12/9/2020	6/15/2021	10/19/2022	11/24/2015	12/15/2016	6/26/2017	6/20/2018	6/20/2019	6/16/2020	12/9/2020	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	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	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	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	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	0.5 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	0.5 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	0.5 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	0.5 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	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	0.5 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	0.5 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	0.5 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	0.5 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	0.5 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	0.5 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	0.5 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	0.5 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	0.75 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	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	0.5 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	0.5 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	0.5 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	0.5 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	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**	**1.3**	**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	**0.45 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**5.0**	0.75 U	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	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	0.5 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	0.5 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	0.75 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	0.5 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	0.5 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	0.75 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	0.5 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	0.5 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	0.75 U	0.75 U	0.5 U
Trichloroethene (TCE)	5	**150**	**191**	**130**	**64.1**	**118**	**149**	**122**	**134.0**	**110**	**133**	**93.5**	**152**	**178**	**97.4**	**165**	**148**	**149**	**140**	**17.7**	**41.3**	**34.0**	**31.3**	**1.1**	**18.9**	**3.6**	**3.9 J**	**22.5**	**31.9**	**31.8**	**43.8 J+**	**39.4**	**34.8**	**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	0.5 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	0.5 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	0.75 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	NA	**3.3**	NA	NA	NA	NA	NA	NA	NA	NA	**2.2**	NA	NA	NA	NA	NA	NA	NA	**1.4**	NA	NA	NA	NA	NA
Acetylene	NS	NA	NA	NA	1 U	**<0.50**	NA	NA	NA	NA	NA	NA	NA	1 U	**<0.50**	NA	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
Alkalinity, Total (as $CaCO_3$) (mg/L)[3]	NS	**196**	**214**	**129**	**128**	**134**	**169**	**168**	**178.0**	**152.0**	**172**	**218**	**205**	**215**	**172**	**201**	**194**	**209**	**183**	**99**	**191**	**201**	**226**	**194**	**146**	**99**	**247**	**182**	**181**	**223**	**202**	**197**	**174**	**177**	**184**	**168**	**181**
Chloride (mg/L)	NS	**35.6**	**84.6**	**38.0**	**29.5**	**24.1 J-**	**32.1**	**27.7**	**26.1**	**35.7**	**41.8**	**43.2**	**22.8**	**22.5**	**21.2**	**25.8**	**32.8**	**35.0**	**33.5**	**48.5**	**62.3**	**15.7**	**16.3**	**6.6 J-**	**13.8**	**3.8**	**3.4**	**13.8**	**42.2**	**53.9**	**17.1**	**15.7**	**21.2 J-**	**26.1**	**26.2**	**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	0.14 U	0.1 U	0.25 U	0.06 U	0.06 U	**0.32**	**0.42**	**0.42**	**0.46**	**0.50**	**0.62**	**0.67**	**0.56**	**0.06 J**	0.2 U	0.06 U	0.06 U	0.06 U	0.14 U	**0.10 J**	0.25 U	0.06 U	**0.040 J**	**0.66**	**0.64**	**0.38**	**0.54**	**0.50**	**3.8**	**0.82**
Sulfate (mg/L)	NS	**21.1**	**0.68 J**	2 U	**2.3**	**8.6**	**11.5**	**9.8**	**9.6**	**10.0**	**25.1**	**8.2**	**11.8**	**14.3**	**10.9**	**13.6**	**13.1**	**12.8**	**12.9**	**64.3**	**23.8**	**13.4**	**11.2**	2.0 U	**3.5**	**5.5**	**3.9**	**10.4**	**48.1**	**7.2**	**13.6**	**10.7**	**9.8**	**10.3**	**10.6**	**21.9**	**10**
Methane (µg/L)	NS	**6.8**	**309**	**817**	**130**	**2190**	**232**	**950**	**2570**	**545**	**64**	**3.4**	**16**	**17**	**4.7**	**4.8**	1.6 U	1.6 U	0.94 U	**14.5**	**1.2**	**12.4**	**35**	**419**	**1740**	**8.5**	**1.5 J**	**22.7 J**	**13.8**	**0.90**	**7.2**	**23**	**38.3**	**59**	1.6 U	**5.1**	0.94 U
Ethane (µg/L)	NS	**0.5 J**	**19.3**	**35.9**	**2**	**12.1**	**4.5**	**6.5**	**8.7**	1.92 U	**7**	**0.25 J**	0.5 U	0.5 U	3.3 U	3.3 U	2.6 U	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	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	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	3.6 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	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	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	3.6 U	2.64 U
Total Organic Carbon (mg/L)	NS	**2.6**	**98**	**22**	**6.4**	**1.4 J+**	1.0 U	**0.94 J**	**1.1**	**1.6**	**8.1**	**30.9**	**0.54 J**	**1.6**	**1.8 J+**	1.0 U	**1.1**	**1.0**	**1.4**	**5.9**	**12**	**3.3**	**0.93 J**	**8.3**	**3.8**	**3.8**	**11.1**	**3.0**	**7.7**	**18.3**	**0.75 J**	**0.6 J**	**1.2 J+**	1.0 U	**0.59 J**	**1.0**	**1.3**
Field Parameters																																					
pH (pH Unit)	NS	8.00	7.54	9.28	8.03	7.77	7.75	8.08	7.71	7.77	8.39	7.18	8.8	7.66	7.21	7.3	7.81	7.54	7.50	12.68	7.14	7.26	7.30	8.91	8.59	7.79	6.99	7.44	9.68	7.09	7.66	7.55	7.42	7.56	7.87	7.33	7.47
Turbidity (NTU)	NS	180	4.01	5.1	0.02	0.02	0.66	1.11	0.02	51.10	23.1	9.31	3.4	2.78	7.84	3.99	5.51	0.02	1.20	44.7	3.23	-4	1.4	5.55	3.16	1.20	1.32	1.90	381	5.99	38.2	25.8	12.1	3.9	0.67	0.1	3.60
ORP (MeV)	NS	-234.2	-140.7	-238.7	-149.4	-165.3	-151.9	-190.2	-182.3	-179.0	-471.2	-126.8	44.9	17.6	2.8	196	151.4	70.7	37.0	-185.4	-8.4	-139.4	-76.3	-140.1	-87.4	112.0	187.9	-98.0	-404	-167.9	-10.6	69.5	-37.1	101.2	141.8	66.3	62.0
Conductivity (mS/cm)	NS	0.239	0.64	0.261	0.206	0.32	0.124	0.243	0.429	0.388	0.247	0.303	0.35	0.382	0.374	0.322	0.286	0.422	0.439	0.361	0.63	0.332	0.332	0.368	0.17	0.142	0.39	0.380	0.287	0.329	0.324	0.335	0.361	0.394	0.328	0.246	0.404
Dissolved Oxygen YSI (mg/L)	NS	0.64	1.77	2.5	8.26	0.3	1.39	0.27	0.41	0.00	0.92	0.41	2.99	3.41	0.65	7.05	5.68	4.7	3.29	6.9	1.12	0.46	1.31	0.35	0.17	1.14	5.55	0.00	0.79	0.41	3.67	3.54	1.82	6.44	7.32	0.99	3.35
Groundwater Elevation (ft)	NS	226.86	223.70	229.05	227.45	227.39	225.93	223.54	226.27	227.30	226.89	225.51	229.11	227.51	227.42	226.07	223.63	226.29	227.23	226.73	225.48	228.66	227.03	227.21	225.45	223.49	225.66	227.49	226.69	225.46	228.68	227.04	227.26	225.66	223.61	225.75	227.36

Table 2-1. Profiling Point Advancement

Sampling Location	Location	Rationale for Location	Advancement Date	Northing[1]	Easting[1]	Ground Surface Elevation (ft amsl)[2]	Total Depth (ft bgs)	Water Table Interface (ft bgs)
PRO-01	Downgradient of PRB in core of TCE plume north of compliance wells MW-33/MW-32	Assess lower hydraulic conductivity zones previously observed during ZVI injection (adjacent to MW-33/MW-32), along deeper portion of PRB wall	5/5/2023	1460416.028	628794.2204	290.2	127	64
PRO-02	Downgradient of northern portion of PRB south of compliance wells MW-29/MW-28	Assess lower hydraulic conductivity zones previously observed during ZVI injection (south of MW-29/MW-28), along shallow portion of PRB wall	5/8/2023	1460768.174	628829.7949	293.6	107	67
PRO-03	Upgradient of northern portion of PRB south of compliance wells MW-29/MW-28	Assess lower hydraulic conductivity zones previously observed during ZVI injection (south of MW-29/MW-28), along shallow portion of PRB wall	5/7/2023	1460769.664	628887.5304	293.5	107	67
PRO-04	Downgradient of PRB south of compliance wells MW-30/MW-31	Assess lower hydraulic conductivity zones previously observed during ZVI injection (south of MW-30/MW-31), along deeper portion of PRB wall	5/9/2023	1460454.249	628783.4333	290.3	92	57
PRO-05	Upgradient of PRB south of compliance wells MW-30/MW-31	Assess lower hydraulic conductivity zones previously observed during ZVI injection (south of MW-30/MW-31), along deeper portion of PRB wall	5/18/2023	1460448.281	628840.4311	289.6	107	65
PRO-06	Downgradient of PRB south of compliance wells MW-33/MW-32	Assess groundwater concentrations along edge of lower hydraulic conductivity zones (south of MW-33/MW-32), along deeper portion of PRB wall	5/4/2023	1460305.596	628785.3777	288.8	127	62
PRO-07	Upgradient of PRB south of compliance wells MW-33/MW-32	Assess groundwater concentrations along edge of lower hydraulic conductivity zones (south of MW-33/MW-32), along deeper portion of PRB wall	5/3/2023	1460299.072	628820.7397	289	97	65
PRO-08	Downgradient of PRB and MW-28	Assess downgradient groundwater conditions	5/11/2023	1460855.359	628625.913	294.4	97	67
PRO-09	Downgradient of PRB and PRO-04	Assess downgradient groundwater conditions	5/16/2023	1460295.496	628567.7559	287.1	92	67
PRO-10	Downgradient of PRB and PRO-06	Assess downgradient groundwater conditions	5/15/2023	1460469.067	628530.2019	289.3	147	67

1) Northing and easting orientation and bearings are referenced to Grid North and are based on the New York State Plane Coordinate System, East Zone, NAD 83/2011 epoch 2010.00. The distances shown are horizontal ground distances.
2) Vertical datum is NAVD 88.
Notes:
amsl = Above mean sea level
bgs = Below ground surface
ft = Foot (feet)
PRB = Permeable reactive barrier
TCE = Trichloroethene
ZVI = Zero valent iron

Table 2-2. Profiling Point Advancement and Groundwater Screening Sample Collection Summary

Vertical Aquifer Groundwater Grab Sample Profiling Point	Northing[(1)]	Easting[(1)]	Water Table Interface Depth (ft bgs)	Total Depth (ft bgs)	Sample Collection Method	Sample Interval (ft bgs)	Sample Collection Date	Field Screening Sample ID	Confirmatory VOC Sample ID	Laboratory SDG	Boring Completion
PRO-01	1460416.0280	628794.2204	64	127	Push-Ahead	70	5/5/2023	PRO-01-70	FSND-PRO-01-70-05062023	O2751	Abandoned (grouted to surface)
					Push-Ahead	79	5/6/2023	PRO-01-79	Not collected	NA	
					Push-Ahead	89	5/6/2023	PRO-01-89	FSND-PRO-01-89-05062023	O2751	
					Push-Ahead	99	5/6/2023	PRO-01-99	FSND-PRO-01-99-05062023	O2751	
									Field Duplicate (FSND-DUP-02-05062023)	O2751	
					Push-Ahead	109	5/6/2023	PRO-01-109	Not collected	NA	
					Push-Ahead	119	5/6/2023	PRO-01-119	Not collected	NA	
PRO-02	1460768.1740	628829.7949	67	107	Push-Ahead	71	5/8/2023	PRO-02-71	FSND-PRO-02-71-05082023	O2751	Abandoned (grouted to surface)
					Push-Ahead	81	5/8/2023	PRO-02-81	FSND-PRO-02-81-05082023	O2751	
					Push-Ahead	89	5/8/2023	PRO-02-89	Not collected	NA	
					Push-Ahead	99	5/8/2023	PRO-02-99	Not collected	NA	
PRO-03	1460769.6640	628887.5304	67	107	Push-Ahead	71	5/7/2023	PRO-03-71	FSND-PRO-03-71-05072023	O2860	Abandoned (grouted to surface)
					Push-Ahead	79	5/7/2023	PRO-03-79	Not collected	NA	
					Push-Ahead	90	5/7/2023	PRO-03-90	FSND-PRO-03-90-05072023	O2643	
					Push-Ahead	99	5/7/2023	PRO-03-99	Not collected	NA	
PRO-04	1460454.2490	628783.4333	66	92	Push-Ahead	71	5/9/2023	PRO-04-71	FSND-PRO-04-71-05092023	O2643	Installed nested well pair MW-EVAL-01S/D
					Push-Ahead	81	5/9/2023	PRO-04-81	FSND-PRO-04-81-05092023	O2643	
					Push-Ahead	94	5/9/2023	PRO-04-94	Not collected	NA	
					Push-Ahead	101	5/9/2023	PRO-04-101	Not collected	NA	
PRO-05	1460448.2810	628840.4311	65	107	Push-Ahead	71	5/17/2023	PRO-05-71	Not collected	NA	Abandoned (grouted to surface)
					Push-Ahead	81	5/17/2023	PRO-05-81	Not collected	NA	
					Push-Ahead	91	5/18/2023	PRO-05-91	FSND-PRO-05-91-05182023	O2860	
					Push-Ahead	101	5/18/2023	PRO-05-101	FSND-PRO-05-101-05182023	O2860	
					Push-Ahead	111	5/18/2023	PRO-05-111	Not collected	NA	
PRO-06	1460305.5960	628785.3777	62	127	Push-Ahead	69	5/4/2023	PRO-06-69	Not collected	NA	Abandoned (grouted to surface)
					Push-Ahead	79	5/4/2023	PRO-06-79	FSND-PRO-06-79-05042023	O2643	
					Push-Ahead	90	5/4/2023	PRO-06-90	Not collected	NA	
					Push-Ahead	99	5/4/2023	PRO-06-99	FSND-PRO-06-99-05042023	O2643	
PRO-07	1460299.0720	628820.7397	65	97	Push-Ahead	69	5/3/2023	PRO-07-69	Not collected	NA	Abandoned (grouted to surface)
					Push-Ahead	79	5/3/2023	PRO-07-79	Not collected	NA	
					Push-Ahead	90	5/3/2023	PRO-07-90	FSND-PRO-07-90-05032023	O2751	
					Push-Ahead	99	5/3/2023	PRO-07-99	FSND-PRO-07-99-05032023	O2751	
									Field Duplicate (FSND-DUP-01-05032023)	O2751	
PRO-08	1460855.3590	628625.9130	67	92	Push-Ahead	71	5/11/2023	PRO-08-71	FSND-PRO-08-71-05112023	O2751	Installed nested well pair MW-EVAL-02S/D
					Iso-Flow	81	5/11/2023	PRO-08-81	FSND-PRO-08-81-05112023	O2860	
					Push-Ahead	91	5/11/2023	PRO-08-91	Not collected	NA	
					Push-Ahead	101	5/11/2023	PRO-08-101	Not collected	NA	
PRO-09	1460295.4960	628567.7559	63	92	Push-Ahead	73	5/16/2023	PRO-09-73	FSND-PRO-09-73-05162023	O2860	Installed nested well pair MW-EVAL-04S/D
									Field Duplicate (FSND-DUP-03-05162023)	O2860	
					Push-Ahead	81	5/16/2023	PRO-09-81	Not collected	NA	
					Push-Ahead	91	5/16/2023	PRO-09-91	Not collected	NA	
					Push-Ahead	101	5/16/2023	PRO-09-101	FSND-PRO-09-101-05162023	O2860	
PRO-10	1460469.0670	628530.2019	57	147	Push-Ahead	71	5/12/2023	PRO-10-71	Not collected	NA	Installed nested well pair MW-EVAL-03S/D
					Push-Ahead	81	5/12/2023	PRO-10-81	Not collected	NA	
					Push-Ahead	91	5/12/2023	PRO-10-91	Not collected	NA	
					Push-Ahead	101	5/12/2023	PRO-10-101	Not collected	NA	
					Push-Ahead	111	5/12/2023	PRO-10-111	Not collected	NA	
					Push-Ahead	121	5/12/2023	PRO-10-121	Not collected	NA	
					Push-Ahead	131	5/15/2023	PRO-10-131	FSND-PRO-10-131-05152023	O2860	
					Push-Ahead	141	5/15/2023	PRO-10-141	Not collected	NA	
					Push-Ahead	151	5/15/2023	PRO-10-151	FSND-PRO-10-151-05152023	O2860	

Notes:

1) Northing and easting orientation and bearings are referenced to Grid North and are based on the New York State Plane Coordinate System, East Zone, NAD 83/2011 epoch 2010.00. The distances shown are horizontal ground distances.

bgs = Below ground surface

ft = Foot (feet)

ID = Identification

NA = Not applicable/available

SDG = Sample delivery group

TBD = To be determined

VOC = Volatile organic compound

Table 2-3. Monitoring Well Construction Details

Well ID	Vertical Aquifer Groundwater Grab Sample Profiling Point Location	Date Installed	Northing[(1)]	Easting[(1)]	Ground Surface Elevation (ft amsl)[(2)]	Top of Casing Elevation (ft amsl)[(2)]	Well Diameter (inches)	Surface Completion	Well Screen Material	Well Screen Length (ft)	Screen Interval (ft bgs)	Filterpack Interval (ft bgs)	Granular Bentonite Seal Interval (ft bgs)	Grout Interval (ft bgs)
MW-EVAL-01S	PRO-04	5/10/2023	1460454.249	628783.43	290.3	290.02	2	Flushmount	Schedule 40 PVC	10	65-75	63-77	58-63	0-58
MW-EVAL-01D		5/10/2023	1460454.249	628783.43	290.3	290.02	2	Flushmount	Schedule 40 PVC	5	85-90	83-92	77-83	
MW-EVAL-02S	PRO-08	5/12/2023	1460855.359	628625.91	294.4	294.14	2	Flushmount	Schedule 40 PVC	10	70-80	68-82	62-68	0-62
MW-EVAL-02D		5/12/2023	1460855.359	628625.91	294.4	294.14	2	Flushmount	Schedule 40 PVC	5	91-96	89-97	82-89	
MW-EVAL-03S	PRO-10	5/15/2023	1460469.067	628530.2	289.3	289.11	2	Flushmount	Schedule 40 PVC	10	70-80	68-82	66-68	0-66
MW-EVAL-03D		5/15/2023	1460469.067	628530.2	289.3	289.11	2	Flushmount	Schedule 40 PVC	5	130-135	128-137	82-128	
MW-EVAL-04S	PRO-09	5/17/2023	1460295.496	628567.76	287.1	286.9	2	Flushmount	Schedule 40 PVC	10	65-75	63-75	61-63	0-61
MW-EVAL-04D		5/17/2023	1460295.496	628567.76	287.1	286.9	2	Flushmount	Schedule 40 PVC	5	85-90	83-90	77-83	

1) Northing and easting orientation and bearings are referenced to Grid North and are based on the New York State Plane Coordinate System, East Zone, NAD 83/2011 epoch 2010.00. The distances shown are horizontal ground distances.

2) Vertical datum is NAVD 88.

Notes:
amsl = Above mean sea level
bgs = Below ground surface
ft = Foot (feet)
ID = Identification
PVC = Polyvinyl chloride
TBD = To be determined

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Table 2-4. Groundwater Sampling Design and Rationale

Well ID	Screen Interval (ft bgs)	Rationale
VOC and MNA Parameter Wells		
MW-EVAL-01S	65-75	Installed during the May 2023 PRB wall evaluation profiling point and monitoring well installation event, baseline sampling to evaluate VOC and MNA parameters and PRB effectiveness
MW-EVAL-01D	85-90	
MW-EVAL-02S	70-80	
MW-EVAL-02D	91-96	
MW-EVAL-03S	70-80	
MW-EVAL-03D	130-135	
MW-EVAL-04S	65-75	
MW-EVAL-04D	85-95	
MW-6	58.5-68.5	Previously existing upgradient and downgradient wells, sampled to account for limited historic MNA data and to compliment the CSIA samples
MW-22R	63-78	
CSIA Wells		
MW-22R	63-78	Evaluate CSIA within centerline of TCE plume upgradient of PRB wall; TCE concentration of 120 µg/L during most recent (October 2022) annual sampling event
MW-EVAL-03S	70-80	Evaluate CSIA in shallow groundwater within centerline of TCE plume downgradient of the PRB wall; field screening TCE concentration of 62.5 µg/L at 71 ft bgs and 117.35 µg/L at 81 ft bgs in May 2023
MW-EVAL-03D	130-135	Evaluate CSIA in deep groundwater within centerline of TCE plume downgradient of the PRB wall; field screening TCE concentration of 205.78 µg/L at 131 ft bgs in May 2023
MW-EVAL-04S	65-75	Evaluate CSIA in shallow groundwater within TCE plume downgradient of the PRB wall south of MW-EVAL-03S/D; field screening TCE concentration of 81.21 µg/L at 73 ft bgs in May 2023
MW-EVAL-04D	85-95	Evaluate CSIA in deep groundwater within TCE plume downgradient of the PRB wall south of MW-EVAL-03S/D, field screening TCE concentration of 39.58 µg/L at 81 ft bgs and non-detect at 91 ft bgs in May 2023
MW-6	58.5-68.5	Evaluate CSIA at downgradient edge of plume; TCE concentration of 30.1 µg/L during most recent (October 2022) annual sampling event
MW-31	82-92	Evaluate CSIA in plume crossing the PRB wall; TCE concentrations of 34.8 µg/L at upgradient well MW-31 and 2.3 µg/L at downgradient well MW-30 µg/L during most recent (October 2022) annual sampling event
MW-30	82-92	
MW-33	82-92	Evaluate CSIA in plume crossing the PRB wall; TCE concentrations of 140 µg/L at upgradient well MW-33 and 110 µg/L at downgradient well MW-32 µg/L during most recent (October 2022) annual sampling event
MW-32	82-92	
VOC Wells		
MW-8	Not available	Sampled annually for VOCs, well was inaccessible and could not be sampled during most recent (October 2022) annual sampling event
MW-18	60-75	Sampled annually for VOCs, well was inaccessible and could not be sampled during most recent (October 2022) annual sampling event

Notes:
µg/L = Microgram(s) per liter
bgs = Below ground surface
CSIA = Compound specific isotope analysis
ft = Foot (feet)
ID = Identification
MNA = Monitored natural attenuation
PRB = Permeable reactive barrier
TCE = Trichloroethene
VOC = Volatile organic compound

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Table 2-5. Former Scotia Navy Depot - Groundwater Sample Tracking Table

Sample Location	Sample ID	Sample Type	Collection Date	Collection Time	VOCs (SW8260D)	TOC (SM5310B)	Alkalinity (SM2320B)	Anions (SW9056A)	Methane, Ethane, and Ethene (RSK-175)	Total Iron (6010D)	Dissolved Iron (6010D)	CSIA	Laboratory SDG VOCs	Laboratory SDG TOC, Alkalinity, Anions, Total/Dissolved Iron	Laboratory SDG Methane, Ethane, and Ethene	Laboratory SDG CSIA
Groundwater Samples																
MW-EVAL-1S	FSND-MW-EVAL-1S-06122023	Parent sample for DUP-1	6/12/2023	15:45	X	X	X	X	X	X	X	---	O3231	O3177	O3231	NA
	FSND-DUP-1-06122023	Field duplicate of MW-EVAL-1S		---	X	---	---	---	---	---	---	---	O3231	N/A	N/A	NA
MW-EVAL-1D	FSND-MW-EVAL-1D-06132023		6/13/2023	8:50	X	X	X	X	X	X	X	---	O3231	O3230	O3231	NA
MW-EVAL-2S	FSND-MW-EVAL-2S-06132023		6/13/2023	13:15	X	X	X	X	X	X	X	---	O3231	O3230	O3231	NA
MW-EVAL-2D	FSND-MW-EVAL-2D-06132023		6/13/2023	11:00	X	X	X	X	X	X	X	---	O3231	O3230	O3231	NA
MW-EVAL-3S	FSND-MW-EVAL-3S-06122023		6/12/2023	13:55	X	X	X	X	X	X	X	X	O3231	O3177	O3231	NA
MW-EVAL-3D	FSND-MW-EVAL-3D-06122023		6/12/2023	11:25	X	X	X	X	X	X	X	X	O3231	O3177	O3231	NA
MW-EVAL-4S	FSND-MW-EVAL-4S-06122023		6/12/2023	10:45	X	X	X	X	X	X	X	X	O3231	O3177	O3231	NA
MW-EVAL-4D	FSND-MW-EVAL-4D-06122023		6/12/2023	12:25	X	X	X	X	X	X	X	X	O3231	O3177	O3231	NA
MW-6	FSND-MW-6-06132023		6/13/2023	8:20	X	X	X	X	X	X	X	X	O3231	O3230	O3231	NA
MW-22R	FSND-MW-22R-06132023		6/13/2023	10:05	X	X	X	X	X	X	X	X	O3231	O3230	O3231	NA
MW-30	FSND-MW-30-06132023		6/13/2023	14:55	---	---	---	---	---	---	---	---	X	NA	NA	NA	041UF
MW-31	FSND-MW-31-06132023		6/13/2023	15:55	---	---	---	---	---	---	---	---	X	NA	NA	NA	041UF
MW-32	FSND-MW-32-06122023		6/12/2023	17:40	---	---	---	---	---	---	---	---	X	NA	NA	NA	041UF
MW-33	FSND-MW-33-06132023		6/13/2023	14:50	---	---	---	---	---	---	---	---	X	NA	NA	NA	041UF
MW-18	FSND-MW-18-06132023		6/13/2023	13:55	X	---	---	---	---	---	---	---	---	O3231	NA	NA	041UF
MW-8	FSND-MW-8-06132023	Parent sample for DUP-2	6/13/2023	12:15	X	---	---	---	---	---	---	---	---	O3231	NA	NA	041UF
	FSND-DUP-2-06132023	Field duplicate of MW-8		---	X	---	---	---	---	---	---	---	---	O3231	NA	NA	041UF
QA/QC Samples																
MW-EVAL-4S	FSND-MW-EVAL-4S-06122023	MS/MSD for VOCs	6/12/2023	10:45	X	---	---	---	---	---	---	---	O3231	NA	NA	NA
FSND-EQB-1-06122023		Equipment Blank for VOCs	6/12/2023	17:30	X	---	---	---	---	---	---	---	O3231	NA	NA	NA
FSND-EQB-2-06132023		Equipment Blank for VOCs	6/13/2023	16:00	X	---	---	---	---	---	---	---	O3231	NA	NA	NA
TB		Trip Blank for VOCs	6/12/2023	---	X	---	---	---	---	---	---	---	O3231	NA	NA	NA

Notes:
CSIA = Compound specific isotope analysis
ID = Identification
MS = Matrix spike
MSD = Matrix spike duplicate
NA = Not applicable
QA = Quality assurance
QC = Quality control
SDG = Sample delivery group
TB = Trip blank
TOC = Total organic carbon
VOC = Volatile organic compound

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	Adjusted Reference Point Elevation (ft) June 2023	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	Depth To Water (ft bgs) May 2023	Depth To Water (ft bgs) June 2023
MW-01S	65-75	290.3	-	-	-	290.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61.9
MW-01D	85-90	290.3	-	-	-	290.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61.99
MW-02S	70-80	294.4	-	-	-	294.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65.96
MW-02D	91-96	294.4	-	-	-	294.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66.02
MW-03S	70-80	289.3	-	-	-	289.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61.5
MW-03D	130-135	289.3	-	-	-	289.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61.62
MW-04S	65-75	287.1	-	-	-	286.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59.46
MW-04D	85-90	287.1	-	-	-	286.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59.4
B-1	48-68	-	287.14	-	-	-	59.4	-	-	57.34	-	-	-	dry	dry	dry	-	-	-	-	-	-	-	-
B-1R	48-68	-	-	287.42	-	287.42	-	-	-	-	-	-	-	-	-	-	57.05	61.99	59.55	61.95	60.84	59.13	-	-
B-3	47.5-67.5	-	287.05	-	-	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	-	-	291.74	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	62.5-72.5	287.95	290.11	-	-	289.44	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	-	-	287.91	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	-	62.40
MW-7	61-71	286.8	289.26	-	-	288.32	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	-	292.33	62.5	68.58	-	-	-	-	-	-	-	-	65.78	72.71	72.82	74.38	66.93	-	-	66.12
MW-9	110-120	285.98	288.33	-	-	287.65	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	-	294.93	-	-	-	-	-	-	-	-	-	-	64.81	-	68.43	71.77	67.53	67.89	-	-
MW-12R	60-80	-	-	292.34	-	291.59	-	-	-	-	-	-	-	-	-	-	64.16	69.64	69.47	71.41	65.71	66.36	-	-
MW-13	65-80	292.62	293.85	-	-	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	293.5	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	65.72	-
MW-15	65-80	-	293.67	-	292.72	291.99	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	65.12	-
MW-16	55-70	-	288.33	-	-	287.66	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	-	291.31	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	63.68	-
MW-18	60-75	-	295.24	291.97	-	291.26	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	-	64.00	62.31
MW-19	62-77	-	297.67	295.33	-	294.6	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	65.71	-
MW-20	63-78	-	301.55	298.55	-	297.78	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	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	-	295.61	-	-	-	-	-	-	-	-	-	-	64.38	67.02	66.71	70.09	68.30	67.70	-	66.21
MW-23	63-78	-	300.54	-	-	299.86	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	-	-	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	67.88	-
MW-25	65-75	288.16	290.26	288.11	-	287.39	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	-	60.46	-
MW-26	100-110	287.23	286.45	-	-	286.96	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	61.91	-
MW-27	100-110	286.08	288.32	-	-	288.59	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	292.97	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	66.56	-
MW-29	67-72	292.50	292.13	-	293.05	292.37	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	71.26	-
MW-30	82-92	291.76	291.63	-	292.84	291.61	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	65.59	63.28
MW-31	82-92	291.80	291.54	-	292.27	290.54	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	64.38	62.16
MW-32	82-92	290.12	289.75	-	-	289.7	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	64.02	61.80
MW-33	82-92	290.27	289.91	-	-	289.87	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	64.07	61.79
MW-34	82-92	287.30	287.05	-	-	286.99	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	61.53	-
MW-35	82-92	287.25	286.96	-	-	286.91	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	61.48	-
MW-36	70-80	292.61	292.36	-	-	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	292.18	67.62	-	70.55	65.06	-	69.30	70.33	-	-	67.72	65.07	66.30	68.40	68.91	65.64	65.18	66.19	-
GEP-2	60.6-75.6	-	296.02	-	293.93	293.18	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	65.98	-
GEP-3	59.6-74.6	-	292.97	-	291.9	291.23	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	64.49	-
GEP-4	60.15-75.15	-	295.62	292.88	292.9	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	65.23	-

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)

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	Groundwater Elevation May 2023	Groundwater Elevation June 2023
MW-01S	65-75	290.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	228.12
MW-01D	85-90	290.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	228.03
MW-02S	70-80	294.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	228.18
MW-02D	91-96	294.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	228.12
MW-03S	70-80	289.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227.61
MW-03D	130-135	289.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227.49
MW-04S	65-75	287.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227.44
MW-04D	85-90	287.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227.50
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	-	225.51
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	-	-	226.21
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	227.78	-
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	226.87	-
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	227.63	-
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	-	227.26	228.95
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	228.89	-
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	-	229.40
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	224.57	-
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	-	226.93	-
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	225.32	-
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	226.41	-
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	221.11	-
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	226.02	228.33
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	226.16	228.38
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	225.68	227.90
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	225.80	228.08
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	225.46	-
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	225.43	-
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	225.99	-
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	227.20	-
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	226.74	-
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	227.67	-

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)

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Table 3-2. Groundwater Screening Sample Water Quality Parameters

Vertical Aquifer Groundwater Grab Sample Profiling Point	Sample /Screened Interval (ft bgs)	Temperature (degrees Celsius)	pH	Oxidation-Reduction Potential (mV)	Conductivity (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)
May 2023 Groundwater Profiling							
PRO-01	70	17.07	6.65	71	0.838	>1,000	4.87
	79	11.2	4.03	143	0.348	>1,000	5.82
	89	12.26	6.4	41	0.377	623	2.71
	99	13.45	7.21	-233	0.572	781	1.00
	109	14,04	7.76	-201	0.546	428	3.24
	119	14.5	7.79	-277	0.552	>1,000	1.07
PRO-02	71	19.08	6.79	88	0.900	749	3.50
	81	16.99	7.33	47	0.542	>1,000	1.98
	89	18.77	7.31	54	0.301	>1,000	1.13
	99	19.76	7.48	61	Not recorded	818	6.02
PRO-03	71	34.82	7.3	-47	0.836	876	1.47
	79	17.87	7.39	-39	0.739	793	1.36
	90	17.78	7.44	-25	0.529	>1,000	1.31
	99	16.99	7.24	-16	0.524	>1,000	3.46
PRO-04	71	15.73	6.29	152	0.654	939	5.89
	81	17.00	7.59	24	0.281	>1,000	1.46
	94	16.33	7.73	-153	0.561	973	1.42
	101	17.37	7.79	-352	0.563	>1,000	1.99
PRO-05	71	19.09	7.31	50	0.598	>1,000	4.36
	81	17.02	7.23	-212	0.549	>1,000	1.06
	91	10.89	6.68	-337	0.695	>1,000	2.21
	101	14.91	7.75	-73	0.614	>1,000	3.78
	111	20.94	7.97	-431	0.512	>1,000	1.30
PRO-06	69	15.32	6.55	-20	0.664	>1,000	5.76
	79	12.47	7.25	-60	0.741	>1,000	4.24
	90	12.47	7.25	-60	0.741	>1,000	4.24
	99	12.61	7.40	-160	0.545	>1,000	1.86
PRO-07	69	Not measured					
	79	Inadvertently deleted from field database					
	90	Inadvertently deleted from field database					
	99	Inadvertently deleted from field database					
PRO-08	71	21.12	7.42	-204	0.656	153	2.53
	81	20.87	6.65	-174	0.751	>1,000	1.64
	91	19.42	7.80	-56	0.571	>1,000	2.75
	101	19.99	7.78	-38	0.484	465	1.81
PRO-09	73	18.10	6.21	13	0.657	>1,000	3.76
	81	21.42	7.31	47	0.375	753	2.08
	91	22.50	7.07	70	0.349	>1,000	3.09
	101	20.18	7.28	-122	0.541	>1,000	0.84
PRO-10	71	25.09	6.74	49	0.747	709	3.27
	81	25.32	7.11	65	0.618	>1,000	3.41
	91	25.02	7.20	83	0.625	>1,000	3.16
	101	20.05	7.33	31	0.527	>1,000	3.80
	111	22.49	7.39	-104	0.555	477	0.94
	121	22.03	7.58	50	0.483	513	1.90
	131	19.23	7.34	-201	0.577	>1,000	2.16
	141	18.72	7.29	-402	0.546	>1,000	1.92
	151	21.09	7.88	-166	0.530	>1,000	1.71
June 2023 Groundwater Sampling							
MW-EVAL-01S	63-77	16.44	7.31	27	0.590	6.9	5.62
MW-EVAL-01D	83-92	16.34	8.04	-154	0.457	4.3	5.33
MW-EVAL-02S	68-82	18.83	7.51	-72	0.770	11.5	0.00
MW-EVAL-02D	89-97	18.08	8.13	-42	0.480	16.8	0.00
MW-EVAL-03S	70-80	15.08	7.49	18	0.612	3.1	0.59
MW-EVAL-03D	130-135	22.86	8.24	-132	0.392	16.9	0.00
MW-EVAL-04S	65-75	16.51	7.15	27	0.621	13.7	5.24
MW-EVAL-04D	85-95	15.21	7.55	12	0.490	6.5	0.00
MW-06	65-75	15.87	6.66	28	0.613	0.3	7.75
MW-08	Not available	19.11	7.13	13	0.504	34.8	5.71
MW-18	60-75	19.57	7	24	0.513	6.5	2.48
MW-22R	63-78	18.4	6.95	16	0.507	70.5	4.56
MW-30	82-92	15.07	9.33	-234	0.230	0.0	0.00
MW-31	82-92	15.07	8.26	-179	0.450	0.0	0.00
MW-32	82-92	15.43	7.58	-194	0.475	5.5	0.00
MW-33	82-92	17.02	7.13	22	0.514	0.0	2.80

Notes:

bgs = Below ground surface

ft = Foot (feet)

ID = Identification

mg/L = Milligram(s) per liter

mS/cm = MilliSiemen(s) per centimeter

mV = Millivolt(s)

NTU = Nephelometric turbidity unit(s)

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Table 3-3. MNA Parameter Results

		Sample Location	MW-EVAL-01S	MW-EVAL-01D	MW-EVAL-02S	MW-EVAL-02D	MW-EVAL-03S	MW-EVAL-03D	MW-EVAL-04S	MW-EVAL-04D	MW-06	MW-22R
		Sample ID	FSND-MW-EVAL-1S-06122023	FSND-MW-EVAL-1D-06132023	FSND-MW-EVAL-2S-06132023	FSND-MW-EVAL-2D-06132023	FSND-MW-EVAL-3S-06122023	FSND-MW-EVAL-3D-06122023	FSND-MW-EVAL-4S-06122023	FSND-MW-EVAL-4D-06122023	FSND-MW-6-06132023	FSND-MW-22R-06132023
		Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
		Sample Date	12-Jun-23	12-Jun-23	12-Jun-23	12-Jun-23	12-Jun-23	12-Jun-23	12-Jun-23	12-Jun-23	13-Jun-23	13-Jun-23
Analyte	Units	CAS No.										
Alkalinity, Total (as $CaCO_3$)	mg/L	ALK	142	182	275	160	161	133	201	178	241	208
Chloride	mg/L	16887-00-6	45.9	47.9	130	75.6	71	57.8	60.1	40.4	62.7	54
Nitrate	mg/L	14797-55-8	1.2	0.25	0.19 J	0.19 J	0.5	0.25	1.6	0.25	1.5	0.62
Sulfate	mg/L	14808-79-8	18.8	17.4	27.2	13.3	21.4	17	22.2	14.6	10.3	15.1
Methane	µg/L	74-82-8	1.6 J	385	324	4.8	2.4 J	6.5	1.6 J	168	<4.7 U	0.59 J
Ethane	µg/L	74-84-0	<9.6 U	1.3 J	<9.6 U	<9.6 U	<9.6 U	<9.6 U	<9.6 U	<9.6 U	<9.6 U	<9.6 U
Ethene	µg/L	74-85-1	6.9 J	<13.2 U	<13.2 U	<13.2 U	4.5 J	<13.2 U	<13.2 U	<13.2 U	4.9 J	<13.2 U
Total Organic Carbon	mg/L	TOC	1.3	1.8	2.2	1.5	2	2.41	1.7	2.3	1.1	1.4
Total Iron	µg/L	7439-89-6	125	633	981	191	84.9	125	154	243	125	3,140
Dissolved Iron	µg/L	7439-89-6	40.6 J	<50 U	<50 U	<50 U	<50 U	22.4 J	<50 U	69.4	43.9 J	<50 U

Notes:
µg/L = Microgram(s) per liter
CAS = Chemical Abstracts Service
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
MCL = Maximum contaminant Level
mg/L = Milligram(s) per liter
NSL = No screening level
RSL = Regional screening level
U = The analyte was analyzed for but was not detected above the level of the reported limit of detection.

Table 3-4. Compound Specific Isotope Analysis Results

Sample Location		MW-6	MW-EVAL-04D	MW-33	MW-22R	MW-31	MW-32	MW-30	MW-EVAL-04S	MW-EVAL-03S	MW-EVAL-03D
Sample ID		FSND-MW-6-06132023	FSND-MW-EVAL-04D-06122023	FSND-MW-33-06132023	FSND-MW-22R-06132023	FSND-MW-31-06132023	FSND-MW-32-06122023	FSND-MW-30-06132023	FSND-MW-EVAL-04S-06122023	FSND-MW-EVAL-03S-06122023	FSND-MW-EVAL-03D-06122023
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Location		Downgradient	Downgradient	Upgradient	Upgradient	Upgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
Sample Date		6/13/2023	6/12/2023	6/13/2023	6/13/2023	6/13/2023	6/12/2023	6/13/2023	6/12/2023	6/12/2023	6/12/2023
Analyte	Units										
13C/12C TCE	$d^{13}C$, VPDB	-24.1	-19.4	-23.2	-26.5	-27.4	-21.3	ND	-22.2	-23.7	-22.2
13C/12C *cis* -DCE	$d^{13}C$, VPDB	NS	NS	NS	NS	ND	ND	ND	NS	NS	NS

Notes:
NS = Not sampled
ND = Not detected
TCE = Trichloroethene
cis -DCE = *cis* -1,2-Dichloroethene
VPDB = Vienna Pee Dee Belemnite Standard for Carbon

Table 4-1. Groundwater Screening Sample Results

Vertical Aquifer Groundwater Grab Sample Profiling Point	Sample Interval (ft bgs)	Field Screening Sample ID	Vinyl Chloride (µg/L)	*cis* 1,2-DCE (µg/L)	TCE (µg/L)	PCE (µg/L)
PRO-01	70	PRO-01-70	ND	ND	133.32	ND
	79	PRO-01-79	ND	ND	292.35	ND
	89	PRO-01-89	ND	1.36	1214.14	ND
	99	PRO-01-99	ND	ND	1.16	ND
	109	PRO-01-109	ND	ND	ND	ND
	119	PRO-01-119	ND	ND	ND	ND
PRO-02	71	PRO-02-71	ND	9.84	181.68	45.550
	71	PRO-02-71 (duplicate)	ND	ND	192.77	28.450
	81	PRO-02-81	ND	ND	5.16	ND
	89	PRO-02-89	ND	ND	1.48	ND
	99	PRO-02-99	ND	ND	ND	ND
PRO-03	71	PRO-03-71	51.18*	35.83	178.79	90.920
	79	PRO-03-79	ND	0.22	4.26	ND
	90	PRO-03-90	ND	ND	6.2	ND
	99	PRO-03-99	ND	ND	ND	ND
PRO-04	71	PRO-04-71	ND	ND	158.2	ND
	71	PRO-04-71 (duplicate)	ND	ND	151.38	5.710
	81	PRO-04-81	27.19*	ND	115.21	ND
	94	PRO-04-94	ND	ND	14.3	ND
	101	PRO-04-101	ND	ND	ND	ND
PRO-05	71	PRO-05-71	7.00*	ND	97.34	2.490
	71	PRO-05-71 (duplicate)	ND	ND	74.55	0.980
	81	PRO-05-81	0.83*	ND	104.06	2.690
	91	PRO-05-91	9.03*	ND	473.22	ND
	101	PRO-05-101	635.91*	102.9	17.13	ND
	111	PRO-05-111	22.73*	ND	0.43	ND
PRO-06	69	PRO-06-69	ND	ND	205.23	ND
	79	PRO-06-79	ND	ND	208.41	ND
	90	PRO-06-90	ND	ND	128.02	ND
	99	PRO-06-99	ND	2.18	867.39	ND
PRO-07	69	PRO-07-69	ND	ND	193.78	ND
	79	PRO-07-79	ND	ND	184.41	ND
	90	PRO-07-90	ND	ND	229.67	ND
	99	PRO-07-99	ND	ND	770.6	ND
PRO-08	71	PRO-08-71	9.28*	ND	77.3	99.210
	71	PRO-08-71 (duplicate)	7.88*	ND	115.6	91.570
	81	PRO-08-81	ND	5.05	14.58	16.290
	91	PRO-08-91	ND	ND	8.12	5.380
	101	PRO-08-101	ND	ND	ND	ND
PRO-09	73	PRO-09-73	ND*	ND	81.21	2.200
	81	PRO-09-81	2.00*	ND	38.67	ND
	81	PRO-09-81 (duplicate)	ND	ND	39.58	ND
	91	PRO-09-91	0.81*	ND	ND	ND
	101	PRO-09-101	ND	ND	ND	ND
PRO-10	71	PRO-10-71	9.6*	ND	62.85	ND
	81	PRO-10-81	0.88*	ND	117.35	ND
	91	PRO-10-91	16.66*	ND	105.98	ND
	101	PRO-10-101	ND	ND	150.56	ND
	111	PRO-10-111	10.27*	ND	144.28	ND
	121	PRO-10-121	ND	ND	167.18	ND
	131	PRO-10-131	1.56*	ND	205.78	ND
	141	PRO-10-141	8.7*	ND	120.13	4.590
	151	PRO-10-151	ND	ND	ND	ND

Notes:

* indicates that the result was blank corrected (result from the most recent blank subtracted from the measured result)

µg/L = Microgram(s) per liter

bgs = Below ground surface

DCE = Dichloroethene

ft = Foot (feet)

ID = Identification

mg/L = Milligram(s) per liter

mS/cm = MilliSiemen(s) per centimeter

mV = Millivolt(s)

ND = Non-detect

NTU = Nephelometric turbidity unit(s)

PCE = Tetrachloroethene

Table 4-2. Groundwater Screening QA/QC Sample Results

Vertical Aquifer Groundwater Grab Sample Profiling Point	Sample Interval (ft bgs)	Sample Type	Field Screening Sample ID	Vinyl Chloride (µg/L)	*cis* 1,2-DCE (µg/L)	TCE (µg/L)	PCE (µg/L)
PRO-01	70	Instrument Blank	Blank1_Pre PRO-01-69	40.43	ND	3.6	ND
		Instrument Blank	Blank2_Pre PRO-01-69	15. 76 (ND)	ND	ND	ND
		Instrument Blank	Blank3_Pre PRO-01-69	12.7 (ND)	ND	ND	ND
		Instrument Blank	Blank4_Pre PRO-01-69	11.66 (ND)	ND	ND	ND
		Instrument Blank	Blank5_Pre PRO-01-69	12.16 (ND)	ND	ND	ND
		Instrument Blank	Blank6_Pre PRO-01-69	14.77 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-01-69_IVC-1	15.09 (ND)	ND	121.89	ND
		Instrument Verification Check Post Initial Run	PRO-01-69_IVC'-2	13.25 (ND)	ND	64.15	ND
		Instrument Blank	Blank7_Pre PRO-01-69	14.05 (ND)	ND	ND	ND
	79	Instrument Blank	Blank1_Pre PRO-01-79	31.39	ND	ND	ND
		Instrument Blank	Blank2_Pre PRO-01-79	18.09 (ND)	ND	ND	ND
		Instrument Blank	Blank3_Pre PRO-01-79	14.49 (ND)	ND	ND	ND
	89	Instrument Blank	Blank4_Pre PRO-01-89	13.64 (ND)	ND	0.62	ND
		Instrument Blank	Blank5_Pre PRO-01-89	13.42 (ND)	ND	ND	ND
	99	Instrument Blank	Blank6_Pre PRO-01-99	14.42 (ND)	ND	3.28	ND
		Instrument Blank	Blank7_Pre PRO-01-99	9.55 (ND)	ND	0.61	ND
	109	Instrument Blank	Blank8_Pre PRO-01-109	13.13 (ND)	ND	ND	ND
	119	Instrument Blank	Blank9_Pre PRO-01-119	13.81 (ND)	ND	ND	0.23 (ND)
		Instrument Blank	Blank10_Post PRO-01-119	13.17 (ND)	ND	ND	ND
PRO-02	71	Instrument Blank	Blank1-Pre PRO-02-71	45.31	ND	ND	97
		Instrument Blank	Blank2-Pre PRO-02-71	27.01	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-02-71	16.9	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-02-71	18.77	ND	ND	ND
		Instrument Blank	Blank8-Pre PRO-02-71 (DUP)	14.87 (ND)	ND	ND	ND
		Instrument Blank	Blank9-Pre PRO-02-71_IVC-1	14.93 (ND)	ND	0.79 (ND)	ND
		Instrument Verification Check	PRO-02-71_IVC-1	14.63 (ND)	4.06 (ND)	180.48	15.88
		Initial Run	PRO-02-71_IVC-2 (Post Initial)	13.38 (ND)	3.86 (ND)	99.68	11.06
		Instrument Blank	Blank10-Post-PRO-02-71_IVC-2	12.87 (ND)	ND	2.78	ND
	81	Instrument Blank	Blank5-Pre PRO-02-81	8.45 (ND)	ND	ND	ND
	89	Instrument Blank	Blank6-Pre PRO-02-89	13.99 (ND)	ND	ND	ND
	99	Instrument Blank	Blank7-Pre PRO-02-99	14.64 (ND)	ND	ND	ND
PRO-03	71	Instrument Blank	Blank1-Pre PRO-03-71	25.29	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-03-71	16.64 (ND)	ND	ND	ND
		Instrument Blank	Blank3Pre PRO-03-71	13.47 (ND)	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-03-71	10.84 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-03-71_IVC-1	42.34	14.7	108.86	108.79
		Initial Run	PRO-03-71_IVC-2 (Post Initial)	39.48	35.79	94.68	125.61
	79	Instrument Blank	Blank5-Pre PRO-03-79	20.04	ND	ND	ND
		Instrument Blank	Blank6-Pre PRO-03-79	16.05 (ND)	ND	ND	ND
		Instrument Blank	Blank7-Pre PRO-03-79	14.81 (ND)	ND	ND	ND
	90	Instrument Blank	Blank8-Pre PRO-03-90	14.72 (ND)	ND	ND	ND
	99	Instrument Blank	Blank9-Pre PRO-03-99	8.34 (ND)	ND	ND	ND
		Instrument Blank	Blank10-Post PRO-03-99	12.29 (ND)	ND	ND	ND
		Instrument Blank	Blank11_Post PRO-03-99_IVC-2	18.16 (ND)	ND	ND	4.74
		Instrument Blank	Blank11_Post PRO-03-99_IVC-2	14.91 (ND)	ND	ND	ND
PRO-04	71	Instrument Blank	Blank1-Pre PRO-04-71	21.52	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-04-71	16.08 (ND)	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-04-71	15.78 (ND)	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-04-71	17.35 (ND)	ND	ND	ND
		Instrument Blank	Blank5-Pre PRO-04-71-DUP	14.07 (ND)	ND	ND	ND
		Instrument Blank	Blank10-Pre PRO-04-71_IVC-1	15.49 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-04-71_IVC-1	14.73 (ND)	ND	146.57	ND
		Initial Run	PRO-04-71_IVC-2 (Post Initial)	13.79 (ND)	ND	85.94	ND
		Instrument Blank	Blank11-Post PRO-04-71_IVC-2	13.15 (ND)	ND	ND	ND
	81	Instrument Blank	Blank6-Pre PRO-04-81	14.40 (ND)	ND	0.67 (ND)	ND
		Instrument Blank	Blank7-Pre PRO-04-81	15.05 (ND)	ND	ND	ND
	94	Instrument Blank	Blank8-Pre PRO-04-94	13.39 (ND)	ND	ND	ND
	101	Instrument Blank	Blank9-Pre PRO-04-101	14.41 (ND)	ND	ND	ND
PRO-05	71	Instrument Blank	Blank1-Pre PRO-05-71	ND	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-05-71	34.3	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-05-71	38.72	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-05-71	28.57	ND	ND	ND
		Instrument Blank	Blank11-Pre PRO-05-71-DUP	21.1	ND	ND	ND
		Instrument Blank	Blank13-Pre PRO-05-71-IVC-1	13.77 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-05-71-IVC-1	12.37 (ND)	ND	91.8	0.94 (ND)
		Instrument Verification Check Post Initial Run	PRO-05-71-IVC-2 (Post Initial)	11.78 (ND)	ND	50.51	3.54 (ND)
		Instrument Blank	Blank14-Post PRO-05-71-IVC-2	12.71 (ND)	ND	ND	ND
	81	Instrument Blank	Blank5-Pre PRO-05-81	31.59	ND	0.17 (ND)	0.20 (ND)
	91	Instrument Blank	Blank6-Pre PRO-05-91	26.47	ND	ND	ND
	101	Instrument Blank	Blank7-Pre PRO-05-101	37.88	ND	0.95	ND
	111	Instrument Blank	Blank8-Pre PRO-09-111	125.8	ND	ND	ND
		Instrument Blank	Blank9-Pre PRO-09-111	54.71	ND	ND	ND
		Instrument Blank	Blank10-Pre PRO-09-111	27.76	ND	ND	ND
PRO-06	69	Instrument Blank	Blank1_Pre PRO-06-69	17.24 (ND)	ND	ND	ND
		Instrument Blank	Blank2_Pre PRO-06-69	17.74 (ND)	ND	ND	ND
		Instrument Blank	Blank3_Pre PRO-06-69	14.17 (ND)	ND	ND	ND
		Instrument Blank	Blank4_Pre PRO-06-69	14.39 (ND)	ND	ND	ND
		Instrument Blank	Blank5_Pre PRO-06-69	14.18 (ND)	ND	ND	ND
	79	Instrument Blank	Blank6_Pre PRO-06-79	16.03 (ND)	ND	ND	ND
	90	Instrument Blank	Blank7_Pre PRO-06-90	15.56 (ND)	ND	ND	ND
		Instrument Blank	Blank8_Pre PRO-06-90	15.92 (ND)	ND	ND	ND
	99	Instrument Blank	Blank9_Pre PRO-06-99	14.13 (ND)	ND	ND	ND
		Instrument Blank	Blank10_Post PRO-06-99	18.11 (ND)	ND	6.19	ND
		Instrument Blank	Blank11_Post PRO-06-99	15.13 (ND)	ND	ND	ND
		Instrument Blank	Blank12_Post PRO-06-99	13.99 (ND)	ND	ND	ND

Table 4-2. Groundwater Screening QA/QC Sample Results

Vertical Aquifer Groundwater Grab Sample Profiling Point	Sample Interval (ft bgs)	Sample Type	Field Screening Sample ID	Vinyl Chloride (µg/L)	*cis* 1,2-DCE (µg/L)	TCE (µg/L)	PCE (µg/L)
PRO-07	69	Instrument Blank	Blank1_Pre PRO-07-69	115.57	ND	ND	ND
		Instrument Blank	Blank2_Pre PRO-07-69	32.27	ND	ND	ND
		Instrument Blank	Blank3_Pre PRO-07-69	20.28	ND	ND	ND
		Instrument Blank	Blank4_Pre PRO-07-69	16.99 (ND)	ND	ND	ND
		Instrument Blank	Blank5_Pre PRO-07-69	17.34 (ND)	ND	ND	ND
		Instrument Blank	Blank6_Pre PRO-07-69	16.27 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-07-69_IVC-1	14.41 (ND)	ND	147.78	ND
		Instrument Verification Check Post Initial Run	PRO-07-69_IVC-2	11.51 (ND)	ND	97.77	ND
		Instrument Verification Check	PRO-07-69_IVC-3	12.16 (ND)	ND	136.23	ND
	79	Instrument Blank	Blank7_Pre PRO-07-79	16.06 (ND)	ND	ND	ND
	90	Instrument Blank	Blank8_Pre PRO-07-90	16.14 (ND)	ND	ND	ND
		Instrument Blank	Blank9_Pre PRO-07-90	14.12 (ND)	ND	ND	ND
		Instrument Blank	Blank10_Pre PRO-07-90	12.93 (ND)	ND	ND	ND
	99	Instrument Blank	Blank11_Pre PRO-07-99	15.62 (ND)	ND	ND	ND
		Instrument Blank	Blank12_Pre PRO-07-99	15.88 (ND)	ND	ND	ND
		Instrument Blank	Blank13_Post PRO-07-99	15.33 (ND)	ND	3.36	ND
		Instrument Blank	Blank14_Post PRO-07-99	13.81 (ND)	ND	0.42	ND
		Instrument Blank	Blank15_Post PRO-07-99	14.35 (ND)	ND	0.88	ND
		Instrument Blank	Blank16_Post PRO-07-99	13.84 (ND)	ND	ND	ND
PRO-08	71	Instrument Blank	Blank7-Pre PRO-08-71	12.39 (ND)	ND	ND	ND
		Instrument Blank	Blank11-Pre PRO-08-71_IVC-1	16.87 (ND)	ND	ND	ND
		Instrument Blank	Blank12-Post PRO-08-71_IVC-2	16.53 (ND)	5.77	ND	ND
	81	Instrument Blank	Blank1-Pre PRO-08-81	24.35	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-08-81	19.94 (ND)	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-08-81	16.99 (ND)	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-08-81	17.82 (ND)	ND	ND	ND
		Instrument Blank	Blank5-Pre PRO-08-81	19.11 (ND)	ND	ND	88.95
		Instrument Blank	Blank6-Pre PRO-08-81	14.60 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-08-81_IVC-1	15.28 (ND)	ND	22.42	21.2
		Instrument Verification Check Post Initial Run	PRO-08-81_IVC-2 (Post Initial)	14.23 (ND)	5.77	10.08	ND
	91	Instrument Blank	Blank8-Pre PRO-08-91	17.71 (ND)	ND	ND	ND
	101	Instrument Blank	Blank9-Pre PRO-08-101	16.09 (ND)	ND	ND	ND
		Instrument Blank	Blank10-Pre PRO-08-101	14.65 (ND)	ND	ND	ND
		Instrument Blank	Blank11-Pre PRO-08-101-DUP	17.27 (ND)	ND	ND	ND
PRO-09	71	Instrument Blank	Blank1-Pre PRO-09-71	18.07 (ND)	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-09-71	29.57	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-09-71	23.99	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-09-71	28.33	ND	ND	ND
		Instrument Blank	Blank9-Pre PRO-09-71-IVC-1	12.88 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-09-71-IVC-1	12.14 (ND)	ND	85.39	ND
		Instrument Verification Check Post Initial Run	PRO-09-71-IVC-2	11.78 (ND)	ND	56.11	ND
		Instrument Blank	Blank10-Post PRO-09-71-IVC-2	14.67 (ND)	ND	0.17	ND
	81	Instrument Blank	Blank5-Pre PRO-09-81	19.14 (ND)	ND	ND	ND
		Instrument Blank	Blank8-Pre PRO-09-81-DUP	15.56 (ND)	ND	ND	ND
	91	Instrument Blank	Blank6-Pre PRO-09-91	19.38 (ND)	ND	ND	ND
	101	Instrument Blank	Blank7-Pre PRO-09-101	16.24 (ND)	ND	ND	ND
PRO-10	71	Instrument Blank	Blank1-Pre PRO-10-71	48.74	1.07	ND	1.48
		Instrument Blank	Blank2-Pre PRO-10-71	18.06 (ND)	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-10-71	27.88	ND	ND	ND
		Instrument Blank	Blank4-Pre PRO-10-71	23.83	ND	ND	ND
		Instrument Blank	Blank10-Pre PRO-10-71-IVC-1	13.01 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-10-71-IVC-1	ND	ND	78.58	1.11
		Instrument Verification Check Post Initial Run	PRO-10-71-IVC-2 (Post Initial)	14.23 (ND)	ND	10.08	ND
		Instrument Blank	Blank11-Post PRO-10-71-IVC-2	16.53 (ND)	0.16 (ND)	ND	0.19 (ND)
	81	Instrument Blank	Blank5-Pre PRO-10-81	1.67 (ND)	ND	ND	ND
	91	Instrument Blank	Blank6-Pre PRO-10-92	15.28 (ND)	ND	ND	ND
	101	Instrument Blank	Blank7-Pre PRO-10-101	13.58 (ND)	ND	ND	ND
	111	Instrument Blank	Blank8-Pre PRO-10-111	19.88 (ND)	ND	ND	ND
	121	Instrument Blank	Blank9-Pre PRO-10-121	ND	ND	ND	ND
	131	Instrument Blank	Blank1-Pre PRO-10-131	ND	ND	ND	ND
		Instrument Blank	Blank2-Pre PRO-10-131	29.57	ND	ND	ND
		Instrument Blank	Blank3-Pre PRO-10-131	37.36	ND	ND	ND
		Instrument Blank	Blank8-Pre PRO-10-131-IVC-1	14.38 (ND)	ND	ND	ND
		Instrument Verification Check	PRO-10-131-IVC-1	17.45 (ND)	ND	78.12	ND
		Instrument Verification Check Post Initial Run	PRO-10-131-IVC-2 (Post Initial)	14.52 (ND)	ND	64.08	ND
		Instrument Blank	Blank9-Post PRO-10-131-IVC-2	17.55 (ND)	ND	0.39 (ND)	ND
	141	Instrument Blank	Blank4-Pre PRO-10-141	24.91	ND	ND	ND
	151	Instrument Blank	Blank5-Pre PRO-10-151	ND	ND	8.43	ND
		Instrument Blank	Blank6-Pre PRO-10-151	1.0 (ND)	ND	ND	ND
		Instrument Blank	Blank7-Pre PRO-10-151	ND	ND	ND	ND

Notes:
µg/L = Microgram(s) per liter
bgs = Below ground surface
DCE = Dichloroethene
ft = Foot (feet)
ID = Identification
ND = Non-detect
PCE = Tetrachloroethene
QA = Quality assurance
QC = Quality control
TCE = Trichloroethene

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Table 4-3. Groundwater Screening Confirmatory Sample Results

Vertical Aquifer Groundwater Grab Sample Profiling Point	Sample Interval (ft bgs)	Vinyl Chloride (µg/L)	*cis*- 1,2-DCE (µg/L)	TCE (µg/L)	PCE (µg/L)
PRO-01	70	ND	ND	93.7	ND
	89	ND	1.4	570	ND
	99	ND	ND	0.59	ND
PRO-02	71	ND	2.8	150	9
	81	ND	ND	4.2	ND
PRO-03	71	ND	1.8	63.2	3.6
	90	ND	ND	8.3	ND
PRO-04	71	ND	ND	79.3	0.38
	81	ND	1.6	61.1	ND
PRO-05	91	ND	ND	570	ND
	101	ND	ND	1.6	ND
PRO-06	79	ND	ND	110	ND
	99	ND	1.9	510	ND
PRO-07	90	ND	ND	160	ND
	99	ND	ND	420.00	ND
PRO-08	71	ND	0.73	44	5.9
	81	ND	1	16.2	11.2
PRO-09	73	ND	ND	120	ND
	101	ND	ND	0.42	ND
PRO-10	131	ND	ND	180	ND
	151	ND	ND	0.87	ND

Notes:
µg/L = Microgram(s) per liter
bgs = Below ground surface
DCE = Dichloroethene
ft = Foot (feet)
ND = Non-detect
PCE = Tetrachloroethene
TCE = Trichloroethene

Table 4-4. June 2023 Groundwater Sampling Results

		Location ID	MW-EVAL-1D	MW-EVAL-1S	MW-EVAL-1S	MW-EVAL-2D	MW-EVAL-2S	MW-EVAL-3D	MW-EVAL-3S
		Sample Name	FSND-MW-EVAL-01D-06132023	FSND-MW-EVAL-1S-06122023	FSND-DUP-1-06122023	FSND-MW-EVAL-02D-06132023	FSND-MW-EVAL-02S-06132023	FSND-MW-EVAL-3D-06122023	FSND-MW-EVAL-3S-06122023
		Parent Sample ID			FSND-MW-EVAL-1S-06122023				
		Sample Date	6/13/2023	6/12/2023	6/12/2023	6/13/2023	6/13/2023	6/12/2023	6/12/2023
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
Dissolved Gases (RSK-175)									
Ethane	NSL	µg/L	1.3 J	< 0.66 U	NA	< 0.66 U	< 0.66 U	< 0.66 U	< 0.66 U
Ethene	NSL	µg/L	< 0.92 U	6.9 J	NA	< 0.92 U	< 0.92 U	< 0.92 U	4.5 J
Methane	NSL	µg/L	385	< 0.51 U	NA	4.8	324	6.5	2.4 J
Anions (SW9056)									
Chloride	250	mg/L	36.2	36.7	NA	54.3	92.4	44.6	53.1
Nitrate	10	mg/L	< 0.084 U	1.2	NA	0.19 J	0.19 J	< 0.084 U	0.5
Sulfate	250	mg/L	17.4	18.8	NA	13.3	27.2	17	21.4
TOC (SW9060A)									
Total Organic Carbon	NSL	mg/L	1.8	1.3	NA	1.5	2.2	2.4	2
Alkalinity (SM2320B)									
Alkalinity, total (as CaCO3)	NSL	mg/L	182	142	NA	160	275	133	161
Metals (SW6010D)									
Iron, Total	300	µg/L	633	125	NA	191	981	135	84.9
Iron, Dissolved	300	µg/L	< 18.5 U	40.6 J	NA	< 18.5 U	< 18.5 U	22.4 J	< 18.5 U
VOCs (SW8260D)	NSL								
1,1,1-Trichloroethane	5	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	2.7	< 0.14 U	< 0.14 U
1,1,2,2-Tetrachloroethane	5	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	µg/L	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U
1,1,2-Trichloroethane	1	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
1,1-Dichloroethane	5	µg/L	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
1,1-Dichloroethene	5	µg/L	1.1	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U
1,2,3-Trichlorobenzene	5	µg/L	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U
1,2,4-Trichlorobenzene	5	µg/L	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U
1,2-Dibromo-3-chloropropane	0.04	µg/L	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U
1,2-Dibromoethane	NSL	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
1,2-Dichlorobenzene	3	µg/L	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
1,2-Dichloroethane	0.6	µg/L	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
1,2-Dichloropropane	1	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
1,3-Dichlorobenzene	3	µg/L	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U
1,4-Dichlorobenzene	3	µg/L	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U
2-Butanone	50	µg/L	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
2-Hexanone	50	µg/L	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U
4-Methyl-2-pentanone	NSL	µg/L	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U
Acetone	50	µg/L	< 1.2 UJ	< 1.2 U	< 1.2 U	< 1.2 UJ	< 1.2 UJ	< 1.2 U	< 1.2 UJ
Benzene	1	µg/L	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U
Bromochloromethane	5	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Bromodichloromethane	50	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Bromoform	50	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Bromomethane	5	µg/L	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
Carbon disulfide	60	µg/L	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U
Carbon tetrachloride	5	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	0.51 J	0.51 J	< 0.13 U	< 0.13 U
Chlorobenzene	5	µg/L	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U
Chloroethane	5	µg/L	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U
Chloroform	7	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Chloromethane	NSL	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
cis -1,2-Dichloroethene	5	µg/L	2.4	< 0.2 U	< 0.2 U	< 0.2 U	1.7	< 0.2 U	< 0.2 U
cis -1,3-Dichloropropene	0.4	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Cyclohexane	NSL	µg/L	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
Dibromochloromethane	50	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Dichlorodifluoromethane	5	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Ethylbenzene	5	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Isopropylbenzene	5	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
m- & p-Xylenes	5	µg/L	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U
Methyl acetate	NSL	µg/L	< 0.36 U	0.87 J	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U
Methyl tert-butyl ether	10	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Methylcyclohexane	NSL	µg/L	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
Methylene chloride	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
o-Xylene	5	µg/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Styrene	5	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Tetrachloroethene	5	µg/L	< 0.17 U	0.37 J	< 0.17 U	< 0.17 U	16.3	< 0.17 U	< 0.17 U
Toluene	5	µg/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
trans -1,2-Dichloroethene	5	µg/L	0.41 J	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
trans -1,3-Dichloropropene	0.4	µg/L	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
Trichloroethene	5	µg/L	240	89	91.2	1.1	35.4	130	67.5
Trichlorofluoromethane	5	µg/L	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Vinyl chloride	2	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U

Notes:
(1) NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1).
µg/L = Microgram(s) per liter.
AWQS = Ambient Water Quality Standard
mg/L = Milligram(s) per liter.
NSL = No screening level available.
NA = Not analyzed.
U = Analyte not detected.
J = Concentration is estimated.
J+ = Concentration is estimated; biased high.
TOC = Total organic carbon
VOCs = Volatile organic compounds
NYSDEC = New York State Department of Environmental Conservation
Concentrations exceeding the screening level are shaded gray.

Table 4-4. June 2023 Groundwater Sampling Results

			Location ID	MW-EVAL-4D	MW-EVAL-4S	MW-18	MW-22R	MW-6	MW-8	MW-8
			Sample Name	FSND-MW-EVAL-4D-06122023	FSND-MW-EVAL-4S-06122023	FSND-MW-18-06132023	FSND-MW-22R-06132023	FSND-MW-6-06132023	FSND-MW-8-06132023	FSND-DUP-2-06132023
			Parent Sample ID							FSND-MW-8-06132023
			Sample Date	6/12/2023	6/12/2023	6/13/2023	6/13/2023	6/13/2023	6/13/2023	6/13/2023
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
Dissolved Gases (RSK-175)										
Ethane	NSL	µg/L		< 0.66 U	< 0.66 U	NA	< 0.66 U	< 0.66 U	NA	NA
Ethene	NSL	µg/L		< 0.92 U	< 0.92 U	NA	< 0.92 U	4.9 J	NA	NA
Methane	NSL	µg/L		168	1.6 J	NA	0.59 J	< 0.51 U	NA	NA
Anions (SW9056)										
Chloride	250	mg/L		32.6	46.8	NA	41.9	46.1	NA	NA
Nitrate	10	mg/L		< 0.084 U	1.6	NA	0.62	1.5	NA	NA
Sulfate	250	mg/L		14.6	22.2	NA	15.1	10.3	NA	NA
TOC (SW9060A)										
Total Organic Carbon	NSL	mg/L		2.3	1.7	NA	1.4	1.1	NA	NA
Alkalinity (SM2320B)										
Alkalinity, total (as CaCO3)	NSL	mg/L		178	201	NA	208	241	NA	NA
Metals (SW6010D)										
Iron, Total	300	µg/L		243	154	NA	3140	125	NA	NA
Iron, Dissolved	300	µg/L		69.4	< 18.5 U	NA	< 18.5 U	43.9 J	NA	NA
VOCs (SW8260D)	NSL									
1,1,1-Trichloroethane	5	µg/L		< 0.14 U	< 0.14 U	1.1	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
1,1,2,2-Tetrachloroethane	5	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	µg/L		< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U
1,1,2-Trichloroethane	1	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
1,1-Dichloroethane	5	µg/L		< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
1,1-Dichloroethene	5	µg/L		< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U	< 0.21 U
1,2,3-Trichlorobenzene	5	µg/L		< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U	< 0.55 U
1,2,4-Trichlorobenzene	5	µg/L		< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U
1,2-Dibromo-3-chloropropane	0.04	µg/L		< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U
1,2-Dibromoethane	NSL	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
1,2-Dichlorobenzene	3	µg/L		< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
1,2-Dichloroethane	0.6	µg/L		< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
1,2-Dichloropropane	1	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
1,3-Dichlorobenzene	3	µg/L		< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U
1,4-Dichlorobenzene	3	µg/L		< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U
2-Butanone	50	µg/L		< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
2-Hexanone	50	µg/L		< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U	< 0.98 U
4-Methyl-2-pentanone	NSL	µg/L		< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U
Acetone	50	µg/L		< 1.2 U	1.7 J	< 1.2 UJ	< 1.2 UJ	< 1.2 U	< 1.2 U	< 1.2 U
Benzene	1	µg/L		< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U
Bromochloromethane	5	µg/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Bromodichloromethane	50	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Bromoform	50	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Bromomethane	5	µg/L		< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
Carbon disulfide	60	µg/L		< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U
Carbon tetrachloride	5	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	0.55 J	0.65 J
Chlorobenzene	5	µg/L		< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.12 U
Chloroethane	5	µg/L		< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U
Chloroform	7	µg/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Chloromethane	NSL	µg/L		< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
cis -1,2-Dichloroethene	5	µg/L		< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
cis -1,3-Dichloropropene	0.4	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Cyclohexane	NSL	µg/L		< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
Dibromochloromethane	50	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Dichlorodifluoromethane	5	µg/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Ethylbenzene	5	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Isopropylbenzene	5	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
m- & p-Xylenes	5	µg/L		< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U	< 0.31 U
Methyl acetate	NSL	µg/L		< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U
Methyl tert-butyl ether	10	µg/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
Methylcyclohexane	NSL	µg/L		< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 UJ	< 0.16 U	< 0.16 U
Methylene chloride	5	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
o-Xylene	5	µg/L		< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
Styrene	5	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Tetrachloroethene	5	µg/L		< 0.17 U	< 0.17 U	1	2.9	< 0.17 U	< 0.17 U	< 0.17 U
Toluene	5	µg/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
trans -1,2-Dichloroethene	5	µg/L		< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
trans -1,3-Dichloropropene	0.4	µg/L		< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U
Trichloroethene	5	µg/L		26.9	71.9 J+	42.8	72	19.9	< 0.26 U	< 0.26 U
Trichlorofluoromethane	5	µg/L		< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
Vinyl chloride	2	µg/L		< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U

Notes:
(1) NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance v
µg/L = Microgram(s) per liter.
AWQS = Ambient Water Quality Standard
mg/L = Milligram(s) per liter.
NSL = No screening level available.
NA = Not analyzed.
U = Analyte not detected.
J = Concentration is estimated.
J+ = Concentration is estimated; biased high.
TOC = Total organic carbon
VOCs = Volatile organic compounds
NYSDEC = New York State Department of Environmental Conservation
Concentrations exceeding the screening level are shaded gray.

Table 6-1. Summary of Compound Specific Isotope Analysis (CSIA) and Water Quality Parameters

Monitoring Well	Location Relative to PRB	Screened Interval (ft amsl)	$\delta^{13}C$ (‰)	TCE [a] (µg/L)	ORP [a] (mV)	DO [a] (mg/L)
MW-22R	Upgradient	217.6-232.6	-26.5	120/72	129/16	5.72/4.56
MW-30*	Downgradient	199.6-209.6	ND	2.3/--	-224/-234	0/0
MW-31*	Upgradient	198.5-208.5	-27.4	38.4/--	-189/-179	0/0
MW-32**	Downgradient	197.7-207.7	-21.3	110/--	-179/-194	0/0
MW-33**	Upgradient	197.9-207.9	-23.2	140/--	37/22	3.29/2.80
MW-EVAL-04S	Downgradient	211.9-221.9	-22.2	--/71.9	--/+27	--/5.24
MW-EVAL-04D	Downgradient	196.9-201.9	-19.4	--/26.9	--/+12	--/0
MW-EVAL-03S	Downgradient	209.1-219.1	-23.7	--/67.5	--/+18	--/0.59
MW-EVAL-03D	Downgradient	154.1-159.1	-22.2	--/130	--/-132	--/0
MW-6	Downgradient	219.4-229.4	-24.1	30.1/19.9	129/28	7.54/7.75

Notes:

[a] Measurements are from October 2022/June 2023

*/** indicates for monitoring well pair straddling the PRB; odd numbers are upgradient

µg/L = Microgram(s) per liter

amsl = Above mean sea level

DO = Dissolved oxygen

ft = Foot (feet)

mg/L = Milligram(s) per liter

mV = Millivolt(s)

ND = Not detected

ORP = Oxidation-reduction potential

PRB = Permeable reactive barrier

TCE = Trichloroethene

Figures

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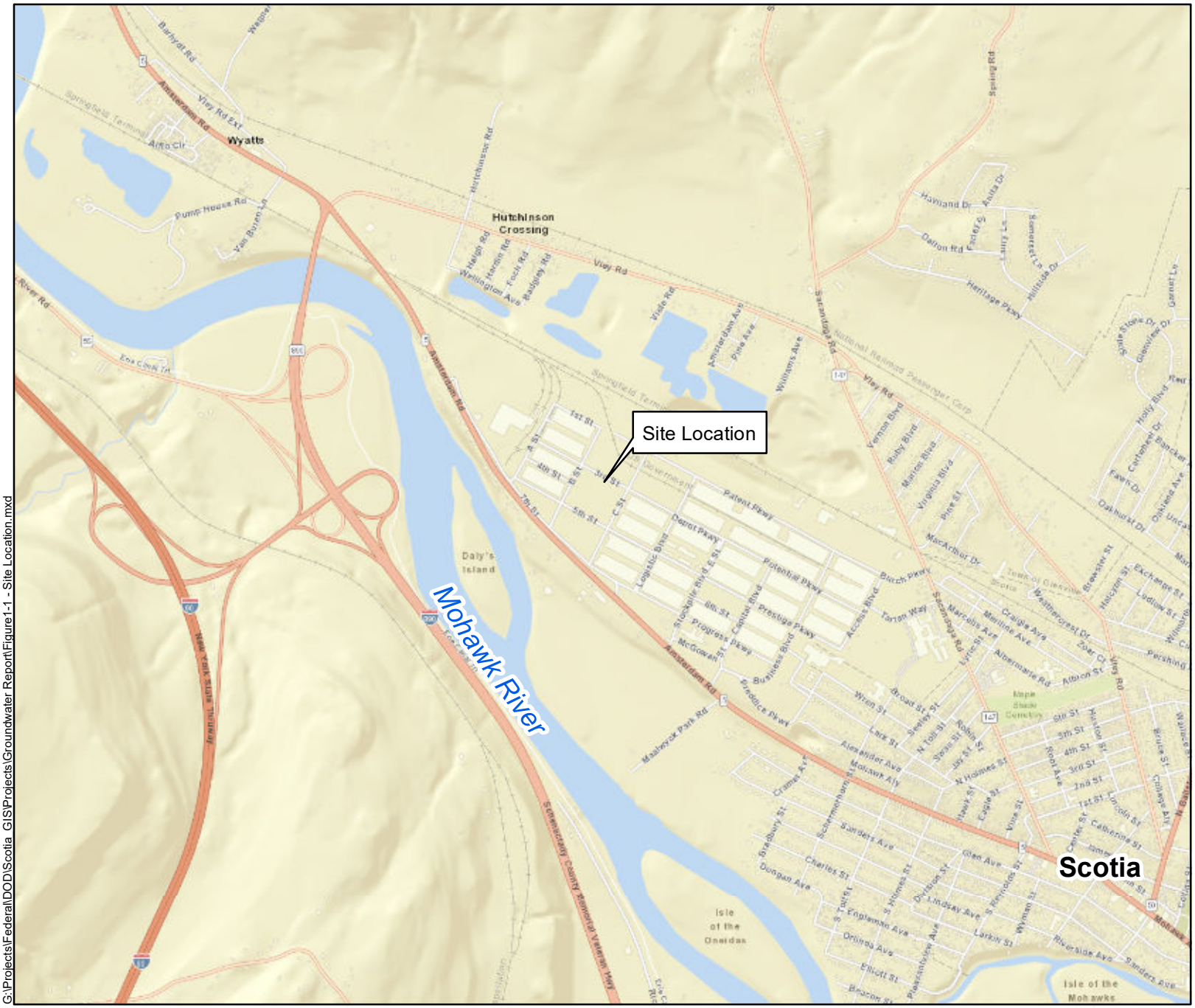
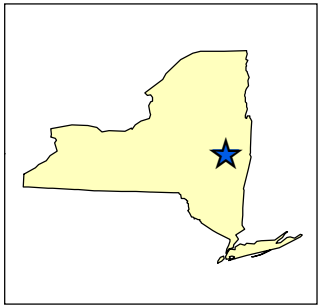


VICINITY MAP



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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Legend

- PRB Location
- Compliance Well
- Monitoring Well

N

0 250 500
Feet

Figure 1-2
SITE FEATURES
Former Scotia Navy Depot

Map Date: 6/14/2024

A

A'

MW-28 / MW-29

MW-30 / MW-31

MW-32 / MW-33

MW-34 / MW-35

Existing Grade

Elevation
(Feet Above Mean Sea Level)

300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150

Coarse Sand &
Gravel Cobbles

Permeable Reactive
Barrier Wall Top
(65 ft bgs)

MW-28 226.41
MW-29 221.11
MW-30 226.02
MW-31 226.16
MW-32 225.68
MW-33 225.8
MW-34 225.46
MW-35 225.43

Permeable Reactive
Barrier Wall Top
(65 ft bgs)

Monitoring Well
Screened Interval

Permeable Reactive
Barrier Wall Bottom
(80 ft bgs)

Medium to
Fine Sand

Permeable Reactive
Barrier Wall Bottom
(110 ft bgs)

0+00
5+00
10+00
12+00
Distance (Feet)

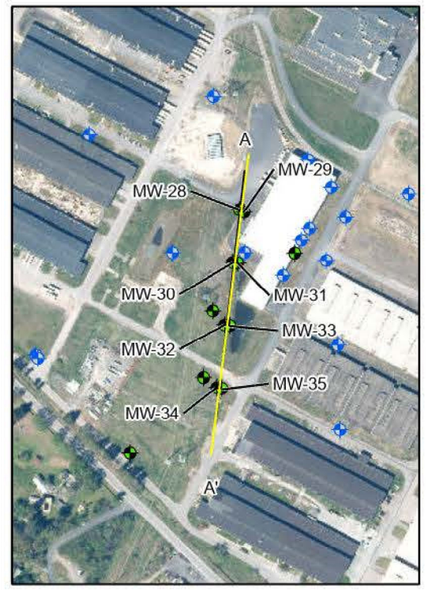
Vertical
0'
10'
20'
40'

0'
50'
100'
200'
Horizontal

SCALE

Section A-A'

VICINITY MAP



N

0
250
500
Feet

Inset Legend

- PRB Location
- Cross Section Baseline

Cross Section Legend

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

Figure 1-3
COMPLIANCE MONITORING WELLS AND PRB WALL PROFILE GROUNDWATER SECTION A-A'
Former Scotia Navy Depot

Map Date: 11/22/2023

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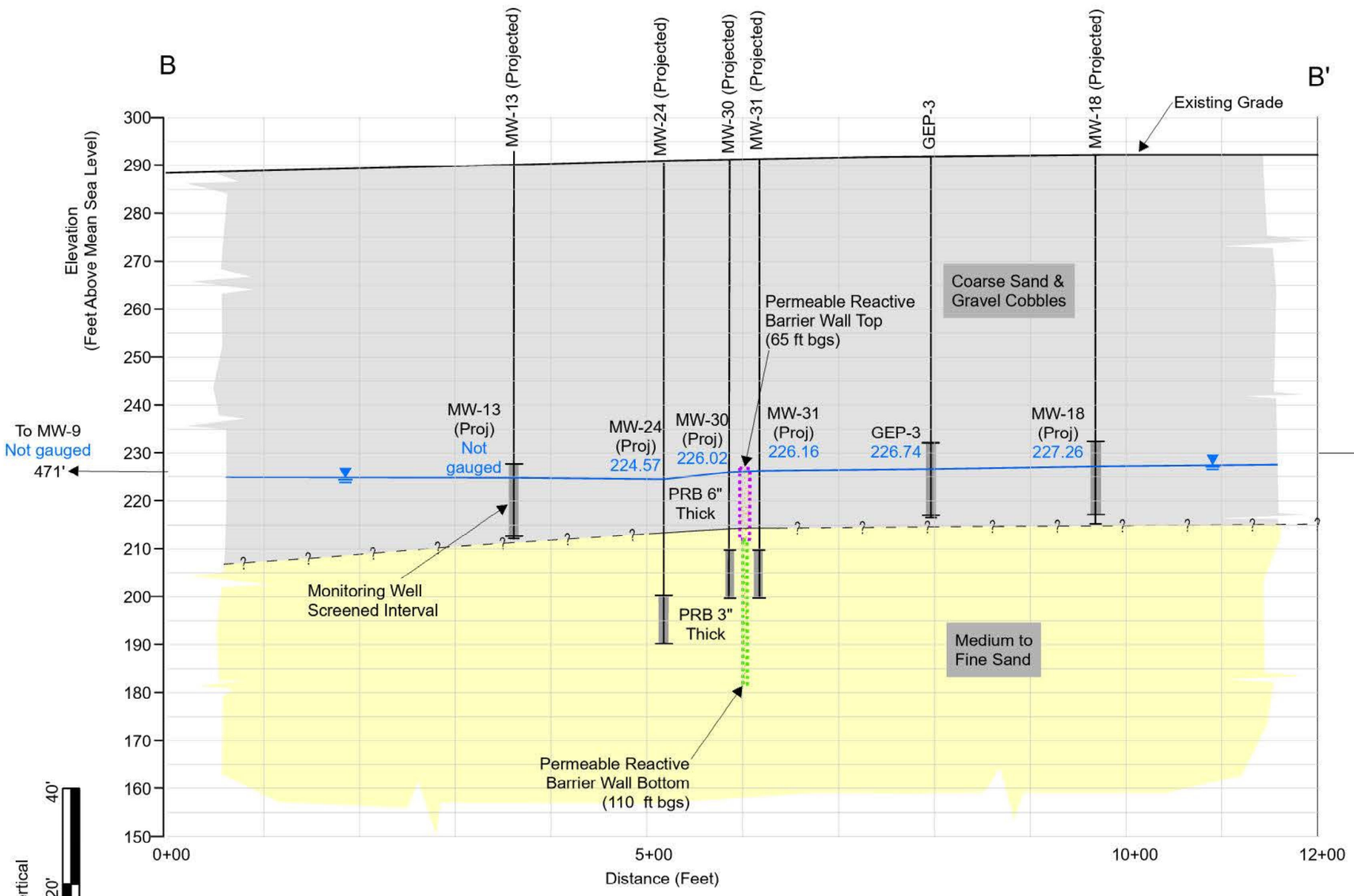
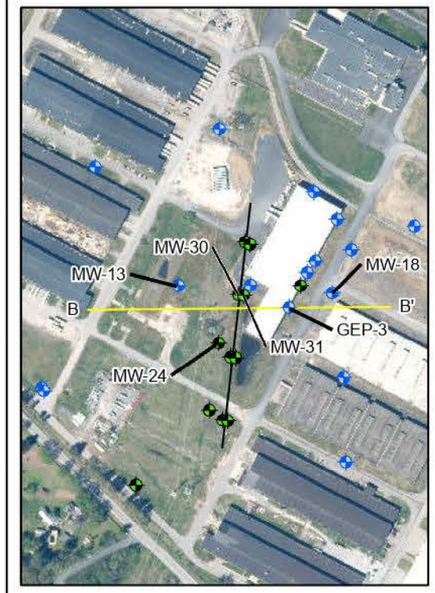


Section B-B'

VICINITY MAP



0 250 500
Feet

N

Inset Legend

- PRB Location
- Cross Section Baseline

Cross Section Legend

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

Figure 1-4
COMPLIANCE MONITORING WELLS AND PRB WALL PROFILE GROUNDWATER SECTION B-B'
Former Scotia Navy Depot

Map Date: 11/22/2023

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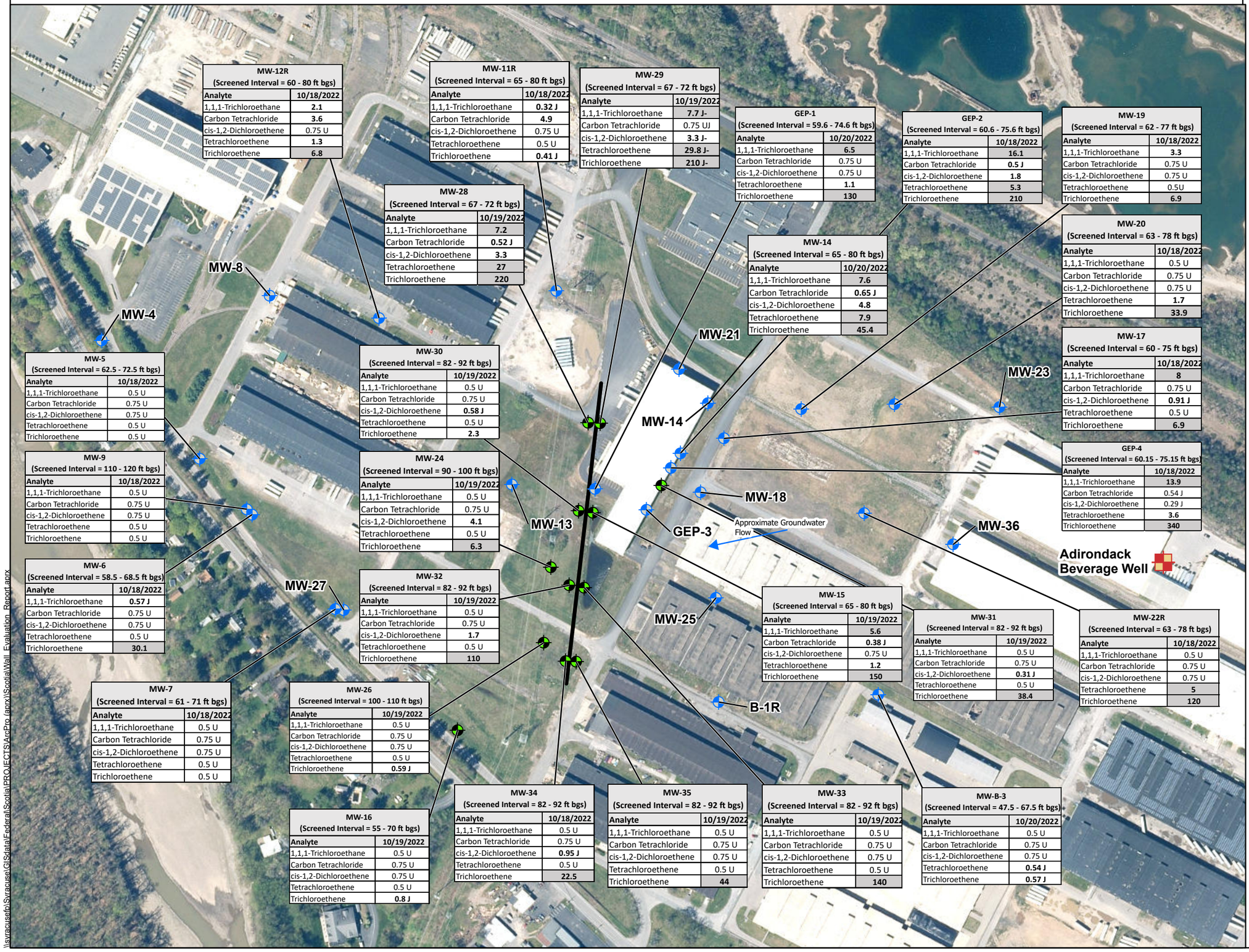

VICINITY MAP

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 1-5
GROUNDWATER RESULTS - SITE WIDE
OCTOBER 2022
Former Scotia Navy Depot

Map Date: 7/1/2024

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VICINITY MAP

Approximate Profiling Location

Approximate Angle Boring

PRB Location

Well Network

Existing Monitoring Wells

0 62.5 125 250

Feet

N

Figure 2-1
May 2023 Field Investigation Locations
Former Scotia Navy Depot

Map Date: 5/31/2023

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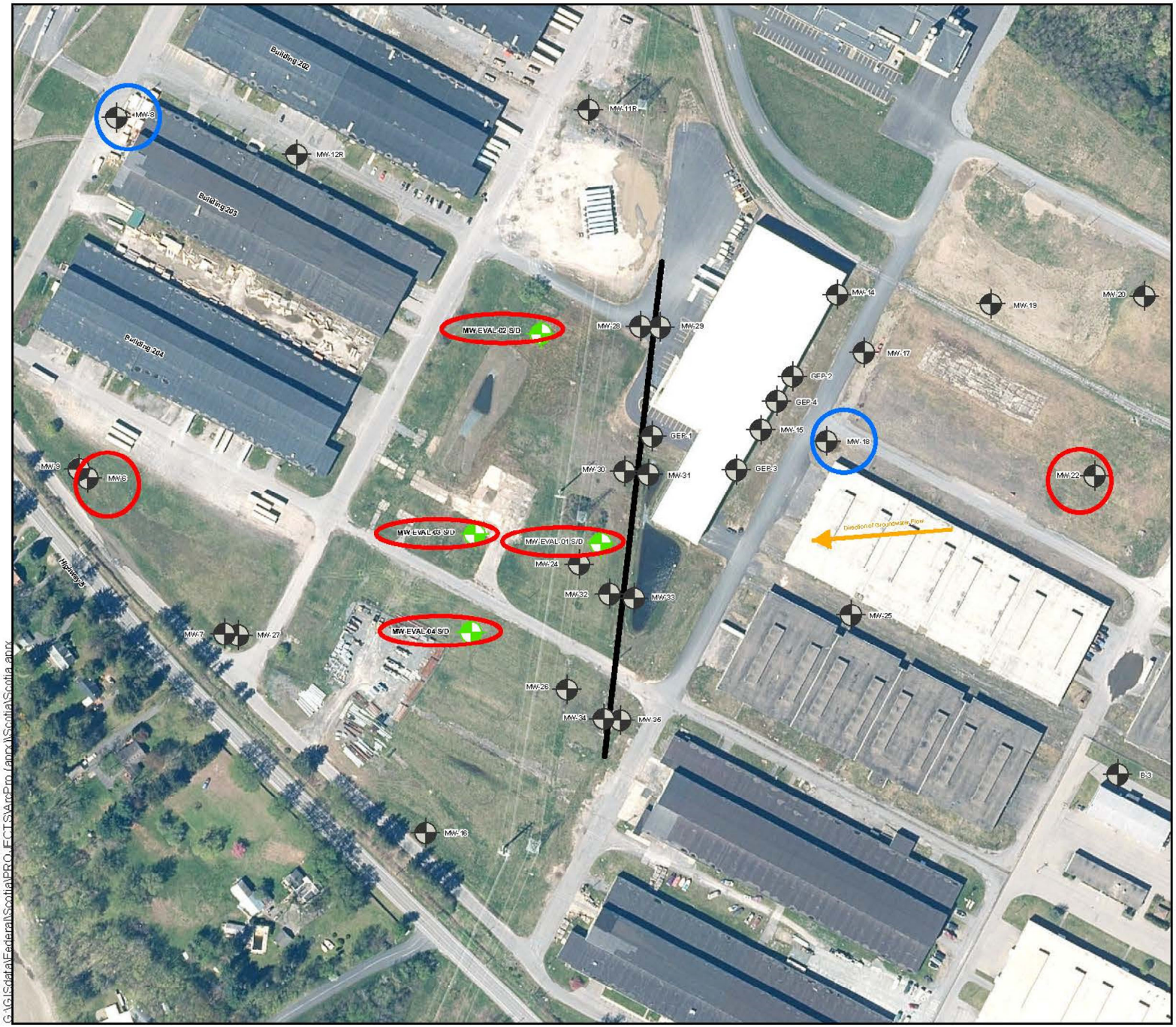

VICINITY MAP

Monitoring Network

Well Network

- Existing Monitoring Wells
- PRB Evaluation Monitoring Well Pairs
- PRB Location
- VOC and MNA Sampling Location
- VOC Sampling Location

0 105 210 420

Feet

N

Figure 2-2
June 2023 Monitoring Well VOC and MNA Sampling Locations
Former Scotia Navy Depot

Map Date: 6/15/2023

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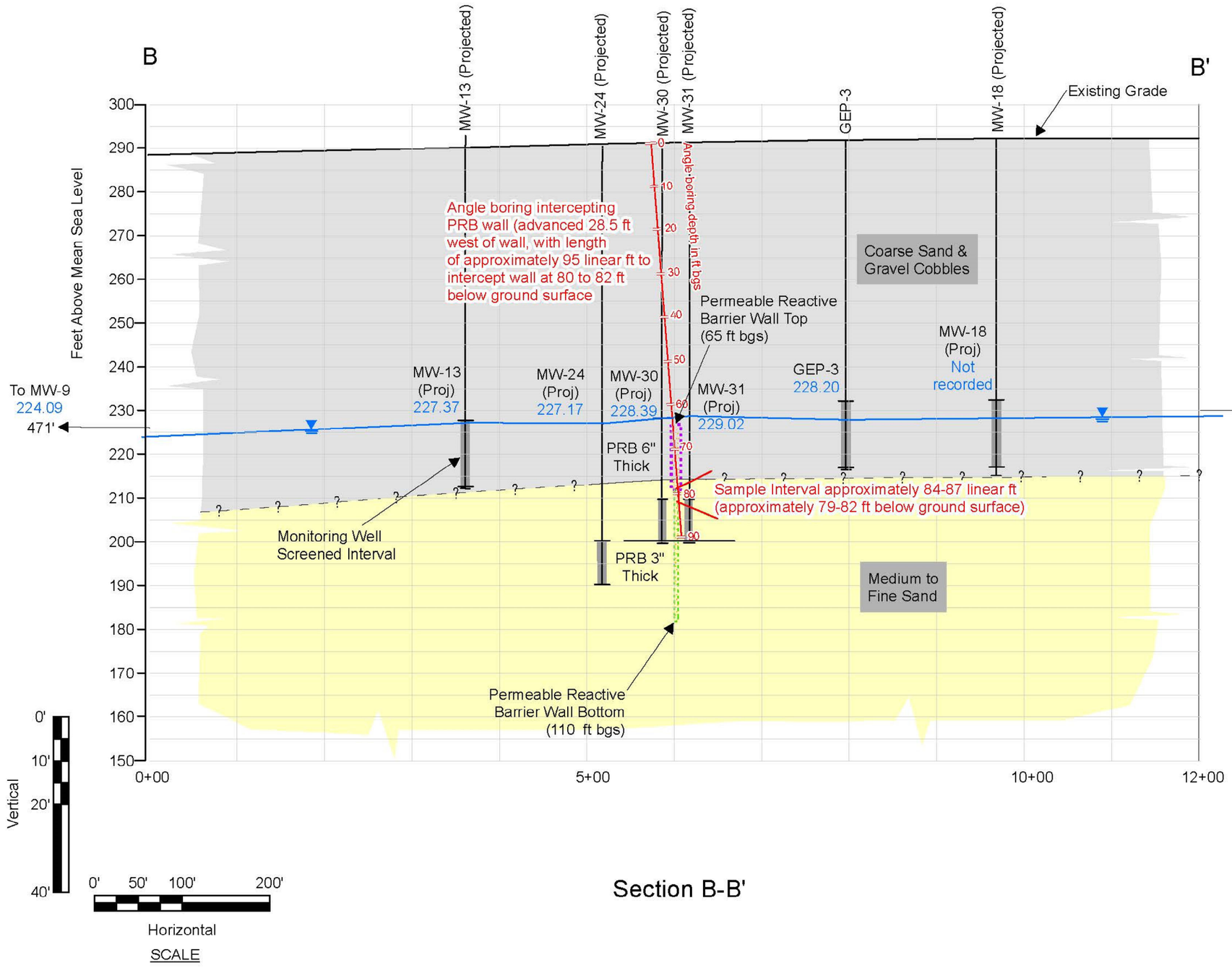
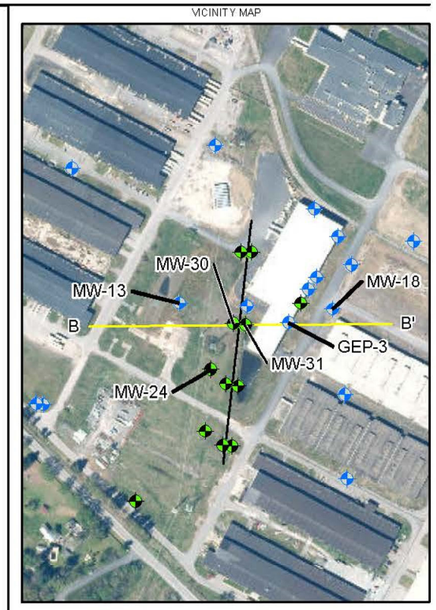


Section B-B'

VICINITY MAP



0 250 500
Feet

N

Inset Legend

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

Cross Section Legend

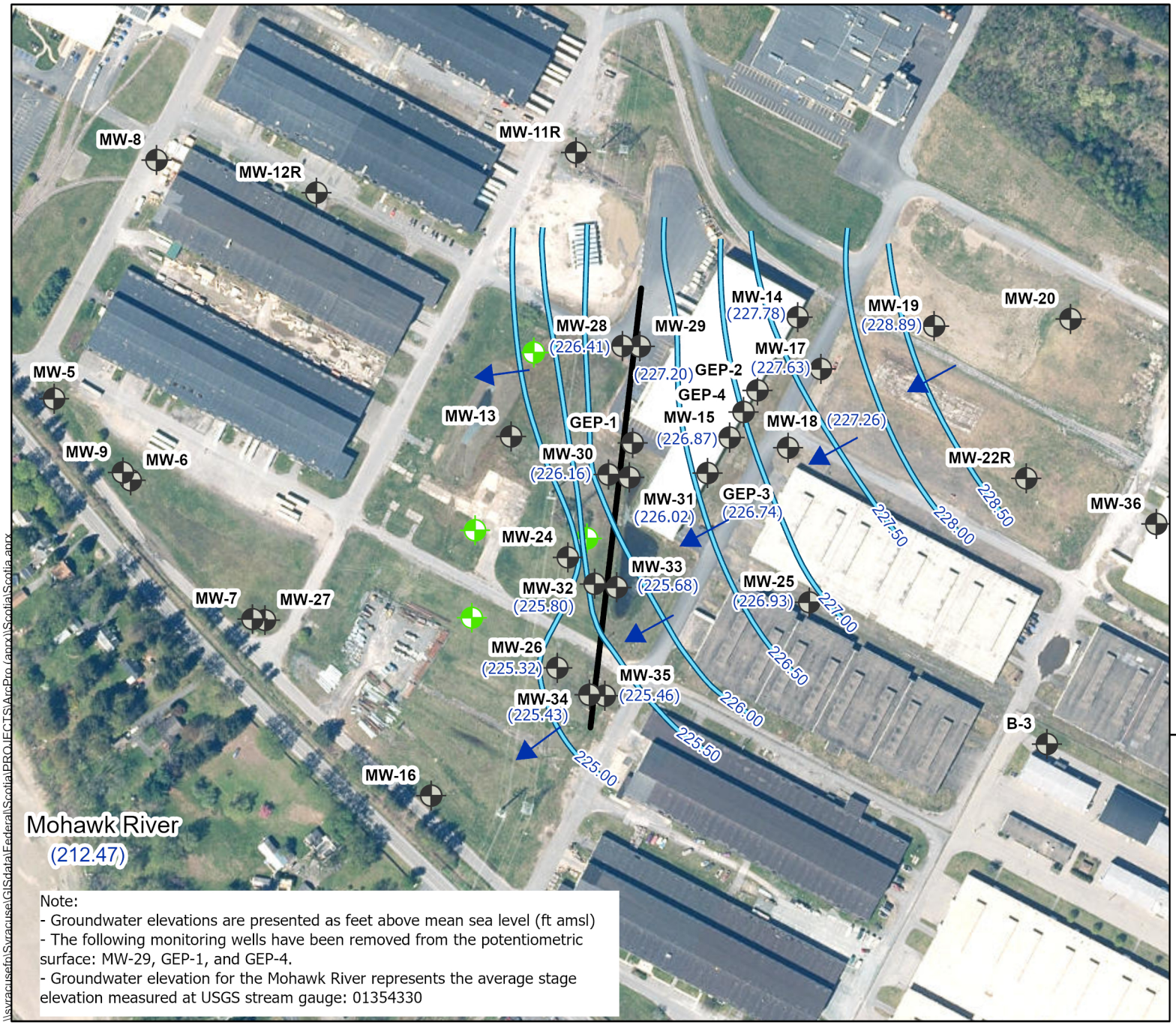
- Coarse sand & gravel, cobbles
- Medium to fine sand
- PRB - 3" thick
- PRB - 6" thick
- Groundwater Table

Figure 2-3
ANGLED BORING AND PRB WALL INTERCEPT

Former Scotia Navy Depot

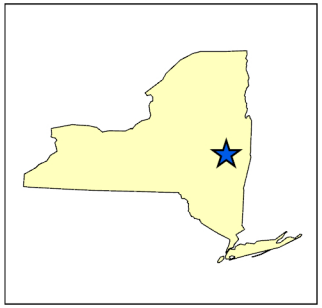
Map Date: 8/7/2023

G:\GIS\data\Federal\Scotia\PROJECTS\ArcMap (mxd\WallEvaluation\AngleBoringSchematicREV.mxd



Note:
- Groundwater elevations are presented as feet above mean sea level (ft amsl)
- The following monitoring wells have been removed from the potentiometric surface: MW-29, GEP-1, and GEP-4.
- Groundwater elevation for the Mohawk River represents the average stage elevation measured at USGS stream gauge: 01354330

VICINITY MAP



Existing Monitoring Well
PRB Evaluation Monitoring Well Pair
PRB Location
Groundwater Contour May 2023
(227.26) Groundwater Elevation at Well
Groundwater Flow Direction

N

0 125 250 500
Feet

Figure 2-4
Potentiometric Surface
May, 2023
Former Scotia Navy Depot
PRB Evaluation Report

Map Date: 3/4/2024

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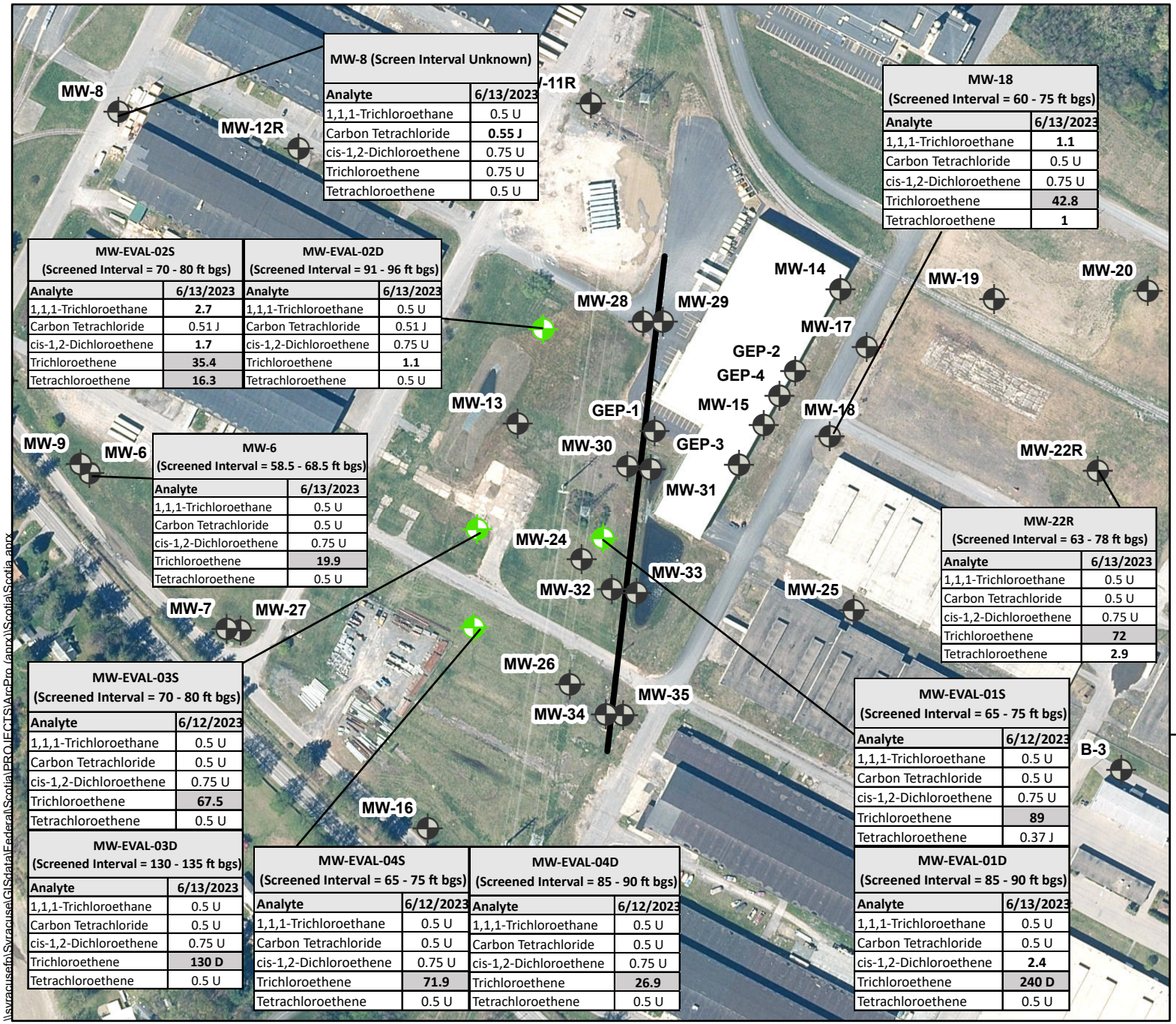


MW-8 (Screen Interval Unknown)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	**0.55 J**
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	0.75 U
Tetrachloroethene	0.5 U

MW-18 (Screened Interval = 60 - 75 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	**1.1**
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**42.8**
Tetrachloroethene	**1**

MW-EVAL-02S (Screened Interval = 70 - 80 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	**2.7**
Carbon Tetrachloride	0.51 J
cis-1,2-Dichloroethene	**1.7**
Trichloroethene	**35.4**
Tetrachloroethene	**16.3**

MW-EVAL-02D (Screened Interval = 91 - 96 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.51 J
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**1.1**
Tetrachloroethene	0.5 U

MW-6 (Screened Interval = 58.5 - 68.5 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**19.9**
Tetrachloroethene	0.5 U

MW-22R (Screened Interval = 63 - 78 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**72**
Tetrachloroethene	**2.9**

MW-EVAL-03S (Screened Interval = 70 - 80 ft bgs)

Analyte	6/12/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**67.5**
Tetrachloroethene	0.5 U

MW-EVAL-03D (Screened Interval = 130 - 135 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**130 D**
Tetrachloroethene	0.5 U

MW-EVAL-04S (Screened Interval = 65 - 75 ft bgs)

Analyte	6/12/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**71.9**
Tetrachloroethene	0.5 U

MW-EVAL-04D (Screened Interval = 85 - 90 ft bgs)

Analyte	6/12/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**26.9**
Tetrachloroethene	0.5 U

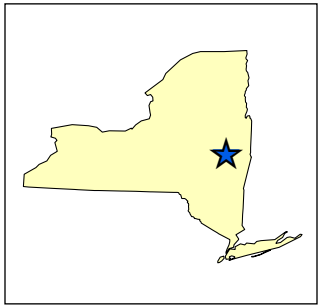
MW-EVAL-01S (Screened Interval = 65 - 75 ft bgs)

Analyte	6/12/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	0.75 U
Trichloroethene	**89**
Tetrachloroethene	0.37 J

MW-EVAL-01D (Screened Interval = 85 - 90 ft bgs)

Analyte	6/13/2023
1,1,1-Trichloroethane	0.5 U
Carbon Tetrachloride	0.5 U
cis-1,2-Dichloroethene	**2.4**
Trichloroethene	**240 D**
Tetrachloroethene	0.5 U

VICINITY MAP



Monitoring Wells

- Existing Monitoring Well
- PRB Evaluation Monitoring Well Pair
- PRB Location

N

0 250 500

Feet

Figure 2-5
June 2023 Monitoring Well VOC and MNA Sampling Locations
Former Scotia Navy Depot

Map Date: 7/1/2024

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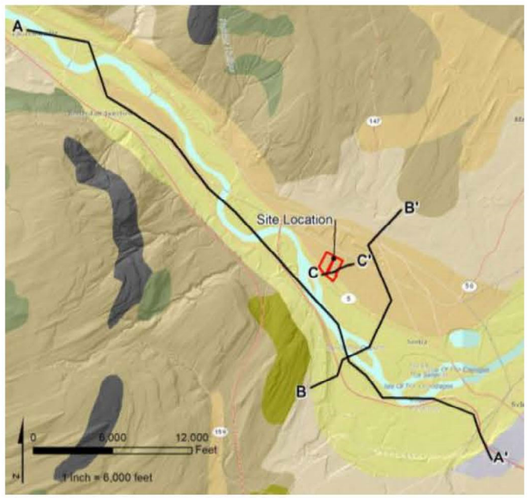


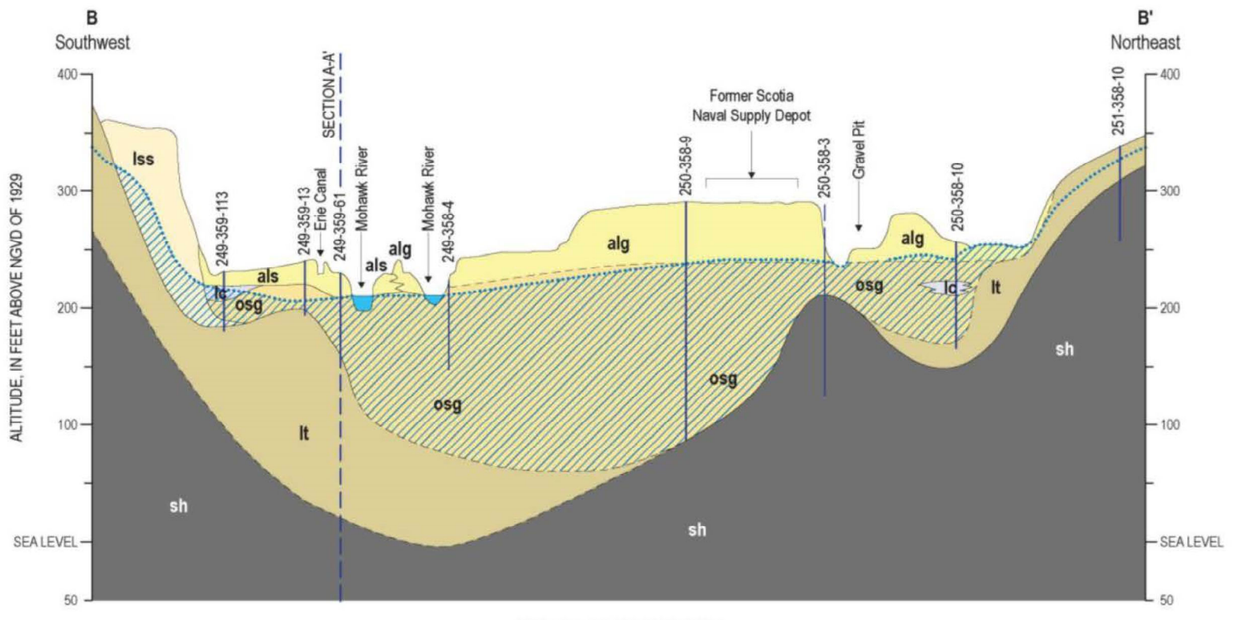
alg/als	Alluvial sand and gravel, with occasional lenses of silt; stream, fan, channel, and terrace deposits of postglacial age; moderate to high permeability. Alluvial silty sand, with some clay and organic matter; floodplain deposits of recent age; low to moderate permeability.
lss	Lake sand and silt, with a few discontinuous lenses of sand and gravel; offshore deposits in proglacial or postglacial lakes; low to moderate permeability.
ls/lc	Lake silt, with a few clay lenses; offshore deposits in proglacial or ls postglacial lakes; low permeability. Lake clay; offshore deposits in proglacial or postglacial lakes; very low permeability.
osg	Outwash sand and gravel, stratified and well sorted; deposited by streams originating at melting ice front; high permeability.
lt	Lodgement till, subglacial deposits of unstratified silty and sandy clay with occasional pebbles, cobbles and boulders and scattered lenses of sand and gravel; low permeability.
k	Kames, eskers, kame terraces, kame deltas, coarse to fine gravel and/or sand deposited adjacent to ice; lateral variability in sorting, coarseness, and thickness.
km	Kame moraine, variable texture (size and sorting) from boulders to sand, deposition at an ice margin during deglaciation, locally cemented with calcareous cement.
sh	Shale bedrock; low to moderate permeability depending on extent of jointing and other fractures.

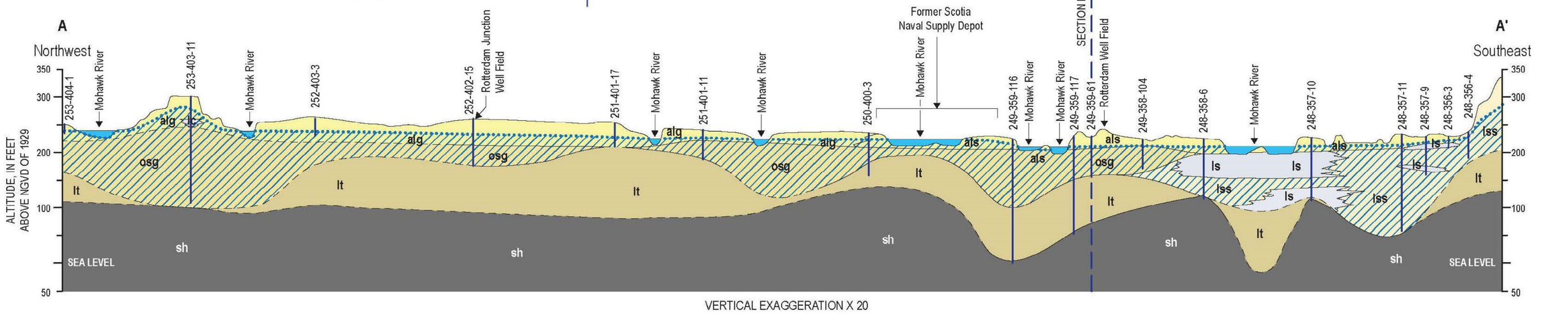
Principle aquifer

Geologic contact - dashed where approximately located

Water table

251-358- Well - numbered by Winslow and others (1965)





Note: Cross sections and geologic descriptions modified from Brown, G.A., Moore, R.B., Mahon, K.I., and Allen R.V., 1981. Geohydrology of the valley-fill aquifer in the Schenectady area, Schenectady County, New York: U.S. Geological Survey Open-File Report 82-84, 6 sheets, 1:24,000 scale.

Figure 3-1 Regional Geology
Former Scotia Navy Depot

Map Date: 3/24/2022

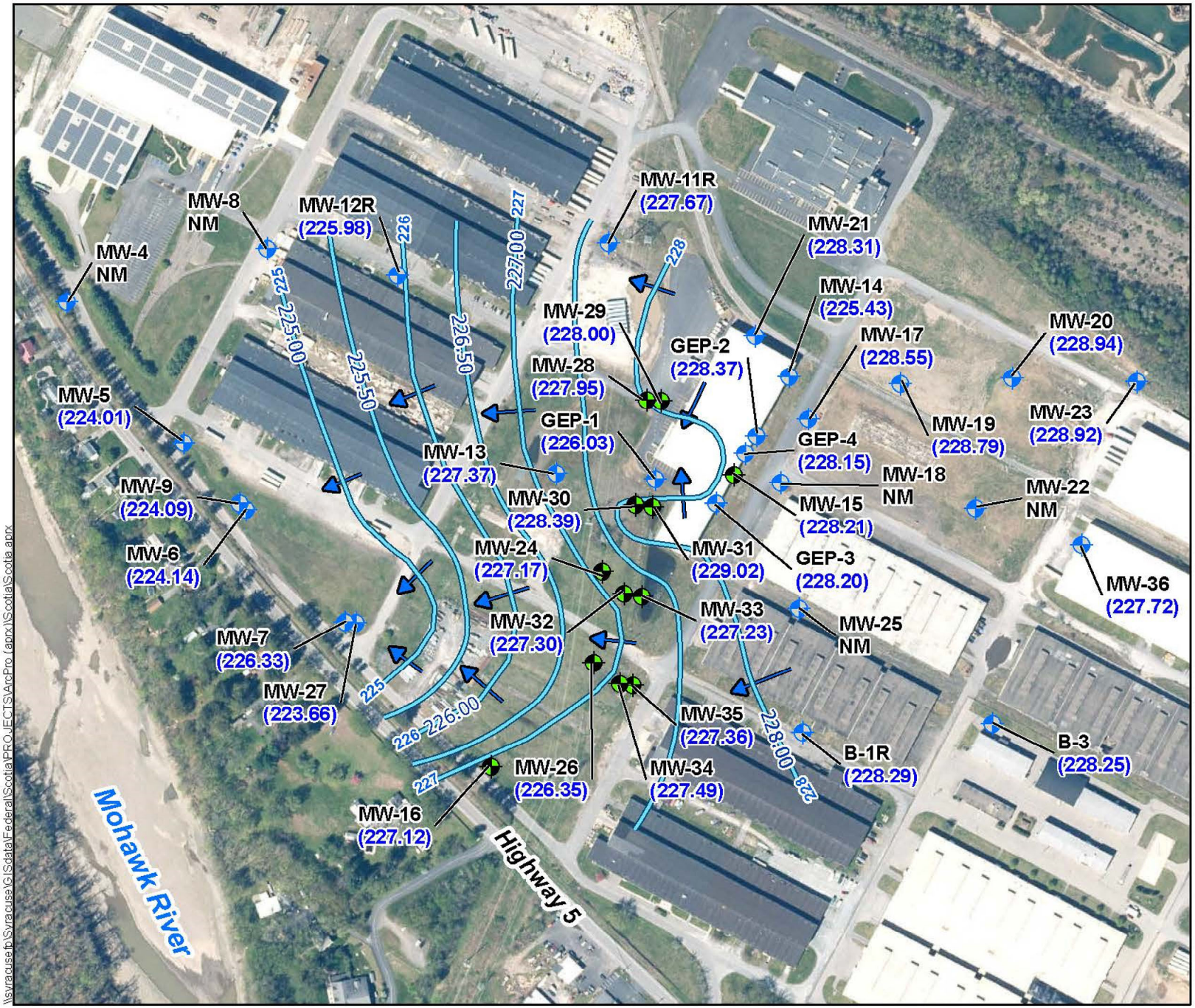


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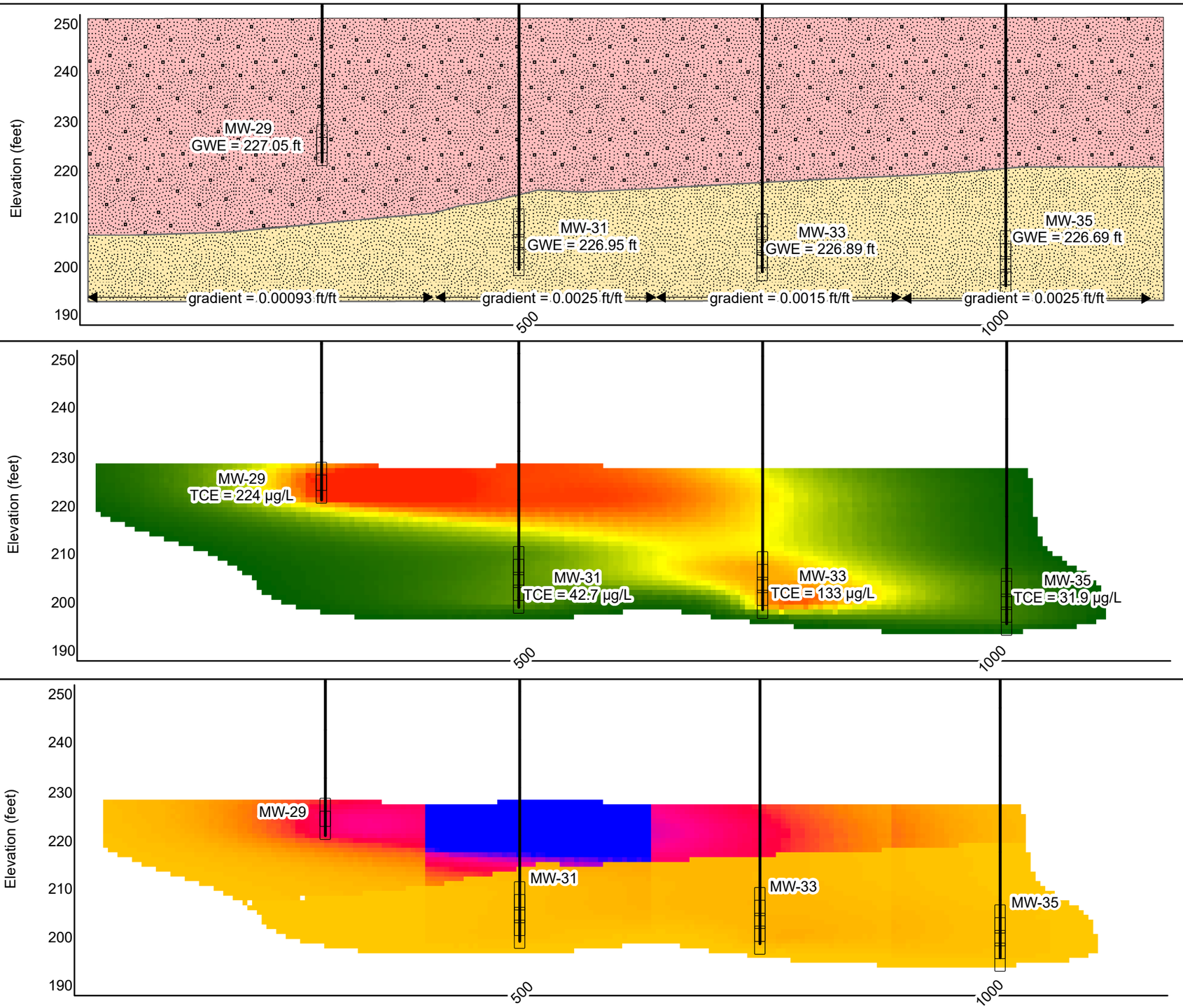
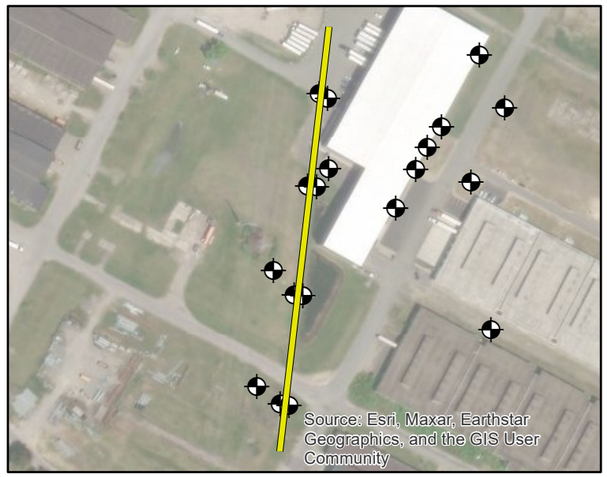
Figure 3-2
POTENTIOMETRIC SITE MAP
October 2022
Former Scotia Navy Depot

Map Date: 1/19/2024





Legend

Lithology

- Coarse Sand & Gravel (K = 100 feet/day)
- Medium to Fine Sand (K = 10 feet/day)

TCE Concentration

µg/L

- High : 250
- Low : 5

TCE Flux

µg/day

- High : 1920
- Low : 1.5

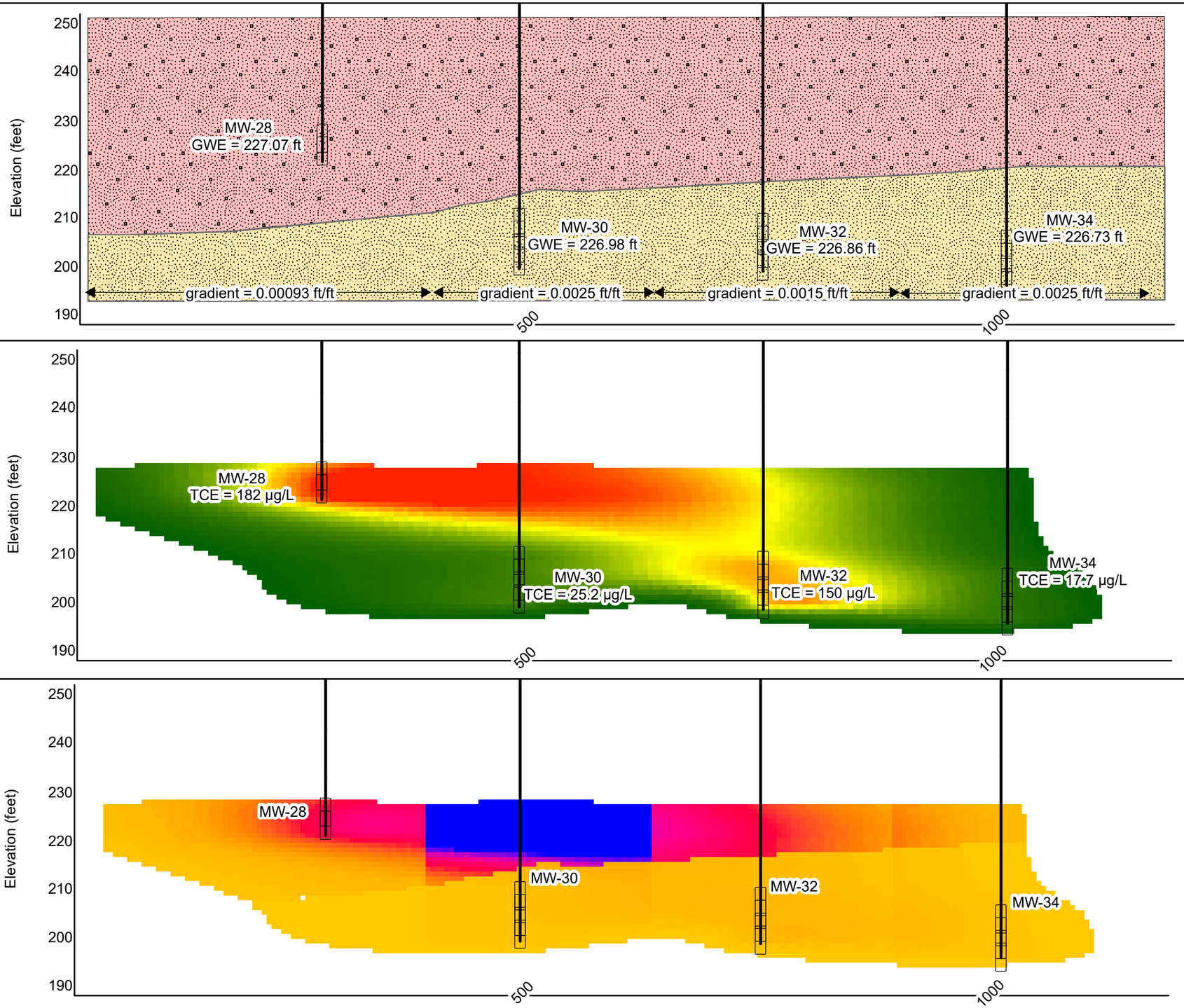
Notes:
5x Vertical Exaggeration
Acronyms:
ft = Feet
GWE = Groundwater Elevation
TCE = Trichloroethene
µg/L = micrograms per liter

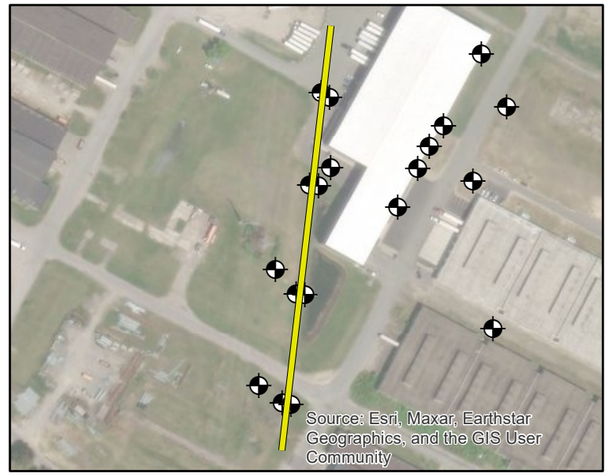
Filepath: C:\Users\lflores\Documents\ScotiaFluxMaps15Up.mxd | 10/11/2024

FINAL

FORMER SCOTIA NAVAL DEPOT
SCOTIA, SCHENECTADY COUNTY, NY

FIGURE 5-1 FLUX MAP
UPGRADIENT (2015)





Legend

Lithology

Coarse Sand & Gravel (K = 100 feet/day)

Medium to Fine Sand (K = 10 feet/day)

TCE Concentration

µg/L

High : 250

Low : 5

TCE Flux

µg/day

High : 1990

Low : 1.5

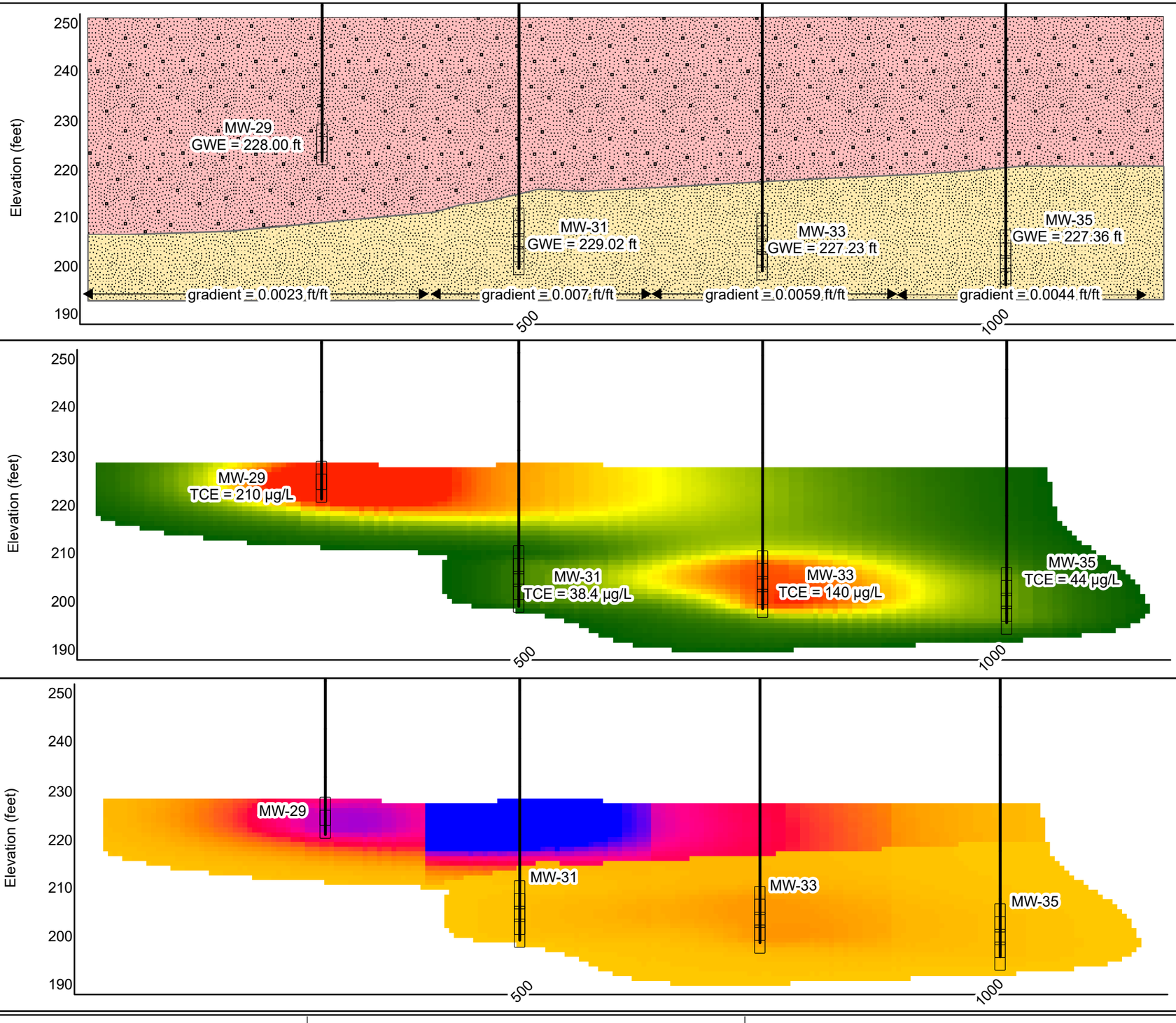
Notes:
5x Vertical Exaggeration
Acronyms:
ft = Feet
GWE = Groundwater Elevation
TCE = Trichloroethene
µg/L = micrograms per liter

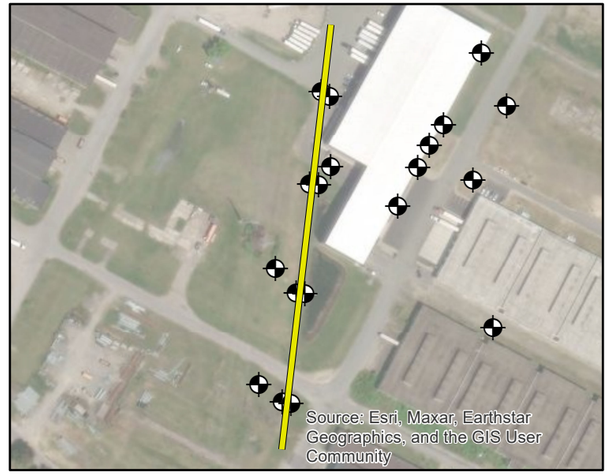
Filepath: C:\Users\lflores\Documents\ScotiaFluxMaps.mxd | 10/11/2024

FINAL

FORMER SCOTIA NAVAL DEPOT
SCOTIA, SCHENECTADY COUNTY, NY

FIGURE 5-2 FLUX MAP
DOWNGRADIENT (2015)





Legend

Lithology

- Coarse Sand & Gravel (K = 100 feet/day)
- Medium to Fine Sand (K = 10 feet/day)

TCE Concentration

µg/L

- High : 225
- Low : 5

TCE Flux

µg/day

- High : 41560
- Low : 4

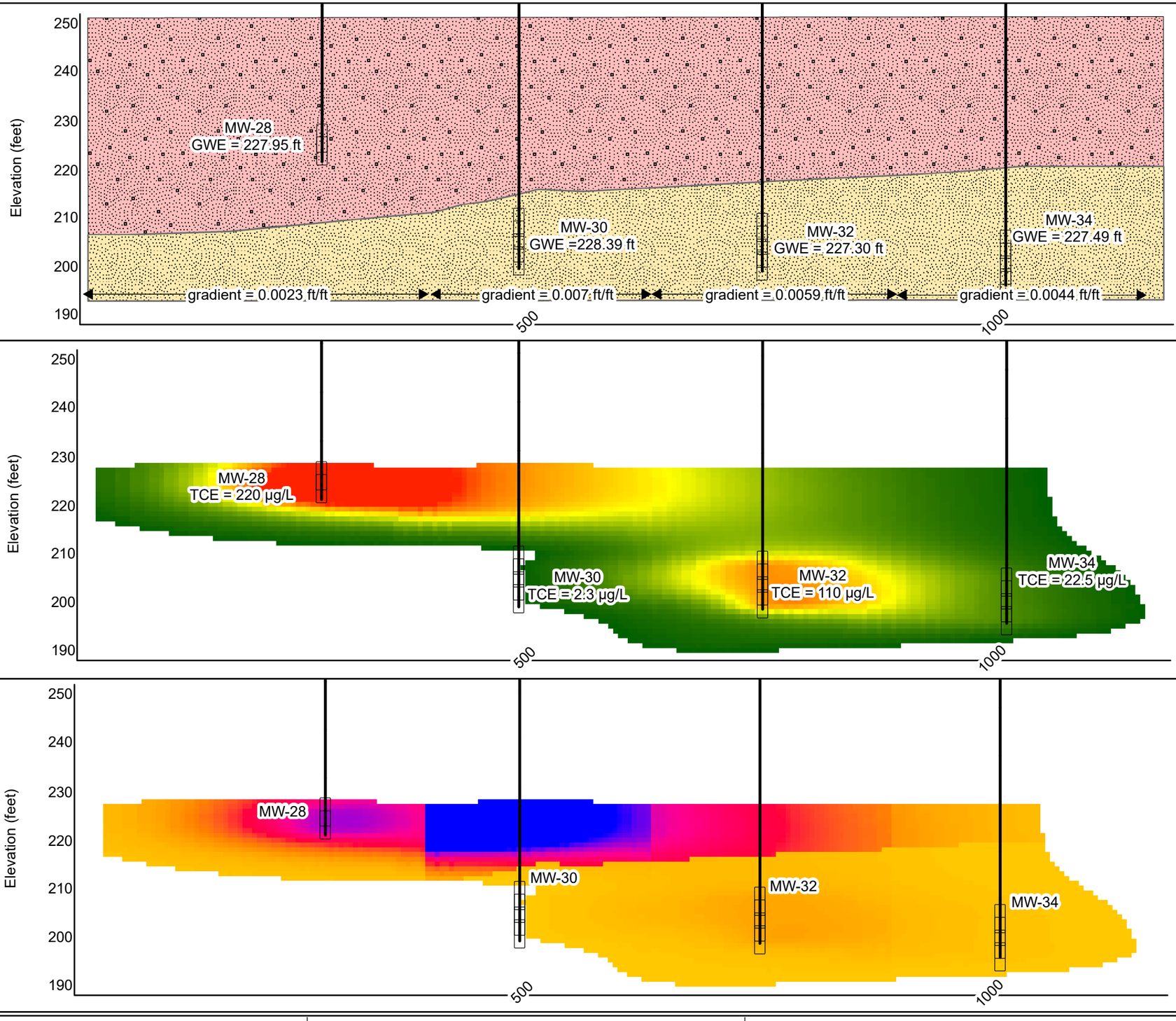
Notes:
5x Vertical Exaggeration
Acronyms:
ft = Feet
GWE = Groundwater Elevation
TCE = Trichloroethene
µg/L = micrograms per liter

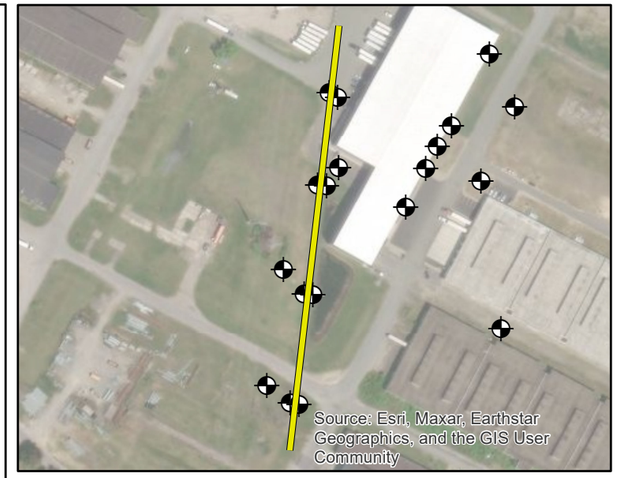
Filepath: C:\Users\lflores\Documents\Scotia\FluxMaps22Up.mxd | 10/11/2024

FINAL

FORMER SCOTIA NAVAL DEPOT
SCOTIA, SCHENECTADY COUNTY, NY

FIGURE 5-3 FLUX MAP
UPGRADIENT (2022)





Legend

Lithology

- Coarse Sand & Gravel (K = 100 feet/day)
- Medium to Fine Sand (K = 10 feet/day)

TCE Concentration

µg/L

- High : 220
- Low : 5

TCE Flux

µg/day

- High : 3969
- Low : 7

Notes:
5x Vertical Exaggeration
Acronyms:
ft = Feet
GWE = Groundwater Elevation
TCE = Trichloroethene
µg/L = micrograms per liter

Filepath: C:\Users\lflores\Documents\Scotia\FluxMaps22Down.mxd | 10/11/2024

FINAL

FORMER SCOTIA NAVAL DEPOT
SCOTIA, SCHENECTADY COUNTY, NY

FIGURE 5-4 FLUX MAP
DOWNGRADIENT (2022)

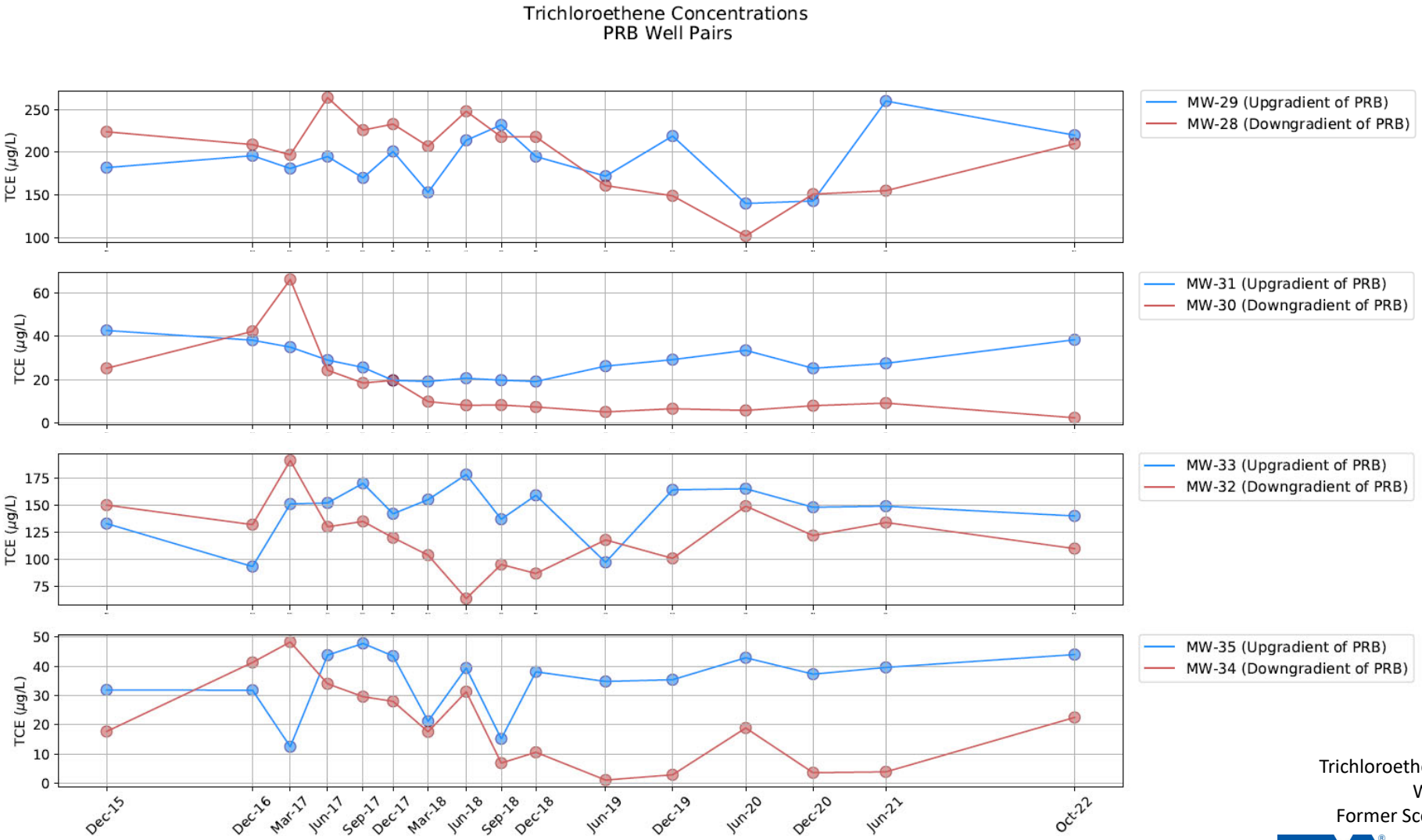


Figure 6-1
Trichloroethene Compliance
Well Pairs Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

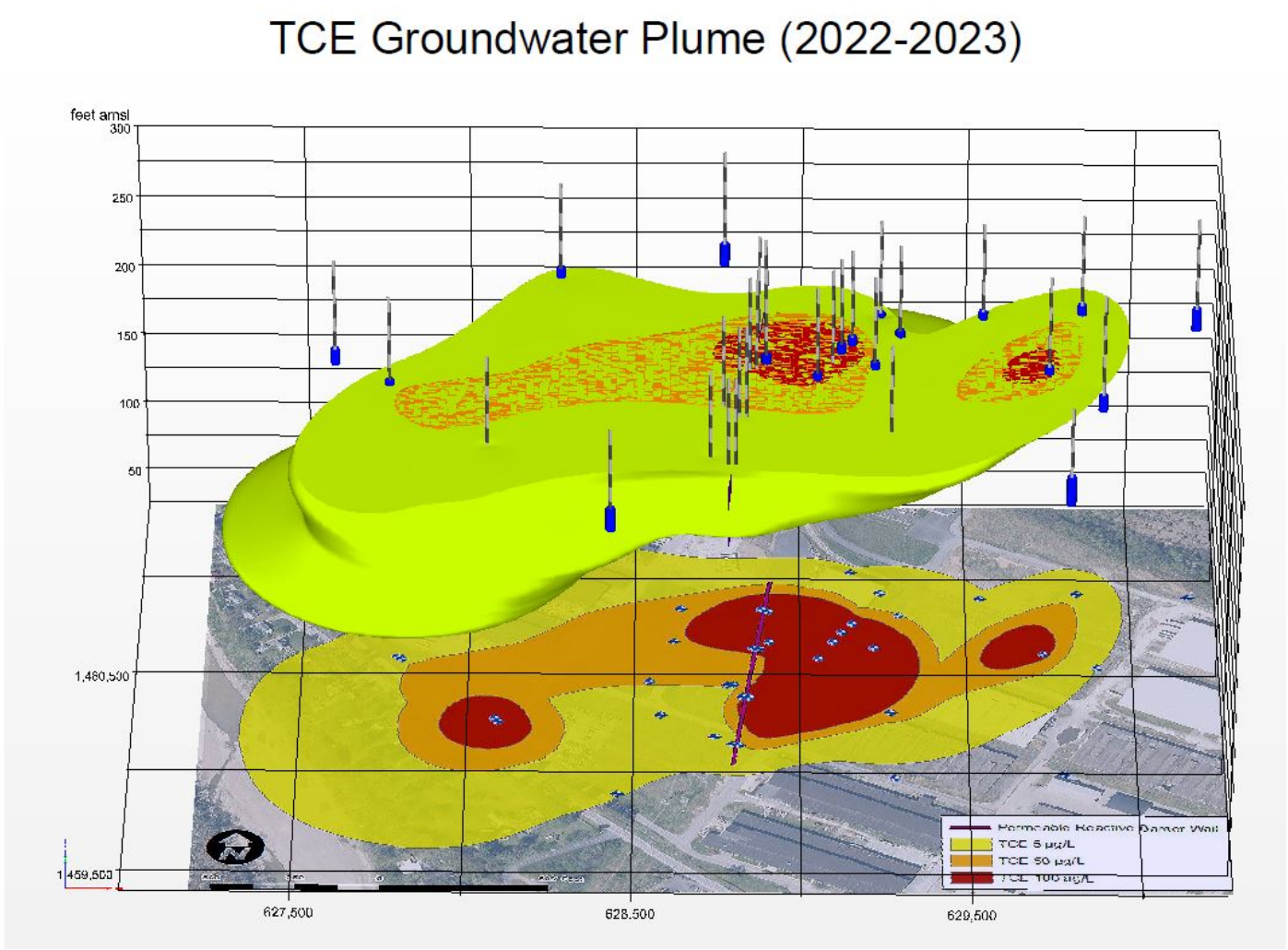
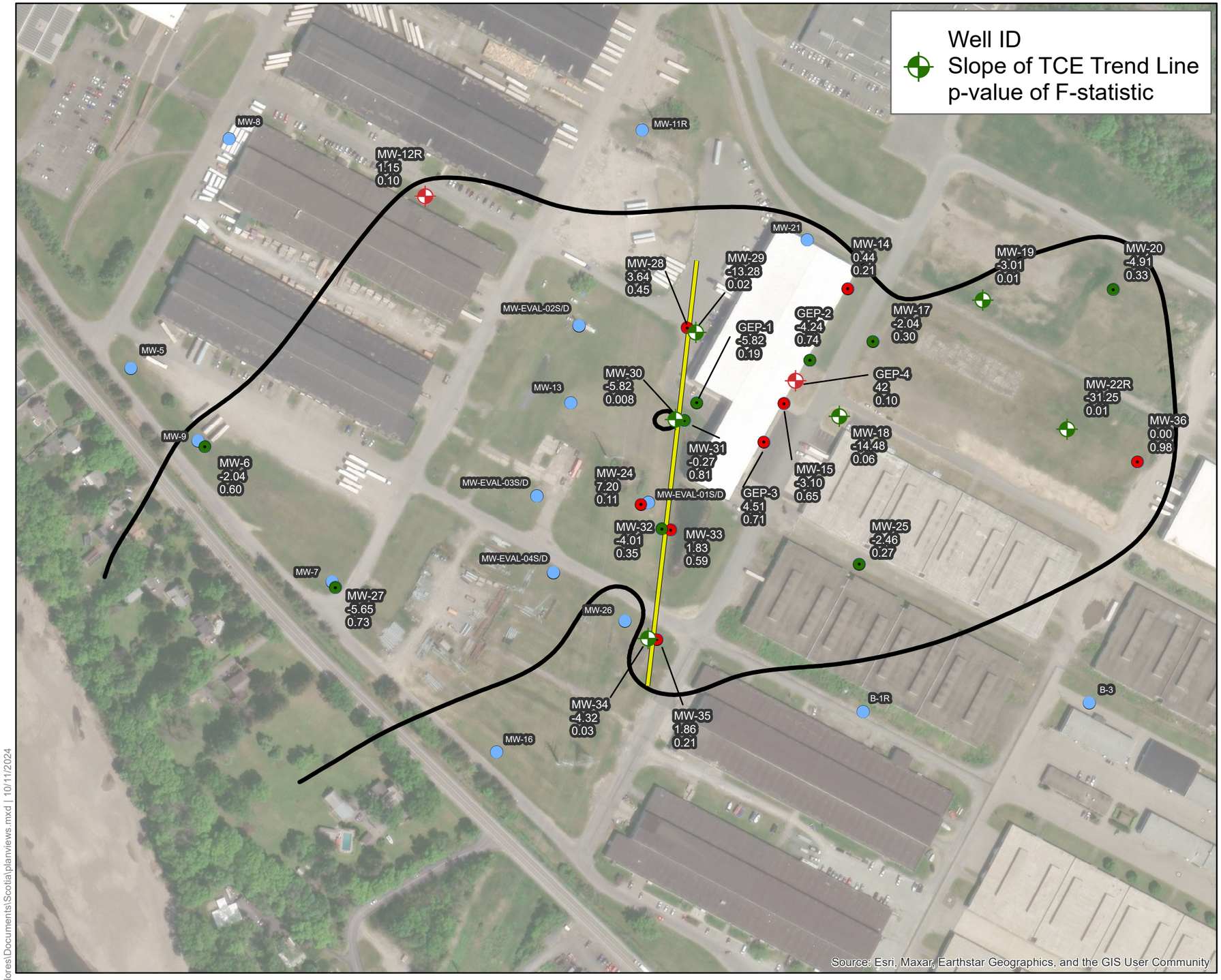
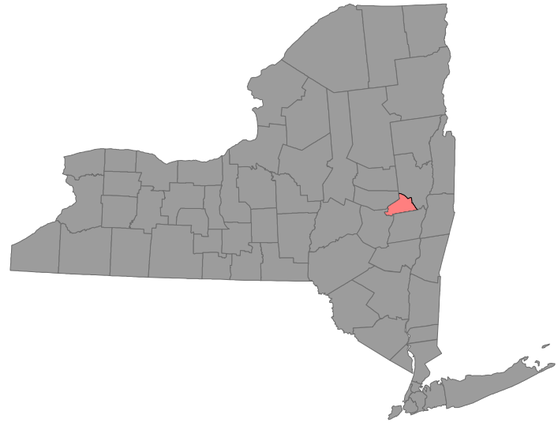


Figure 6-2.
Snapshot of 3D TCE Plume
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC





Legend

Monitoring Wells

- Decreasing, p > 0.1
- Decreasing, p < 0.1
- Increasing, p > 0.1
- Increasing, p < 0.1
- Less than 5 Samples

Permeable Reactive Barrier Wall

5 µg/L TCE Plume (2022)

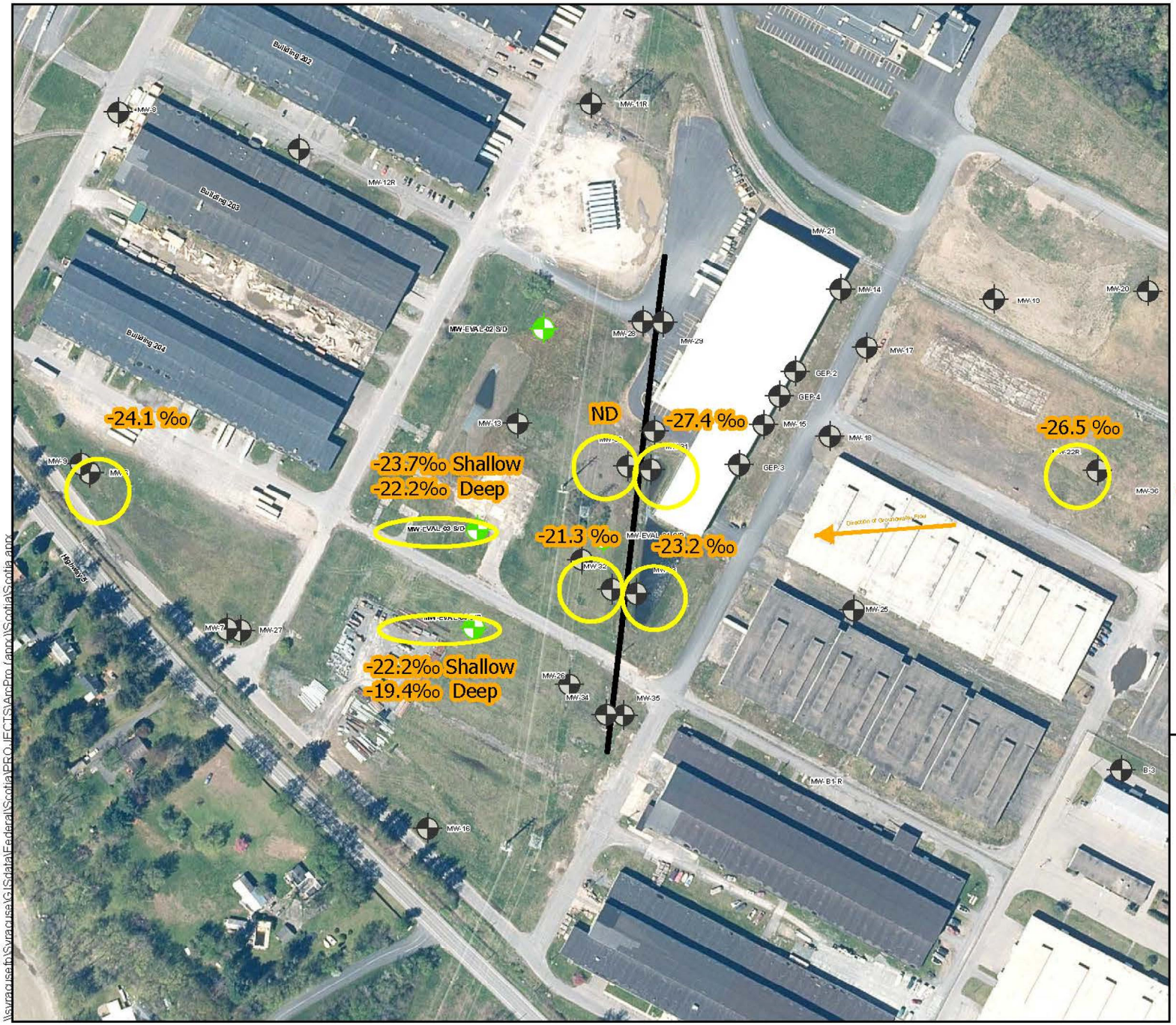
Acronyms:
TCE = Trichloroethene
µg/L = micrograms per liter

N

300 150 0 300 Feet

Filepath: C:\Users\tflores\Documents\Scotia\planviews.mxd | 10/11/2024

EA	**FINAL**	FORMER SCOTIA NAVAL DEPOT SCOTIA, SCHENECTADY COUNTY, NY	FIGURE 6-3 CVOC TREND ANALYSIS



Existing Monitoring Well

PRB Evaluation Monitoring Well Pair

PRB Location

CSIA Sampling Location

-26.5 ‰ ^{13}C / ^{12}C TCE

0 105 210 420

Feet

N

Figure 6-4
June 2023 Groundwater CSIA Results
Former Scotia Navy Depot

Map Date: 1/19/2024

\\syracuseafp\Syracuse\GIS\data\Federal\Scotia\PROJECTS\ArcPro\.aprx\ScotiaScotia.aprx

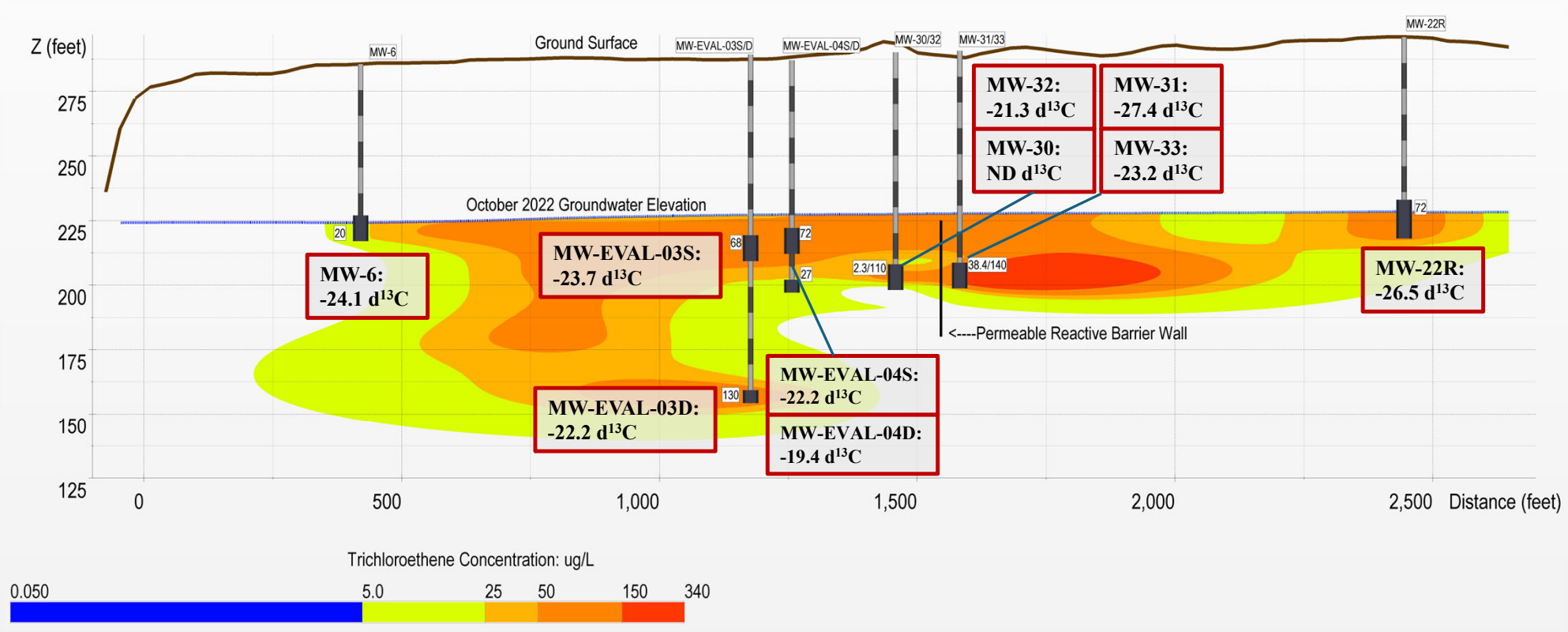


Figure 6-5.
Side Projection of **Figure 6-4** "June 2023 Groundwater CSIA Results"
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC

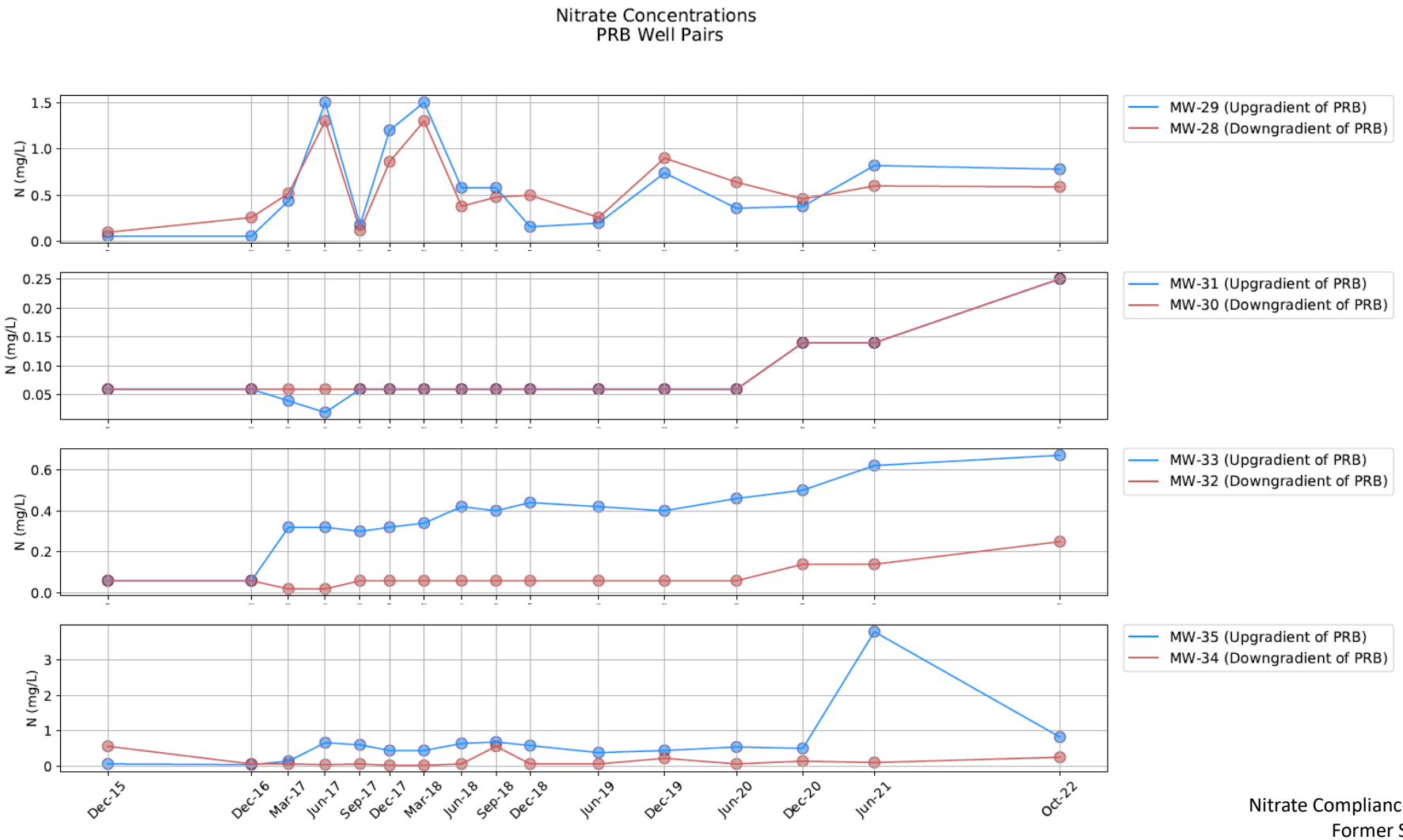


Figure 6-6
Nitrate Compliance Well Pair Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

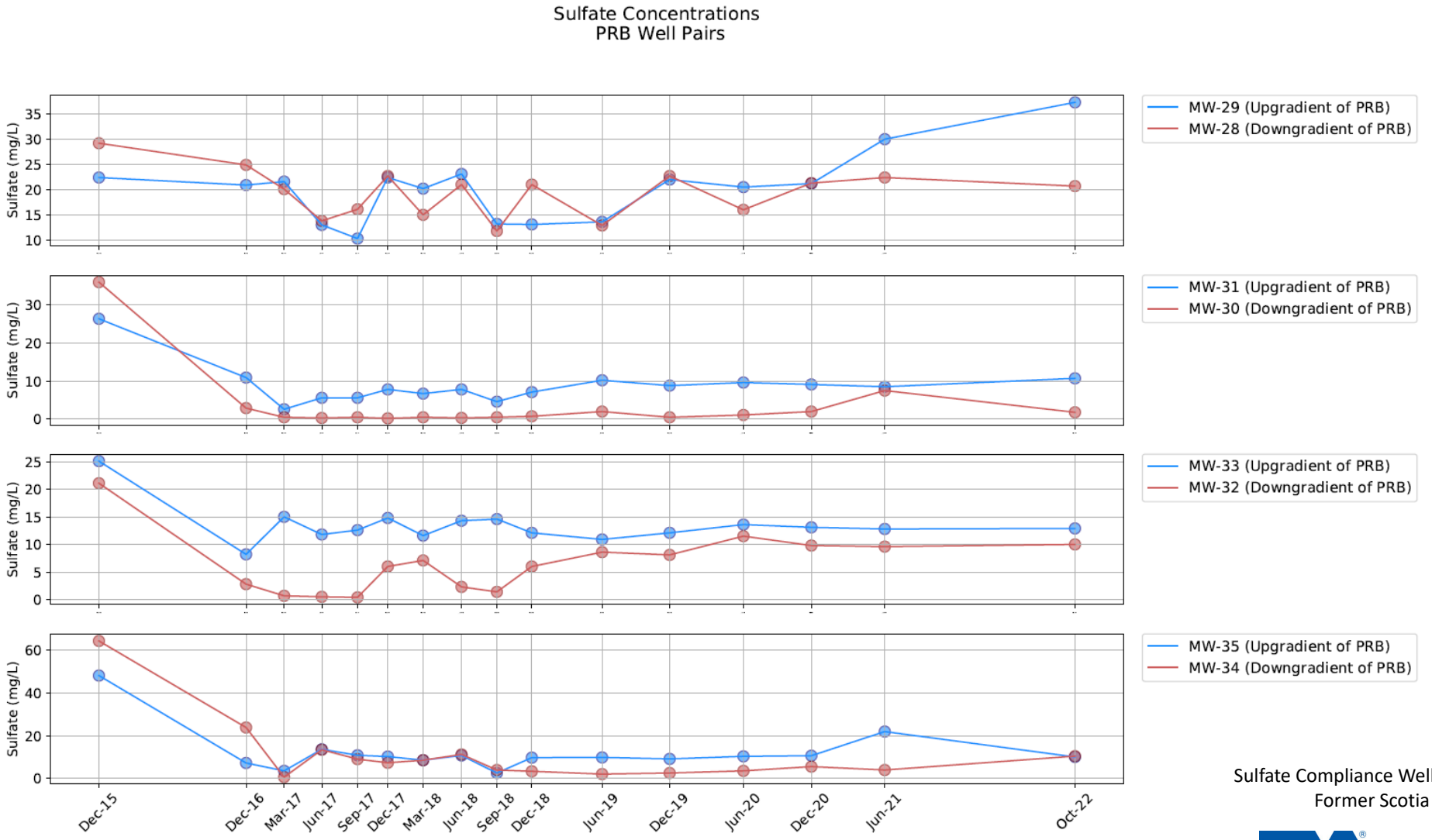


Figure 6-7
Sulfate Compliance Well Pair Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

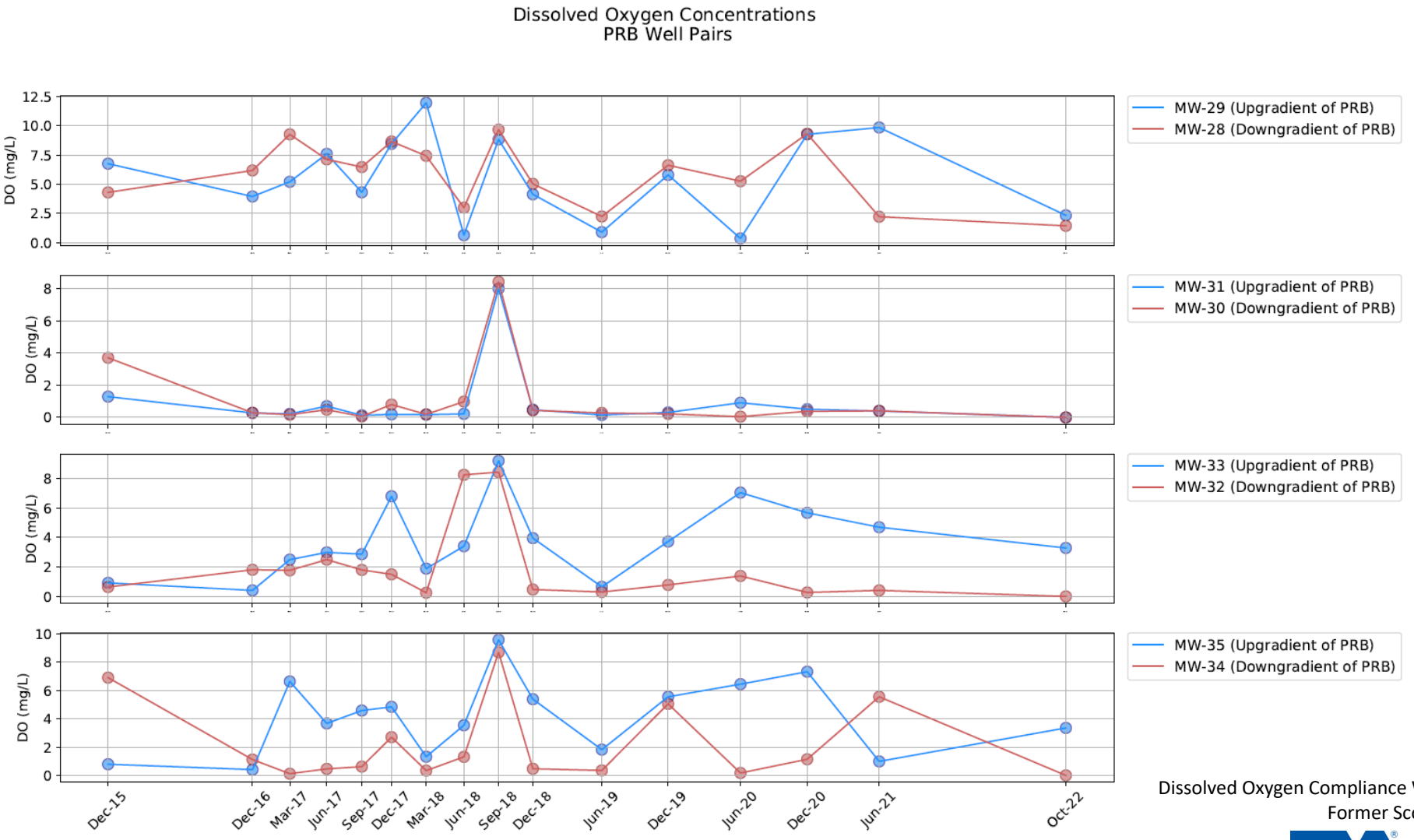


Figure 6-8
Dissolved Oxygen Compliance Well Pair Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

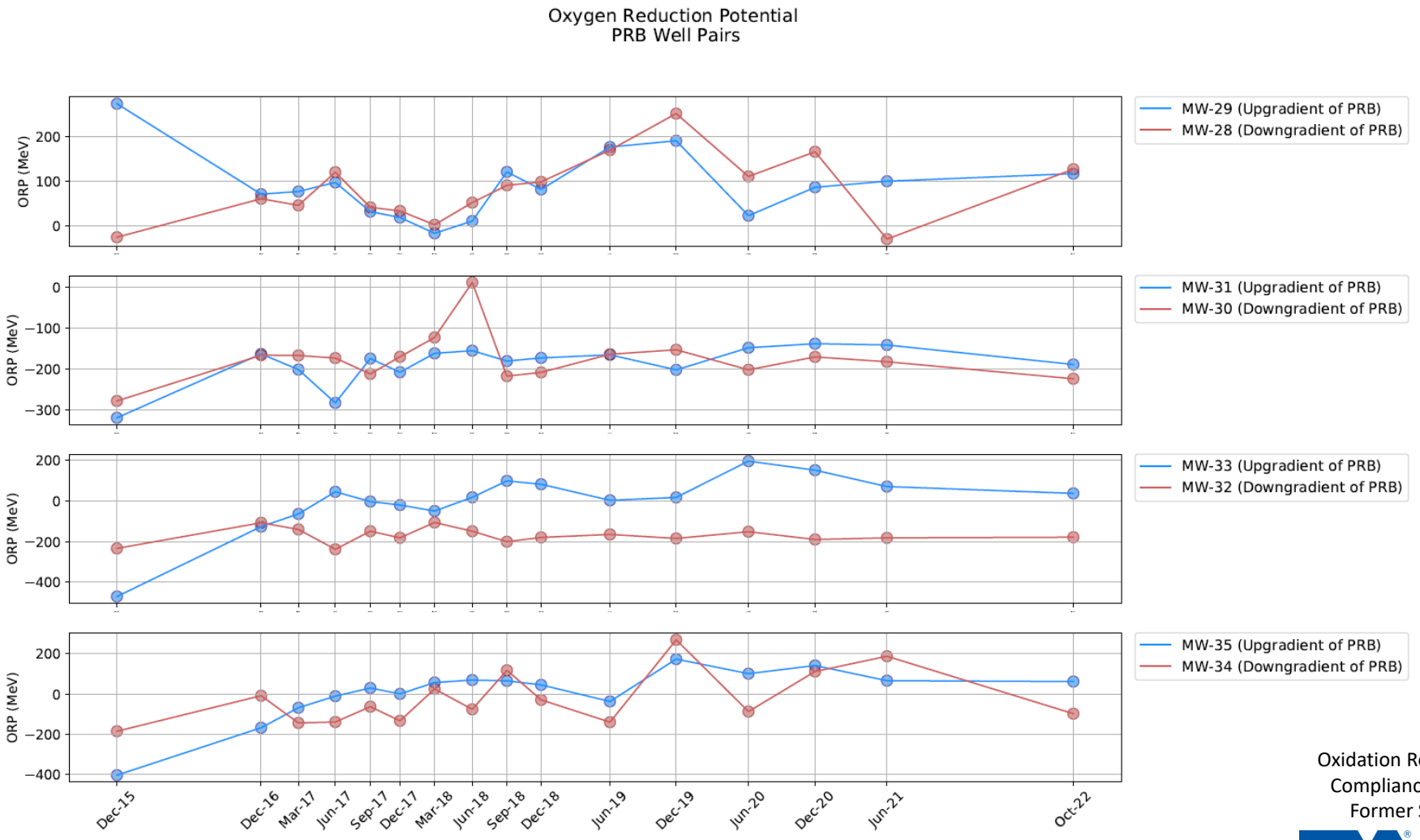


Figure 6-9
Oxidation Reduction Potential
Compliance Well Pair Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

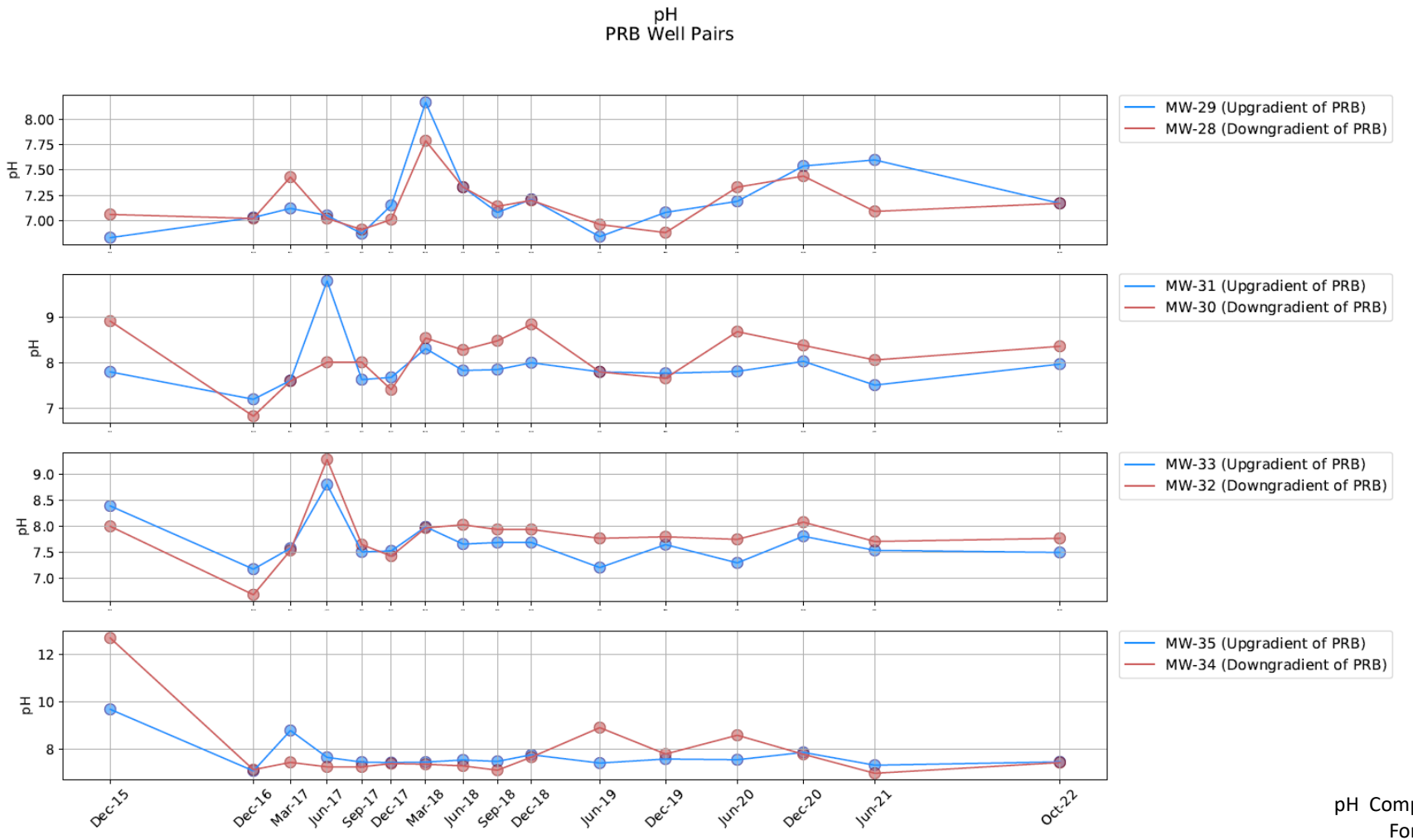


Figure 6-10
pH Compliance Well Pair Trends
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

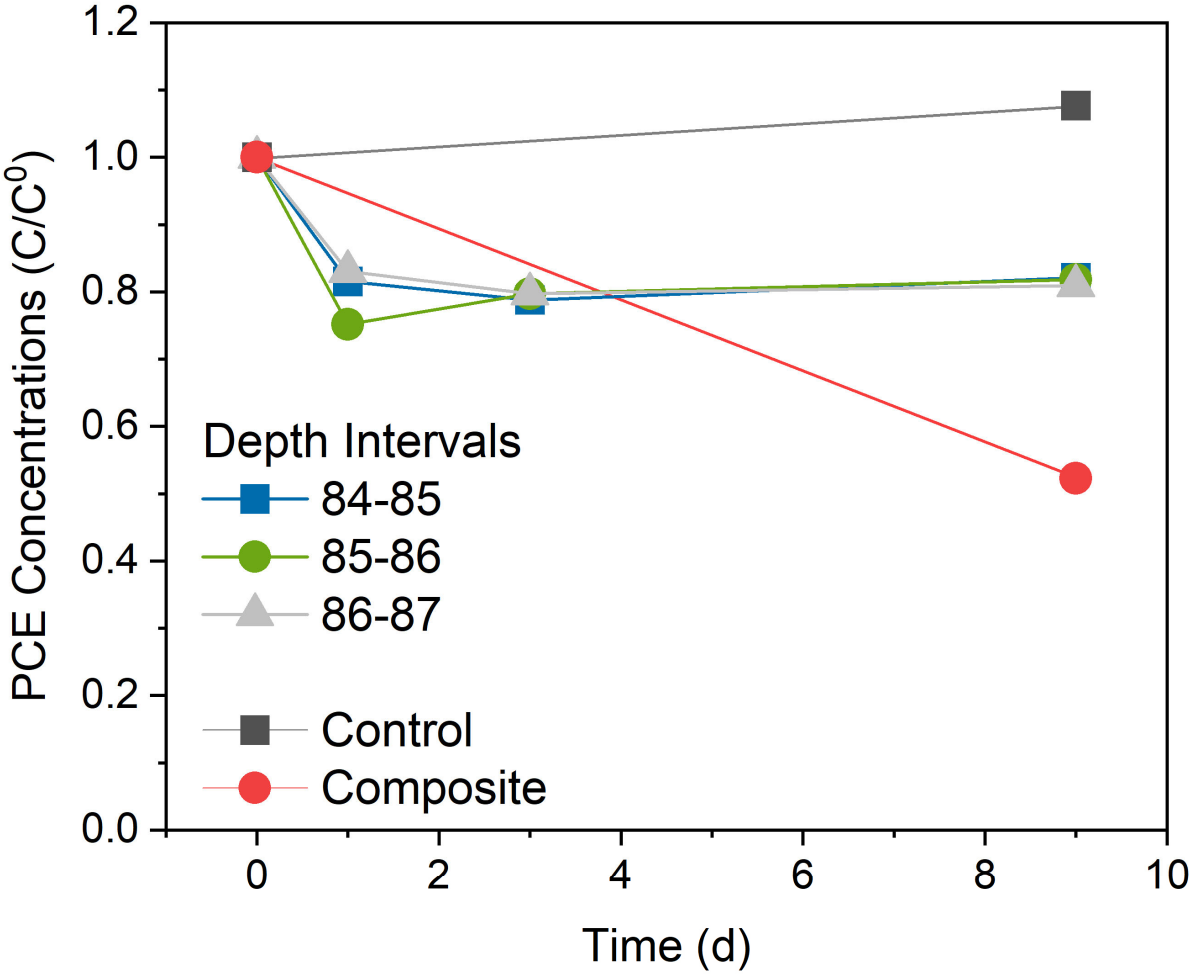


Figure 6-11
ZVI Passivation Study
Former Scotia Navy Depot

EA Engineering, P.C.
and Its Affiliate
EA Science and Technology

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Appendix A

Field Logbooks and Daily Field Reports

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Daily Field Form

Site: Scotia Navy Depot
Location: Scotia, New York
Project: 160530104

DATE: 5/2/2023	**Prepared by:** P. Gannon

Personnel Onsite:		
	P. Gannon (EA)	C. Tomko (Cascade)
	M. Wright (EA)	J. Kadegis (USACE)
	J. Hayward (EA)	J. Apell (USACE)
	S. Parkey (Cascade)	K. Decker (Land)
	N. Gravlin (Cascade)	Kieth (RECONN)

Arrive at site: 7:45 (am)
Leave site: 5:45 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	46	(am)	53	(pm)
Humidity	100%	(am)	100%	(pm)
Wind direction	NW	(am)	NW	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Periods of intermittent rain and sunshine. Periods of heavy rin and hail at times.

Material Deliveries/Equipment On Site:

0745: EA onsite with FROG 5000, Horiba, Water level meter, and PIDs.
0805: Land drops off Frac Tank.
0930: Land drops off Roll-off bins
0955: Hole Products drops of dry goods for Cascade
1230: Cascade on-site with box truck, auxillary truck, and truck mounted Sonic drill rig
1720: Porta-John delivered to site.

Inspections Conducted:

Inspection of:
Field instruments prior to arrival onsite
Frac Tanks once delivered
Roll-off bin once delivered
Bentonite, filter pack sand, and grout from Hole products
Cascade sonic rig, casing diameters, push-ahead sampler
Porta-John once delivered

Daily Field Form

Site: Scotia Navy Depot
Location: Scotia, New York
Project: 160530104

Description of Field Activities:

EA Gauged 20 site wells associated with the field event,
EA marked out the proposed borings
Land delivered IDW management solutions (Frac tank and roll-off bins)
Hole Products delivered dry goods for Cascade
Cascade arrived onsite, unloaded, the staged the truck mounted drill rig on PRO-07, hand-cleared to 5 feet, and prepared the drill rig to begin advancing tomorrow AM.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None encountered. Potential discussion about moving proposed boring locations with USACE. Will discuss again once the results from the first couple of borings are revealed.

Proposed Plan for Next Day

The plan is to complete PRO-07, profile and sample groundwater from intervals 65'-75', 75'-85', 85'-95', and 95'-105'. Depending on FROG 5000 screening results EA and USACE may elect to install a Monitoring well.

Attachments

Photographs from 5/2/2023

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 3 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	N. Gravlin (Cascade)
	P. Gannon (EA)	J. Apell (USACE)
	J. Hayward (EA)	J. Kadegis (USACE)
	J. Von Uderitz (EA)	D. Folan (USACE)
	S. Parkey (Cascade)	T. Litts (Reconn)
	C. Tomko (Cascade)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	43	(am)	48	(pm)
Humidity	100%	(am)	100%	(pm)
Wind direction	South	(am)	South	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

PRO-07 was drilled and completed. Grab water samples were collected from 69, 79, 90, and 99 ft bgs and samples were run on the field gas chromatograph. Lithology was logged to 97 ft bgs. Upon completion, the boring was filled with a grout.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):\

EA failed to collect water quality data from the 69 ft sample interval.

Proposed Plan for Next Day

Set up on PRO-06 and complete boring and hydraulic profiling.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 4 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	P. Gannon (EA)	
	S. Parkey (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	43	(am)	55	(pm)
Humidity	100%	(am)	100%	(pm)
Wind direction	South	(am)	South	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

PRO-06 was drilled and completed. Grab water samples were collected from 69, 79, 90, and 99 ft bgs and samples were run on the field gas chromatograph. Lithology was logged to 127 ft bgs. Upon completion, the boring was filled with a grout.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None

Proposed Plan for Next Day

Set up on PRO-01 and complete boring and hydraulic profiling down to 127 ft with 2 additional intervals of water sampling down to 125 ft bgs.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 5 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	K. Forster (NYSDEC)
	P. Gannon (EA)	S. Roberts (NYSDEC)
	S. Parkey (Cascade)	D. Gao (NYSDEC)
	C. Tomko (Cascade)	Steven I. (NYSDEC)
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0630 (am)
Leave site: 1715 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	43	(am)	65	(pm)
Humidity	100%	(am)	100%	(pm)
Wind direction	Southwest	(am)	Southwest	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

PRO-01 was drilled to 57ft bgs. One push ahead sample was collected at 70ft bgs. Drill rig was down for most of the day with mechanical issues.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

Drill rig was down for most of the day. Hydraulic lines slipped the rollers on the mast and kinked causing the pressure transmitter for the drill head tube lube to blow.

Proposed Plan for Next Day

Install new pressure transmitter on the drill rig, continue PRO-01 down to 125ft bgs with soils and water samples.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 6 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	P. Gannon (EA)	
	S. Parkey (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	

Arrive at site: 0630 (am)
Leave site: 1745 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	45	(am)	74	(pm)
Humidity	75%	(am)	80%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Complete PRO-01 to 127 ft bgs and collect 5 screening samples from 79', 89', 99' 109' and 119'. Move rig to PRO-03 and drill to 57 ft bgs.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None

Proposed Plan for Next Day

Sample 4 intervals and PRO-03 and drill to 107 ft bgs. Move Rig to PRO-02 and begin drilling.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 7 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	P. Gannon (EA)	
	S. Parkey (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	

Arrive at site: 0630 (am)
Leave site: 1500 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	48	(am)	78	(pm)
Humidity	75%	(am)	85%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Complete PRO-03 to 107 ft bgs and collect 4 screening samples from 71', 79', 90', and 99'.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

The starter on the rig is broken ,unable to move rig off PRO-03 location.

Proposed Plan for Next Day

Repair the starter on the rig and set up on PRO-02 and drill and sample to 107ft.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 8 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	P. Gannon (EA)	
	S. Parkey (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0730 (am)
Leave site: 1800 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	55	(am)	78	(pm)
Humidity	75%	(am)	85%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Complete PRO-02 to 107 ft bgs and collect 4 screening samples from 71', 81', 89', and 99'.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Grout PRO-02 and set up and drill PRO-04.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 9 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	L. Backman-Lowe (EA)
	P. Gannon (EA)	S. Argue (Cascade)
	S. Parkey (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0630 (am)
Leave site: 1830 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	55	(am)	78	(pm)
Humidity	55%	(am)	30%	(pm)
Wind direction	North	(am)	North	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Abandon PRO-02, Move to PRO-04 and drill to 87ft bgs. Collect samples from 71', 81', 94', and 101'.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Set well at PRO-04 after well call with PDT. Set up and begin drilling at PRO-08.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 10 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0630 (am)
Leave site: 1850 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	50	(am)	78	(pm)
Humidity	25%	(am)	32%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Install nested well pair at PRO-04 location, MW-EVAL-01S screened 65-75 and MW-EVAL-01D screened 85-90. Drill PRO-08 to 67 ft bgs.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Sample PR0-08 and install nested well pair.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 11 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0615 (am)
Leave site: 1750 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	57	(am)	78	(pm)
Humidity	40%	(am)	33%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Drill PRO-08 to 97ft and samples 71', 81, 91, and 101' with FROG.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

Hydraulic cylinder on the rig blew. Rig down for 4 hours while repaired.

Proposed Plan for Next Day

Install nested well pair at PRO-08, MW-EVAL-02S screened 70-80 and MW-EVAL-02D screened 90-95. Begin drilling PRO-10.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 12 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	Pat Gannon (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	D. Folan (USACE)	

Arrive at site: 0615 (am)
Leave site: 2000 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	60	(am)	80	(pm)
Humidity	55%	(am)	34%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Install nested well pair at PRO-08, MW-EVAL-02S screened 70-80 and MW-EVAL-02D screened 91-96. Drill PRO-10 to 107ft bgs and sample 71', 81', 91', 101', 111', and 121'.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Continue drilling and sampling at PRO-10 until decreasing tread is observed.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 13 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	

Arrive at site: 0715 (am)
Leave site: 1530 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	68	(am)	78	(pm)
Humidity	38%	(am)	13%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Drilled to 127ft bgs, no samples collected due to hydraulic line failure.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

Main hydraulic feed to the drill head blew, hydraulic oil was released and caught in secondary containment. Spill was called into NYSDEC (case number 2301216). A technician from the DEC Spills group (Kevin Sarnowicz) came by the site mid-afternoon today for an inspection, and indicated everything had already been taken care of by Cascade to his satisfaction. Once the rig is moved again on Monday, Kevin plans to swing by the site again for a quick follow-up inspection. He said if there is any hydraulic fluid leftover that may have been under the rig, the affected grass/soil can simply be scooped up and placed in the roll-off with the poly sheeting.

Proposed Plan for Next Day

Repair hydraulic lines on rig and resume drilling PRO-10.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 15 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	D. Baker (GSA)
	L. Backman-Lowe (EA)	T. Hines (USACE)
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	K. Forster (NYSDEC)	

Arrive at site: 0730 (am)
Leave site: 1845 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	51	(am)	71	(pm)
Humidity	50%	(am)	33%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Sample PRO-10 at 131', 141', and 151'. Nested wells MW-EVAL-03 S/D set and screened from 70-80ft and 130-135ft bgs. 151' ND sample will be sent to the lab per request from USACE.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Grout MW-EVAL-03 S/D. Move to PRO-09 and begin drilling and sampling

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 16 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	D. Baker (GSA)
	L. Backman-Lowe (EA)	T. Hines (USACE)
	S. Argue (Cascade)	S.
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	
	K. Forster (NYSDEC)	

Arrive at site: 0630 (am)
Leave site: 1745 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	51	(am)	78	(pm)
Humidity	58%	(am)	17%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Grout MW-EVAL-03 S/D. Move to PRO-09 and drill to 92ft bgs. FROG sample at 73', 81, 91', and 101'. Wells will be set at 65-75' and 85-90'.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Set MW-EVAL-04 S/D to 65-75ft and 85-90ft.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 17 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	

Arrive at site: 0630 (am)
Leave site: 1745 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	47	(am)	55	(pm)
Humidity	44%	(am)	17%	(pm)
Wind direction	Northwest	(am)	Northwest	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Set wells MW-EVAL-04 S/D to 65-75ft and 85-90ft. Move to PRO-05 and drill to 87 ft bgs. Sample 71' and 81'. Will run on FROG tomorrow.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Drill PRO-05 to 107ft and sample 91' and 101'.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 18 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe (EA)	
	S. Argue (Cascade)	
	C. Tomko (Cascade)	
	N. Gravlin (Cascade)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	46	(am)	64	(pm)
Humidity	56%	(am)	23%	(pm)
Wind direction	Southwest	(am)	South	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Drill PRO-05 to 107'. Sample 91', 101', and 111'. Move rig to angle boring location south of PRO-01. Rig set to 70 degree angle 28.5 ft perpendicular to the PRB wall.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Demoab drill crew until 5/23.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 22 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	60	(am)	76	(pm)
Humidity	40%	(am)	13%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Develop wells MW-EVAL-03S/D and MW-EVAL-04S/D.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Start angle boring and pour well pads.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 23 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	S. Parkey (Cascade)	
	N. Gravlin (Cascade)	
	Austin (Cascade)	
	J. Apell (USACE)	
	J. Kadegis (USACE)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	55	(am)	75	(pm)
Humidity	32%	(am)	22%	(pm)
Wind direction	East	(am)	East	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

MW-EVAL-02 S/D was developed. Pour well pads on all 4 nested well pairs. Angle boring drilled to 35 ft bgs.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

Finish angle boring and collect aliquot for PRB analysis.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 24 May 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	J. Hayward (EA)
	S. Parkey (Cascade)	K. Forster (NYSDEC)
	N. Gravlin (Cascade)	Steven I. (NYSDEC)
	Austin (Cascade)	
	J. Apell (USACE)	
	J. Kadegis (USACE)	

Arrive at site: 0630 (am)
Leave site: 1700 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	65	(am)	75	(pm)
Humidity	32%	(am)	22%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

FROG 5000

Horiba U-52

Inspections Conducted:

Drill Rig Inspection

Safety Inspection

Description of Field Activities:

Drill Angle boring to 95 linear ft. Iron filling present 85-87 linear ft. collect samples 84-85, 85-86, and 86-87'. Cascade packed up drilling equipment to prepare for demoab.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

All work complete.

Attachments

NONE

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/2/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	6	6	6		
On Site:	6.5	6.5	6.5		
Misc. Off Site:	1	0.5			
Total Hours:	13.5	13	12.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
5:30-6:00	p.m. equip, pre-trip inspection
6:00-12:30	finish traveling to site
12:30-5:30	meet with clients, safety meeting-site orientation, unload and set up lay
	lay down, hook up water source and fill rig, site walk and look at locatior
	with clients, move in equip. on first location then stand down due to
	electrical line going underground near rig then get clarification from ons
	rep. then set up and hand clear-seal tub,
5:30-6:30	shutdown and secure site and equip. travel to hotel
6:30-7:00	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck	1	Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)		Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)		Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site					
Footage Drilled					
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/3/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11	11	11		
Misc. Off Site:	0.5				
Total Hours:	12	11.5	11.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-7:00	fuel up and travel to site,then safety meeting-preshift
7:00-8:30	drill 4x6 to 57ft then set up sampler
8:30-10:00	drive to 70ft and sample then pull-decon then drive to 80ft water sample
	and pull -decon
10:00-11:00	tower down rig and retighten the new hydraulic lines and clean up
11:00-1:30	set and drive sampler to 81ft client needed more water, then pull-decon
	and drive to 90ft water sample then pull-decon rods then drive to 100ft
	water sample-pull,decon rods,
1:30-2:00	finish drilling 4x6 from 57ft to 97ft
2:00-4:00	set up to grout then mix and install 3-batches of grout while pulling-decc
	of tooling, clean up
4:00-5:30	teardown, shovel tub, dump soil and pump off dirty tote, shutdown and
	secure site and equip.travel to hotel
5:30-6:00	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	97	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	4	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	97	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

		Cascade Drilling Project #	***119-23-1043***
Hours On Site		rig repair due to retightening of new lines	1.00
Footage Drilled			
Well Installed (FT.)			
Boring Abandoned (FT.)			

DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/4/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-8:30	fuel up and travel to site,then safety meeting-preshift, move equip. to
7:00-8:30	next location and set up, seal tub and water runs
8:30-9:30	drill 4x6 to 57ft then set up sampler
9:30-10:00	drive sampler to 70ft open and water sample then pull-decon rods
10:00-10:30	drill to 67ft then drive sampler to 80ft
10:30-11:00	water sample-pull,decon rods,
11:00-11:30	drill to 77ft then drive sampler to 90ft
11:30-12:30	water sample-pull,decon rods,
12:30-1:00	drill to 87ft then drive sampler to 100ft
1:00-1:30	water sample-pull,decon rods,
1:30-3:00	drill to 127ft look at samples then terminate boring
3:00-5:30	set up to grout then mix 7-batches of grout while pulling-decon of tooling
	also top off previous hole clean up
5:30-6:00	shutdown and secure site and equip. travel to hotel (.5hr paperwork)

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	127	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	127	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

		Cascade Drilling Project #	***119-23-1043***
Hours On Site		rig repair due to retightening of new lines	1.00
Footage Drilled			
Well Installed (FT.)			
Boring Abandoned (FT.)			

DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/5/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	12	12	12		
Misc. Off Site:	0.5				
Total Hours:	13	12.5	12.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-8:30	fuel up and travel to site,then safety meeting-preshift, move equip. to
	next location and set up, seal tub and water runs
8:30-10:00	drill 4x6 to 47ft then noticed that the new hydraulic line jumped the roller
10:00-2:30	tower down and begin to take off hoses and rig repair, get new lines
	made and install,
2:30-3:30	drill to 57ft then drive sampler to 70ft, water sample, then pressure
	switch for tub lube failed due to kinked hose from earlier,
3:30-6:30	rig repair, take switch off and go purchase a new one shutdown secure
	site and equip. travel to hotel
6:30-7:00	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	57	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	1	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

		Cascade Drilling Project #	***119-23-1043***
Hours On Site		roller	7.00
Footage Drilled			
Well Installed (FT.)			
Boring Abandoned (FT.)			

DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/6/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-7:30	fuel up and travel to site,then safety meeting-preshift, set up
7:30-8:00	pull-decon rods then drive to 80ft and water sample pull-decon rods
8:00-8:30	drill 4x6 to 77ft then then push sampler to 90ft
8:30-9:00	water sample and pull-decon rods, drill to 87ft
9:00-9:30	drive sampler to 100ft,water sample and pull-decon rods
9:30-10:00	drill to 100ft then drive samper to 110ft sample then pull-decon rods
10:00-10:30	drill to 107ft then drive samper to 117ft
10:30-11:30	water sample and pull-decon rods
11:30-12:00	drill to 127ft to terminate boring
12:00-1:30	set up to grout and travel to purchase cement travel back to site-unload
1:30-3:30	mix-install 6-batches of grout while pulling-decon of tooling, clean up
3:30-4:30	teardown move and set up-seal tub
4:30-5:30	drill to 57ft,
5:30-6:00	shutdown and secure site and equip. travel to hotel (.5hr paperwork)

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	127	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	3.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	127	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site					
Footage Drilled					
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/7/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	8.5	8.5	8.5		
Misc. Off Site:	0.5				
Total Hours:	9.5	9	9		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-7:00	fuel up and travel to site,then safety meeting-preshift, set up
7:00-7:30	drive sampler to 75ft,water sample and pull-decon rods
7:30-8:00	drill 4x6 to 67ft then then push sampler to 80ft
8:00-8:30	water sample and pull-decon rods, drill to 77ft
8:30-9:00	drive sampler to 90ft,water sample and pull-decon rods
9:00-9:30	drill to 87ft then drive samper to 100ft
9:30-10:00	water sample-pull and decon rods then drill to 107ft to terminate boring
10:00-12:30	set up to grout then mix-install 4-batches of grout while pulling-decon of
	tooling,clean up, shovel tub,pump off dirty tote
12:30-1:30	attempt to start the rig then troubleshoot, starter went out on motor
1:30-3:00	talk with client, back fill previous hole with chip,shutdown and secure
	site and equip. travel to hotel
3:00-3:30	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	50	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	107	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

		Cascade Drilling Project #	***119-23-1043***
Hours On Site		(starter on drill rig)	1.00
Footage Drilled			
Well Installed (FT.)			
Boring Abandoned (FT.)			

DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/8/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	10.5	10.5	10.5		
Misc. Off Site:	0.5				
Total Hours:	11.5	11	11		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
7:00-10:30	fuel up and travel to site,then safety meeting-preshift, then rig repair by
	a mobile mechanic,
10:30-12:00	move equip. to next location and set up, water up and seal tub
12:00-1:30	drill to 67ft and drive sampler to 72ft,water sample
1:30-2:30	pull-decon sampler,then drive to 82ft water sample and pull-decon rods
2:30-3:00	drill to 77ft,and drive to 90ft
3:00-3:30	water sample-pull and decon rods then drill to 87ft and drive sampler to
	100ft
3:30-4:00	water sample-pull and decon rods and sampler
4:00-4:30	drill to 107ft to terminate boring
4:30-6:00	shutdown and dump soil-pump off tote, secure site and equip. then trav
	to hotel
6:00-6:30	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	107	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site		(rig repair on starter of rig)			3.00
Footage Drilled					
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/9/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
6:00-8:00	fuel up and travel to site,then safety meeting-preshift, and driller call in
	set up to grout
8:00-9:30	mix and install 4-batches of grout while pulling-decon of tooling,
9:30-10:30	clean up,and teardown, move and set up-seal tub
10:30-1:00	drill to 67ft then drive sampler to 72ft
1:00-2:30	water sample then pull-decon rods then drive to 82ft water sample and
	pull-decon rods,
2:30-3:30	drill to 77ft, and drive the sampler to 95ft
3:30-4:00	water sample-pull and decon rods and sampler
4:00-4:30	drill to 87ft then drive sampler to 102ft
4:30-5:00	water sample then pull-decon rods
5:00-6:00	shutdown and secure site and equip. then load trash into truck and drive
	to hotel
6:00-6:30	paperwork completed by driller

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	87	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	107	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site					
Footage Drilled					
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:					
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/10/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Steve A**	**Cory T**	**Nick G**		
Travel:	1	1	1		
On Site:	12	12	12		
Misc. Off Site:	0.5				
Total Hours:	13.5	13	13		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site H&S
815	Well depths decided
830	Overdrill 7" to 75'
	set nested pair of wells, deep 85-90 and shallow 65-75
	Complete wells with cement grout
1330	Clean up and handle IDW
	move and set up at next drilling location
1445	drill 4x6 to 67'
1830	Off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	147	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)		Hour
2" S40 PVC & Annular Material-Per Foot Installed	165	Feet
Cement-Bentonite Grout	60	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	12				
Footage Drilled	147				
Well Installed (FT.)	165				
Boring Abandoned (FT.)					
DATE:	**5/10/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**Steve A**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/11/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Tyler F**		
Travel:	1	1	1		
On Site:	7	7	7		
Misc. Off Site:	4	4	4		
Total Hours:	12	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site H&S Preshift
	while setting drive point screen hydraulic cylinder on jaws blew out
700	Down looking new cylinder, repair made on our cylinder
1230	rig repaired, water sample 72,82,92,102
	drill to 97
	wash 7' override casing to 82
1730	Off site, Cascade safety call
1800	off duty

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	112	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	Quantity	Head Failure / Rig Failure/ Downtime	Hrs

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	7	rig down 5.5 hours			
Footage Drilled	112				
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:	**5/11/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**Steve**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/12/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Steve A**	**Cory T**	**Nick G**		
Travel:	1	1	1		
On Site:	12	12	12		
Misc. Off Site:	0.5				
Total Hours:	13.5	13	13		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site H&S Preshift inspections warm up equipment
	set nested wells deep at 96 and shallow at 80
	grout to surface
	clean up move and set up IDW
1230	drill to 107 water samples at 72,82,92,102,112,122
1830	Off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	107	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	3.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed	176	Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	12				
Footage Drilled	107				
Well Installed (FT.)	176				
Boring Abandoned (FT.)					
DATE:	**5/12/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/13/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Tyler F**		
Travel:	0.5	0.5	0.5		
On Site:	10	10	10		
Misc. Off Site:	1.5	1	1		
Total Hours:	12	11.5	11.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
730	On Site H&S Preshift warm up equipment and fuel
	pull water sampler drill from 107-127
	while setting water sampler back at 132, hydraulic line on back of
	tower broke causing leak. Leak hig on tower and difficult to access.
	unable to find replacement line due to being the weekend.
	Able to get rig towered down, broken line removed clean up fluid
	sprayed on rig. Checked area adjacent to the rig for oil, a fine mist
	left no fluid to be found. Called release in to DEC, inspector onsite
	was confident we captured the release in plastic under the rig.
	Rig sprayed down with degreaser and sprayed off with clean water
	platic containing oil bagged up with absorbant and diapers to hold any
	liquid
1800	off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	20	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)		Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	10.5				
Footage Drilled	20				
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:	**5/13/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/15/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Tyler F**		
Travel:	0.5	0.5	0.5		
On Site:	12	12	12		
Misc. Off Site:	0.5				
Total Hours:	13	12.5	12.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site rig repairs H&S, Lines replaced
1030	Drill from 126-146, water sample from 152,162
	set well at 135 and shallow at 80, chip between
	shallow well sand packed and sealed ready for grout in the AM
1830	Off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	20	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed	215	Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	12				
Footage Drilled	20				
Well Installed (FT.)	215				
Boring Abandoned (FT.)					
DATE:	**5/15/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/16/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site, Preshift, fuel equipment, H&S
	prepare to grout
730	Cascade call
800	Grout wells
	clean up move and set up at next location
	.5 clean up from hydraulic release dig out 3x4 area about 2 inches
	soil in roll off
	drill to 92 with 6"
	wash 7" over to 77
	secure site for the night
1750	Off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	87	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2.5	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	11.5				
Footage Drilled	87				
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:	**5/16/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
DATE:	5/17/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Nick G**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site Preshift warm up equipment H&S
	set nested wells at 85-90 and 65-75
	clean up and move to the next location
	set up at location next to pond steep side slope
	drill to 87
	water sample 72 and 82
	secure the site for the night
1800	off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	87	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2	Hour
2" S40 PVC & Annular Material-Per Foot Installed	165	Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	11.5				
Footage Drilled	87				
Well Installed (FT.)	165				
Boring Abandoned (FT.)					
DATE:	**5/17/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:					
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/18/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Scott P**	**Cory T**	**Tyler F**		
Travel:	0.5	0.5	0.5		
On Site:	11.5	11.5	11.5		
Misc. Off Site:	0.5				
Total Hours:	12.5	12	12		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site
	Drill from 87-107
	water sample at 91,101,111
	abandon boring with grout
	Move and set up at angle boring location
	clean up secure site for shift break
1800	Off site

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)	20	Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)	2	Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout	107	Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)		Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	11.5				
Footage Drilled	20				
Well Installed (FT.)					
Boring Abandoned (FT.)	107				
DATE:	**5/18/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/23/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Steve**	**Nick**	**Austin**		
Travel:	6.5	6.5	6.5		
On Site:	5	5	5		
Misc. Off Site:	0.5				
Total Hours:	12	11.5	11.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
600	Shop pick up crew, mob to Metro
	Fly to Albany
1200	pick up Concrete and forms at Lowes
1300	On Site
	Pour four completions
	rig inspection
	drill and pull samples to 35'
	advance core barrels to 55'
	will advance casing in the AM when DEC and others get onsite to see
1730	Off site

DRILLING SCHEDULE OF ITEMS	**QUANTITY**	**UNITS**
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)		Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)		Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)		Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)	35'	Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)		Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	5				
Footage Drilled	35				
Well Installed (FT.)					
Boring Abandoned (FT.)					
DATE:	**5/23/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

CASCADE
DRILLING | TECHNICAL SERVICES

Cascade Drilling Project #	***119-23-1043***

DATE:	5/24/2023				
REP:	Mike Wright				
COMPANY:	EA Engineering				
CREW MEMBERS:	**Steve**	**Austin**	**Nick**		
Travel:	0.5	0.5	0.5		
On Site:	11	11	11		
Misc. Off Site:	0.5				
Total Hours:	12	11.5	11.5		
JOB LOCATION:	Scotia former Navy Depot				
DRILL #	11-25542				

Breakout Hourly Activity

TIME	
630	On Site, Preshift H&S
730	Pull 35-55 sample, visitors on site, continue drilling to 95
	Abandon angle boring with cement grout
1230	Clean up and load for demob
1730	Off site

DRILLING SCHEDULE OF ITEMS	QUANTITY	UNITS
Mob/Demob Tracked or Truck Sonic, Skid Steer, Crew, Support Truck		Lump
Seven Inch Sonic Drilling (+8" Override for well constructioin)		Feet
Push-Ahead/IsoFlow Sampling (2 Hrs/Well)		Hour
2" S40 PVC & Annular Material-Per Foot Installed		Feet
Cement-Bentonite Grout		Feet
Flushmount in 2' x 2' x 6" Concrete Pad (Labor & Material)	4	Each
Angled Borehole (Assumes 45-Degree Angle to Target 90' BGS)	60' / 1	Each
Grout for Angled Hole (Assumes 126-Foot Hypotenuse)	95' / 1	Each

Other Duties Perfomed Not Included in the Billable Items

ITEM	**Quantity**	**Head Failure / Rig Failure/ Downtime**	**Hrs**

CASCADE

DRILLING | TECHNICAL SERVICES

				Cascade Drilling Project #	***119-23-1043***
Hours On Site	11				
Footage Drilled	60				
Well Installed (FT.)					
Boring Abandoned (FT.)	95				
DATE:	**5/24/2023**				
CLIENT REP:					
SIGNATURE:					
CASCADE OPERATOR:	**steve a**				
SIGNATURE:					

Navy Depot 5/2/23

s Moab drilling equipment to site and set up work area

am- 4/6' light Rain

p.m-

M. Wright (EA) onsite

D. Gannon (EA) onsite

Cascade rentech will be onsite mid day

S. Decker (Land) onsite for tank Drop off

Frac tank onsite

Start synoptic gauging

Roll off onsite

Hole products onsite w/ dry goods for Cascade

Hole products offsite

J. Hayward (EA) onsite

Mark out boring Locations

~~Mark~~ Recon onsite to mark out utilities

Cascade onsite, begin staging equipment

Digital flow meter on hydrant set to 0.0 on totalizer

USACE onsite

Scotia Navy Depot 5/2/23

1452 - set up Rig on PRO-07

1530 - Hand Clear PRO-07 to 35 ft

1630 - Drill to 7 ft and seal Tub

1720 - Porta-John delivered to site

1745 - All personnel offsite

5/2/23

Rite in the Rain

Scotia Navy Depot 5/3/2022

AM Temp 46°F, overcast
PM Temp 51°F overcast/Rain } Weather

Objective: Conduct vertical profile at PRO-07 collect Frog measurements at 65-75, 75-85, 85-95, 95-105

0630 M. Wright (EA) onsite
0630 Cascade onsite
0645 P. Gannon (EA) onsite
0700 EA calibrates PID & Horiba
EA runs two blanks on the Frog-5000
0720 Begin PRO-07
0730 USACE onsite
0815 EA onsite
[0848] Sample at PRO-07-69
0850 continue advancing to 75-85 interval and running blanks with Frog
0855 Kyle Forester from NYSDEC arrived onsite.
[0914] Sample at PRO-07-79
0930 Rig has mast brought down to tighten lines
1100 Grab water quality...

Scotia Navy Depot 5/3/2023

AM Temp 47°F, overcast
PM Temp 51°F, overcast/rain } Weather

1100. Parameters ok, Frog, Prep to advance to 75-85
1100 NYSDEC offsite
[1203] Sample at PRO-07-90
drillers break for lunch.
1230 Tammy with RECONN arrived onsite
[1316] Sample at PRO-07-99
Finish water sample start logging soil and prepare to grout the hole
1630 Frog is done with instrument calibration check and decon baseline.
1700 All personell offsite for the day. Plan to do PRO-06 tomorrow.

5/3/2023

Rite in the Rain

Scotia Navy Depot 5/4/23

weather am- 46°F clouds
pm- 63 °F sun

objective: complete Hydrologic profile PRO-6

0620-	M.Wright (EA) onsite
0638-	Cascade onsite
-	Start to move Rig to PRO-06
0650-	P. Mannon (EA) onsite
0710-	calibrate ~~YSI~~ Horiba + PID
0724-	Tower up Rig on PRO-06
0750-	cascade fill water tanks and prep Rig
0830-	Start Drilling PRO-06
0950-	Start pushahead sample 1
-	will push 10 ft + Drill kept Moving forward
1037-	Next ~~push~~ ahead sample
1140-	Drillers take lunch
1230-	Drillers Return From lunch
1335-	Finish water sampling stand drill to 107 ft bgs
1400-	drill to 117 on D. Fulam (USACE) Request
1440-	End boring @ 127 bgs
-	pull Rods + grout

1445-	grab Sample from MW-33 to Run in PROG, with bailer
	purge 1 well volume
1515-	Grout PRO-06 + Trip out Rods
1715-	Finish Grouting, cascade offsite
1800-	EA offsite to ship Samples

5/4/23

Rite in the Rain

a Navy Depot 5/5/23

- am- 45°F Sun

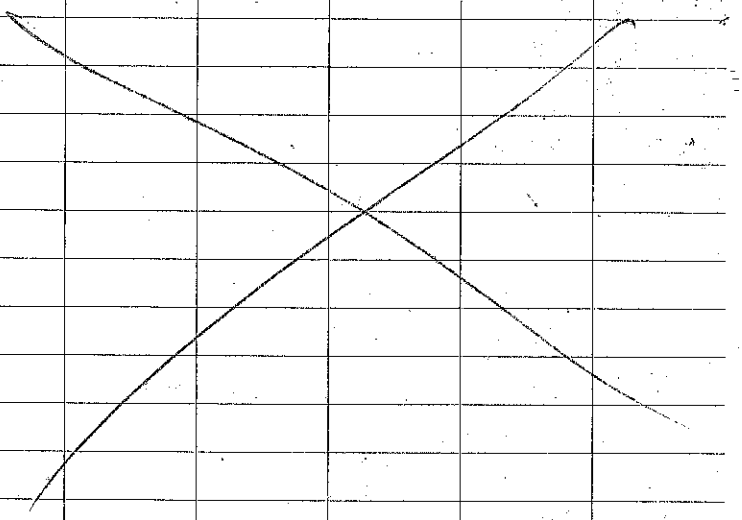
pm

e: Drill + profile PRO-01
to 125 ft
EA + cascade onsite
Tailgate safety Meeting
Cascade fixes pulley on Rig
set up on PRO-01
start Drilling PRO-01
NYSDEC onsite w/ crew
Issue with new lines on
Rig, Rig is down for a while
cascade offsite to Replace hydraulic
lines the eat lunch
DEC offsite for lunch
USACE offsite for lunch
Cascade Returns with new
hoses, Replace new hoses
Hoses Replaced, check Functionality
Resume drilling
Tower down to realign new
hydraulic lines
begin to push shear sample
collect sample @ 70'
Rig down again

Scotia Navy Depot 5/5/23 9

1415- Pressure Transmitter to
Tub valve ~~is~~ blew
1700- will go buy Replacement
and fix in the morning
1715- All personnel offsite

5/5/23



Rite in the Rain

Scotia Navy Depot 5/6/23

weather am 43°F sun
pm 74°F sun

Objective: Finish drilling PRO-01 to 125' bgs + move to PRO-03

0630- EA + cascade onsite
0635- Tailgate meeting
0640- cascade replace pressure transmitter
0723- Resume drilling PRO-01, Drive to 80' and sample @ 79' bgs
0842- Drill to ~~80~~ 87' + push to 100 Ft
0918- Drill to 97' push to 110'
1114- 119' sample below mw ND, Drill to 127' bgs + grout hole
1145- Cascade offsite for lunch + to buy cement
1245- cascade onsite with 2 pallets of cement
1350- Grout PRO-01
1545- Move Rig to PRO-03
1625- Start drilling PRO-03
1720- Hard drilling after 40ft bgs
1735- Drill to 57' @ PRO-03 + pack up, Leave site

5/6/23

weather am 47° sun
pm

Objective: drill PRO-03 to 107 + collect water from 69, 79, 89, 99, move to PRO-02

0615- EA onsite
0632- Cascade onsite
0640- Fill water tank warm up Rig
0645- cal borehole + ~~15~~ PID
0714- start push ahead sampling
- Hard push from 57-70' bgs
0730- Dry to 67 push to 72 for sample @ 71' bgs
- sample temp hit due to hard drilling
1007- Drill to 107' + grout hole
1200- Take lunch
1250- Return from lunch + begin to move Rig to PRO-02
1300- Starter went on the Rig, were down until tomorrow morning
1400- Fill PRO07, 06 + 01 with bentonite
1430- All personnel offsite

5/7/23

Rite in the Rain

Scotia Navy Depot 5/8/23

0730 - EA + cascade onsite
- Mobile mechanic will be onsite in 10am to replace starter
0800 - Cascade offsite to buy supplies
0855 - Cascade onsite
1000 - Mechanic onsite
1035 - Rig fixed, will move to PRO-02 soon
1100 - Move Rig to PRO-02
1200 - Start Drilling PRO-02
1215 - L. Backmen - Love onsite
1400 - D. Falvo onsite
1550 - Drill to 107' + end for Day, grout in the morning
1630 - Cascade offsite
1800 - EA offsite

5/8/23

Scotia Navy Depot 5/9/23

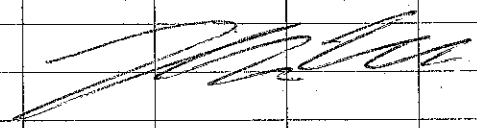
0630 - EA + cascade onsite
0645 - Tailgate + Cascade prepare to grout
0730 - Cascade has driller cool before they grout
- EA preps FROG for the day
0805 - start to grout PRO-02
1000 - set upon PRO-04
1035 - start drilling PRO-04
1224 - Drill to 67ft bgs, push to 72 ft for 71 sample
1245 - cascade take lunch
1350 - D. Falvo onsite
1409 - Cascade Returns From lunch
1645 - Drill to 87 ft bgs, push to 802' sample @ 101'
- Will hold off on advancing drill steel until after well cool
1725 - cascade offsite
1835 - EA offsite

5/9/23

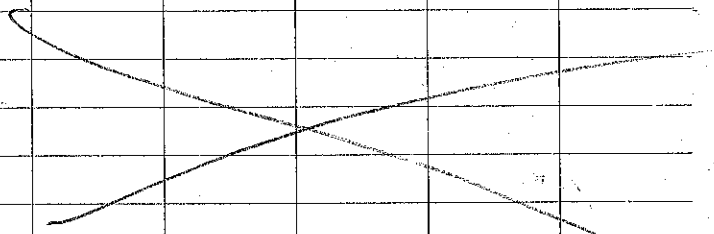
Rite in the Rain

0630-	EA + Cascade onsite
0640-	~~0654~~ Tailgate meeting
0815-	well set at PRO-04 will be set at 85-90 ft + 65-75 ft
0825-	cascade Return tem getts supplies for well constructions
0903-	wrong sand onsite, cascade will pickup sand from Schneidtody office + Return choker Sand
0930-	cascade goes to get sand, and also drives 7in to ~~92 ft~~ ~~90 ft~~ 75 ft
1034-	7" dow to 77 ft, will clean out hole to 92 ft
1117-	begin well installation
-	MW-EVAL-01 0 +5
	sand 92- 83
	screen 90- 85
	Bensead 83- 77
	Sand 77 - 63
	screen 75 - 65
	Bensed 63 - 58
	Grout 58 - 2
1230-	cascade take lunch
1350-	cascade Returns from lunch

1355-	Primer onsite for Utility Markouts
-	Finish grouting MW-EVAL-01 ~~and~~
1450-	break down from PRO-04 ~~and~~ and move to PRO-08
1530-	move Rig to PRO-08
1630-	stat drilling PRO-08
1830-	Drill to 67 + end for day, will push in the morning
1850-	All personnel off site



5/10/23



Rite in the Rain

0615- EA onsite, start FROG Blanks
0630- Cascade onsite
0640- Tailgate meeting, warm up Rig
0700- push to 72' sample at 71'
0705- Fix Leak on jaws
0802- Cascade offsite to Replace cylinder on Jaws
1210- Cascade Returns w/ repaired Cylinder
1240- begin pushhead sampling
1311- Mis communication push ahead went to 82 ft, will Isolation @ 72 ft
1550- drill to 97' bgs + wait for well cal
- Cascade prep 7in + well materials
1604- Wells will be 70-80' + 90-95'
- MW-EVAL-02 S+D
sand: 97-88
screen: 95-90
Bensed: 82
sand: 82-62
screen: 80-70
Bensed: 68-60
Grout: 60-0

1730- will set well in the am, well materials are prepped
1734- J. Hayward + T. Robinson offsite
1750- All personnel onsite

5/11/23

Rite in the Rain

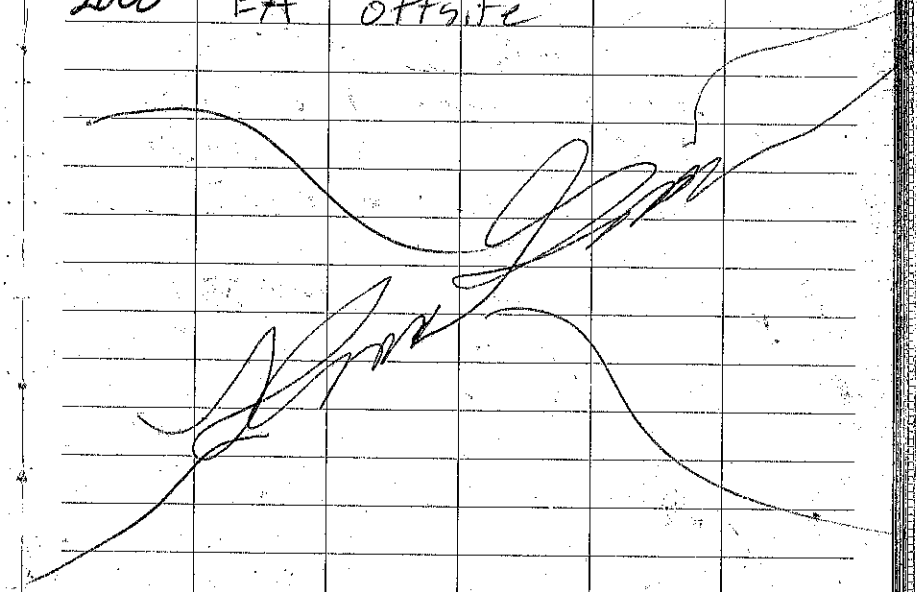
Scotia Navy Depot 5/12/2023

Weather AM: Mostly cloudy 60°F
Weather PM: Mostly cloudy 80°F
Goal: Finish Installing
MW-EVAL-02S & D,
Then move to PRO-10
and do vertical profiling.

0615: EA onsite
0630: Cascade onsite
0640: tailgate meeting, warm-up rig
0700: Begin constructing MW-EVAL-~~20~~2D
0900: Set MW-EVAL-02S &
MW-EVAL-02D
Begin grouting.
1000: Start breaking down at
PRO-08 head to PRO-10
1030: Begin set-up at PRO-10
Set retention times for
FROG-5000 unit #0157
after returning unit #0230
1230 Begin advancing PRO-10
1345 Begin Push Ahead to 72
1400 Advance to 82'
1445 Begin Push Ahead sampling at 82
1500 Advance to 92
1535 Begin Push Ahead sampling at 93

Scotia Navy Depot 5/12/2023

1555 Sample at PRO-92
Advance push ahead to 102.
1615 Push ahead ~~SPT~~ at 102
1630 Advance push ahead to 112
log soil to 107
1715 Push ahead sample at 111
1730 Push ahead to 122
1825 Sample at 122
Plan tomorrow: TRIP
Push ahead rods from
122. log soil to 127.
1830 Cascade off site
2000 EA offsite



Rite in the Rain

0785- EA onsite
0800- cascade onsite
0815- Fuel up + prep Rig for the day
0830- prep FRAG for the day
0840- Tripout pushahead from 121', drill out soil to 127', push to 132 for 131' sample
0930- Rig blew main line, oil contained by poly under the Rig, drillers Respond with dispers + degreaser
1120- bypass blown line tower down + Remove line
1230- line Removed, cascade takes lunch
1400- Cascade calls in NYSDEC spill Report
1440- spill Response onsite to address spill
1530- All personnel offsite

5/13/23

0750- EA + Cascade onsite
- cascade to have New hydraulic lines made up
0825- New hydraulic lines onsite
0845- Kyle, NYSDEC onsite
0920- New lines Installed, Rig Towered up to check Fitment
1034- Push to 132' for 131 sample
1145- cascade takes lunch
1245- GSA D. Baker + USACE T. Hines onsite
1300- Resume drilling
1400- ND @ 151', wait for call from USACE
1440- wells at 70-80' + 130-155', send 131' + 151' to the Lab
1620- begin setting MW-EVAL-03 S+D
sand = 137-128
screen = 135-130
bensead = 128-82 grout = 66-gs
sand = 82-68
screen = 80-70
bensead = 68-66

Rite in the Rain

cotia Report 5/15/23

- set MW-EVAL-035
- sand pack + Bensea
- USACE + GSA offsite
- ALL personnel offsite

5/15/23

Scotia Navy Depot 5/16/23 23

weather 51° west wind, overcast
76° sun south wind

0630 - EA onsite
0640 - Cascade onsite
- Fuel up Rig + equipment
0710 - Cascade has Interval weekly safety call at 730 then we will grout PRO-10 / MW-EVAL-03 S/D
0810 - begin to grout MW-EVAL-03 S/D
0900 - NYDEC, GSA, USACE onsite
0945 - Move to PRO-09
0946 - A discoloration was Noted on the ground and Had PID hits of 1.8 ppm, Cascade will Remove soil and dispose in Roll off
1016 - set up Rig on PRO-09
1115 - begin drilling PRO-09
1219 - Finish drilling to 67'.
~~set~~ push to 72' for 71 sample
1600 - Drill to 92', spin 7" to 82", set wells MW-EVAL-04 S/D at 65-75 + ~~60-85~~ (W) 85-90
1730 - off site

Rite in the Rain

Scotia PRB 5/17/23

weather am - 47° Sun NW wind
pm - 55° Overcast

0630 - EA onsite
0635 - Cascade onsite
0700 - Cascade start well install at MW-EVAL-04D
0830 - gauge MW-EVAL-01S (casing height: 1.08 ft) DTW = 65.29 DTB = 76.58
0835 - gauge MW-EVAL-01D (casing height: 0.89 ft) DTW = 65.05 DTB = 90.83
0900 - start well Development at MW-EVAL-01S/D
1004 - End Development @ MW-EVAL-01D
1100 - Cascade starts to move to PRO-05
1146 - End development of MW-EVAL-01S
1252 - Finish setting up on PRO-05
1307 - Cascade takes lunch
1348 - Set Tub + Start drilling PRO-05
1530 - Start water sampling
1644 - collect 81' sample, Drill to 87'
1715 - Cascade put Anti Freeze in Rig
1740 - All personnel offsite

5/17/23

Scotia PRB 5/18/23

weather am 40° Sun
pm
0630 - EA onsite
0730 - cascade onsite
0800 - grab samples from 91' 101' + 111'
1121 - Drill to 107' and grab soil
1200 - start to grout PRO-05
1427 - Finish grouting PRO-05
1549 - Move Rig to Angle hole
1639 - Finish setting up on Angle hole
1655 - Load up Trash + Haul out

5/18/23

Rite in the Rain

...tica PBB 5/22/23

EA onsite for [redacted] well Development

Start well Development at MW-EVAL-03 S/D

Finish Development at MW-EVAL-03 move to MW-EVAL-04 S/D

Start purging MW-EVAL-04 S

Finish Developing MW-EVAL-04 S/D

EA offsite

5/22/23

Scotia Dept 5/23/23

0930- EA onsite to run 4 more well Development

1020- Start well Development @ MW-EVAL-02 D

1120- Start purging MW-EVAL-02 S

1205- Finish ALL well Development

1230- Jeff K + Jen A (USACE) onsite

1320- Cascade onsite

1335- Cascade start pouring concrete pads at MW-EVAL-01

1530- Setup to start drilling

1630- start drilling Angle boring

1730- Drill to 35 Ft bgs, pack up for the day

1745- All personnel offsite

5/23/23

Rite in the Rain

Scotia Depot 5/24/23

Weather am 56 sun

pm

0630 - EA + Cascade onsite

0645 - cascade preps Rig for drilling

0740 - Resume Drilling Angle Boring

0800 - USACE onsite, Ten Appel + Jeff K

" Recon onsite (Tammy Litts)

" start using Magnet @ 35 ft bgs

0808 - J. Hayward onsite

0820 - NYSDEC onsite

" water meter 305976

0910 - collect 3 Aliquot from 82-83, 83-84, 84-85

0920 - collect 2 Aliquot 85-86, 86-87', filling present 85-87'

" 2° off from ⊥ to the north

1000 - Cascade start grouting

1025 - 11,476 gallons of water used by cascade

1139 - break for lunch

1300 - cascade Return from lunch

" start to clean up

1630 - All personnel offsite

Rite in the Rain

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 12 June 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe	
	C. Zook	
	M. Reardon	

Arrive at site: 0830 (am)
Leave site: 1830 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	70	(am)	78	(pm)
Humidity	38%	(am)	29%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

2 Horiba U-52

2 200' WLM

2 GeoSub 2 pumps

2 Honda Generators

Inspections Conducted:

Safety Inspection

Description of Field Activities:

Sampled groundwater at MW-EVAL-04S/D, MW-EVAL-03S/D for VOC, MNA, and CSIA. Sampled groundwater at MW-EVAL-01S for VOC and MNA. Sampled groundwater at MW-32 for CSIA.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

Submersible pumped died, replaced with a new one.

Proposed Plan for Next Day

Finish all groundwater sampling.

Attachments

NONE

Former Scotia Navy Depot
PRB Evaluation
Scotia, NY

Daily Field Form

DATE: 13 June 2023	**Prepared by:** Mike Wright

Personnel Onsite:	M. Wright (EA)	
	L. Backman-Lowe	
	C. Zook	
	M. Reardon	

Arrive at site: 0700 (am)
Leave site: 1800 (pm)

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	To 32 º F	32 to 50 º F	50 to 70 º F	70 to 85 º F	85+ º F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Temperature º F	70	(am)	78	(pm)
Humidity	55%	(am)	37%	(pm)
Wind direction	West	(am)	West	(pm)

Additional Details: (i.e. additional information regarding weather conditions. Changing conditions, heavy rain, other precipitation types, time periods of precipitation/storms, etc.).

Material Deliveries/Equipment On Site:

PID Mini RAE 3000

2 Horiba U-52

2 200' WLM

2 GeoSub 2 pumps

2 Honda Generators

Inspections Conducted:

Safety Inspection

Description of Field Activities:

Sampled groundwater at MW-EVAL-01D and MW-EVAL-02S/D for VOC and MNA. Sampled groundwater at MW-30, MW-31, and MW-33 for CSIA. Sampled groundwater at MW-6 and MW-22R for VOC, MNA, and CSIA. Sampled groundwater at MW-8 and MW-18 for VOC.

Issues/Problems Encountered/Deficiencies/Deviations from UFP-QAPP (and resolutions):

None.

Proposed Plan for Next Day

None, event complete

Attachments

NONE

Appendix B

Field Forms

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FIELD CALIBRATION FORM

Site Name: Scotia Navy Depot

INSTRUMENT: Mini-RAE 3000	INSTRUMENT ID No: 592-60 2252
OPERATOR: P. Gannon / M. Wright	WEATHER: Overcast
SPAN GAS TYPE: Isobutylene	DATE: 05/03/2023
CALIBRATION NOTES:	
Zero cal: 0.0 PPM	
Span cal: 100.0 PPM	
COMMENTS: Instrument in good working condition	
SIGNATURE: [signature]	DATE: 05/03/2023

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

CALIBRATION	
DATE:	05/03/2023
TIME:	0715
METER ID:	LGJX1TFK

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.26	3.96

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.67	4.58

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	0.3	0.2

COMMENTS

DO: 10.81 MG/L 11.12 mg/L

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 592-602752
OPERATOR: P. Gannon / M. Wright	WEATHER: light rain
SPAN GAS TYPE: 150 butylene	DATE: 5/4/2023
CALIBRATION NOTES:	
Zero cal 0.0 PPM	
Span cal 100.2 PPM	
COMMENTS: Instrument in good working condition	
SIGNATURE: [signature]	DATE: 05/03/2023

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

CALIBRATION
DATE: 09/04/2023
TIME: 0727
METER ID: LGJX 1TFK

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	5.27	3.86

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	5.06	5.05

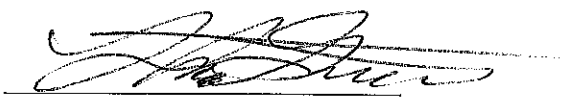
TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	13	0

COMMENTS

DO 11.66mg/L

SIGNATURE



FIELD CALIBRATION FORM

Site Name: Scotia Navy Depot

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 592-60-2752
OPERATOR: P. Gannon / M. Wright	WEATHER: Partly cloudy
SPAN GAS TYPE: Isobutylene	DATE: 05/05/2023
CALIBRATION NOTES:	
Zero cal: 0.0 PPM	
Span cal: 100.1 PPM	
COMMENTS:	
SIGNATURE:	DATE: 05/05/2023

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

CALIBRATION
DATE: 05/05/2023
TIME: 0730
METER ID: LGJX1TFK

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.25	4.02

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.55	4.53

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	26	0

COMMENTS

DO mg/L 12.45 11.37

SIGNATURE

FIELD CALIBRATION FORM

Site Name: Former Scotia Navy depot

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 592-60-2752
OPERATOR: P. Gannan / M. wright	WEATHER: Sunny
SPAN GAS TYPE: Isobutylene	DATE: 05/06/2023
CALIBRATION NOTES:	
Zero Cal : 0.0	
Span cal : 100.0	
COMMENTS: Calibration looks good. Instrument working as intended.	
SIGNATURE:	DATE: 05/06/2023

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

CALIBRATION
DATE: 05/06/2023
TIME: 730
METER ID: LGJX1TFX

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	3.61	3.97

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.49	4.52

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	6.4	0.0

COMMENTS

DO: 11.15 mg/L 10.68

SIGNATURE

FIELD CALIBRATION FORM

Site Name: Former Scotia Navy Depot

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 592-60-8752
OPERATOR: P. Gannon / M. Wright	WEATHER: Sunny
SPAN GAS TYPE: Isobutylene	DATE: 05/07/2023
CALIBRATION NOTES:	
Zero: 0.0	
Span cal: 99.9	
COMMENTS: Instrument operating as intended	
SIGNATURE: [signature]	DATE: 05/07/2023

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

CALIBRATION
DATE: 05/07/2022
TIME: 0650
METER ID: LGJX1TFK

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.11	3.98

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.53	4.52

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	11.9	0.0

COMMENTS

DO: 12.14 mg/L 10.80

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: mini RAE 3000	INSTRUMENT ID No: 401093
OPERATOR: LBL	WEATHER: 61 F sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/8/23
CALIBRATION NOTES:	
Zero cal: 0.0 ppm	
Span cal: 99.9 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/8/23

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

CALIBRATION
DATE: 5/8/23
TIME: 1240
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.34	3.99

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.44	4.51

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	21.8	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: LBL	WEATHER: 52F Sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/9/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm	
span cal: 100.0 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/9/23

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

CALIBRATION
DATE: 5/9/23
TIME: 0740
METER ID: 2246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.07	3.96

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.67	4.54

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	12.1	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: MW	WEATHER: 48°F, sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/10/23
CALIBRATION NOTES:	
Zero cal: 0.0 ppm	
Span cal: 100.1 ppm	
COMMENTS: N/A	
SIGNATURE: Marlee Wright	DATE: 5/10/23

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: miniRAE 3000	INSTRUMENT ID No: 801093
OPERATOR: LBL	WEATHER: 54 F sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/11/23
CALIBRATION NOTES:	
Zero Cal: 0.0 ppm	
Span Cal: 100.1 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/11/23

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

CALIBRATION
DATE: 05/11/2023
TIME: 0645
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	3.92	3.94

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.68	4.46

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	0.0	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: PG	WEATHER: Sun, 78°F
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/12/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm	
span cal: 100.0 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/12/23

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

CALIBRATION
DATE: 5/12/23
TIME: 1030
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.82	3.95

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.27	4.46

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	0.0	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: miniRAE 3000	INSTRUMENT ID No: 801093
OPERATOR: MW	WEATHER: 61°F sunny
SPAN GAS TYPE: Isobutylene 100. ppm	DATE: 5/15/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm span cal: 99.9 ppm	
COMMENTS: N/A	
SIGNATURE: Mike Wright	DATE: 5/15/23

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

CALIBRATION
DATE: 5/15/23
TIME: 1015
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	3.510	4.02

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.52	4.49

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	0.0	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: LBL	WEATHER: 62°F, sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/16/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm	
span cal: 100.3 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/16/23

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

CALIBRATION
DATE: 5/16/23
TIME: 0925
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.02	3.93

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.95	4.51

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	19.6	1.6

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: MW	WEATHER: 60°F sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/17/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm	
Span cal: 100.1 ppm	
COMMENTS: N/A	
SIGNATURE: Mike Wright	DATE: 5/17/23

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

CALIBRATION
DATE: 5/17/23
TIME: 0835
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.62	3.98

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.78	4.53

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	0.0	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: Mini RAE 3000	INSTRUMENT ID No: 801093
OPERATOR: MW	WEATHER: 39°F, sunny
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 5/18/23
CALIBRATION NOTES:	
zero cal: 0.0 ppm	
span cal: 100.0 ppm	
COMMENTS: N/A	
SIGNATURE: [signature]	DATE: 5/18/23

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

CALIBRATION
DATE: 5/18/23
TIME: 0710
METER ID: 21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	3.93	3.97

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.81	4.60

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	LBV 12.7	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: MiniRAE 300	INSTRUMENT ID No: 801093
OPERATOR: MW	WEATHER: 50 sun
SPAN GAS TYPE: Isobutylene	DATE: 5/22/23
CALIBRATION NOTES:	
Zero cal = 0.0 ppm	
span cal = 100.0 ppm	
COMMENTS: NONE	
SIGNATURE:	DATE: 5/22/23

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

CALIBRATION	
DATE:	5/22/23
TIME:	0800
METER ID:	21246

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	3.95	4.02

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.92	4.50

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	9.6	0.0

COMMENTS

None

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: MiniRAE 3000	INSTRUMENT ID No: 80613
OPERATOR: MW	WEATHER: 60 sun
SPAN GAS TYPE: Isobutylene	DATE: 5/23/23
CALIBRATION NOTES:	
Zero cal = 0.0 ppm	
Span cal = 99.9 ppm	
COMMENTS:	
NONE	
SIGNATURE:	DATE: 5/23/23

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

CALIBRATION
DATE: 5/23/23
TIME: 0900
METER ID: 2124C

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.11	3.97

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.37	4.51

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	2.6	0.1

COMMENTS

None

SIGNATURE

FIELD CALIBRATION FORM

Site Name:

INSTRUMENT: Min RAE 3000	INSTRUMENT ID No: 801083
OPERATOR: MW	WEATHER: 70 sunny
SPAN GAS TYPE: Isobutylene	DATE: 5/24/22
CALIBRATION NOTES:	
Zero cal = 0.0 ppm	
Span cal # = 100.0 ppm	
COMMENTS:	
NA	
SIGNATURE: [signature]	DATE: 5/24/22

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

CALIBRATION
DATE: 6/12/23
TIME: 0840
METER ID: 19565

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	5.54	3.95

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	5.09	4.47

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	2.6	0.0

COMMENTS

NONE

SIGNATURE

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

CALIBRATION
DATE: 6/12/23
TIME: 0840
METER ID: 51894

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.20	3.98

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.65	4.47

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	1.0	0.2

COMMENTS

N/A

SIGNATURE

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

CALIBRATION
DATE: 6/13/22
TIME: 0715
METER ID: 19565

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	5.16	3.93

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.62	4.44

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	10.2	2.4

COMMENTS

NONE

SIGNATURE

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

CALIBRATION
DATE: 6/13/23
TIME: 0710
METER ID: 51894

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	4.73	3.97

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	4.85	4.51

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	7.4	0.0

COMMENTS

NONE

SIGNATURE

FIELD CALIBRATION FORM

Site Name: Scotia Navy Depot

INSTRUMENT: mini RAE 3000	INSTRUMENT ID No: 22290
OPERATOR: LBL	WEATHER: 75 °F, cloudy
SPAN GAS TYPE: Isobutylene 100 ppm	DATE: 6/12/23
CALIBRATION NOTES:	
Zero cal: 0.0 ppm	
span cal: 100.0 ppm	
COMMENTS: N/A	
SIGNATURE: L L Bailey	DATE: 6/12/23

FIELD CALIBRATION FORM

Site Name: Scotia

INSTRUMENT: PID Mini RAE	INSTRUMENT ID No: 22190
OPERATOR: MW	WEATHER: Cl clouds
SPAN GAS TYPE: Isobutylene	DATE: 6/13/23
CALIBRATION NOTES:	
Zero cal = 0.0	
Span cal =	
COMMENTS:	
NONE	
SIGNATURE:	DATE: 6/13/23

MONITORING WELL GAUGING LOG

Inspector(s): M. Wright + D. Gannon

Weather Conditions: 45 cloudy

Site Name: Scotia Navy Depot

Date/Time: 5/2/23 0910

Well ID	PID Reading (ppm)	DTW (ft. below TOC)	DTB (ft. below TOC)	Well Condition / Notes
MW-26		61.91		Good
MW-34		61.53		Good
MW-35		61.48		broken bolt hole
MW-33		64.07		Good
MW-32		64.02		Good
MW-24		67.88		Good
MW-30		65.59		Good
MW-31		64.38		missing bolt
GEP-1		66.19		well casing damaged
MW-28		64.56		Good
MW-29		71.26		Good
MW-25		60.46		Good
GEP-3		64.49		No J plug
MW-15		65.12		Good
MW-16		64.00		Good
GEP-4		65.23		Good
GEP-2		65.98		No J plug
MW-14		65.72		No J plug
MW-17		63.68		Good
MW-19		65.71		Good

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EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-01
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 4**
Coordinates: Northing 1460416.028	Easting: 628794.2204		
TOC Elevation: NA			**Drilling**
Surface Elevation: 290.2'	**Water Level:** 64 ft		**Start** DATE: 5/5/23 / **Finish** DATE: 5/6/23
Reference Elevation:	**Time:**		TIME: 0845 / TIME: 1330
Reference Description:	**Date:** 5/5/2023		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW-SM			0		Loose, brown, fine sand, soime silt, few small gravel, moist, no plasticity 10YR 5/3
SW	7/7		0	2, 4, 6	Loose, brown coarse sand, some medium sand, large gravel, dry, no plasticity 10YR4/3
SW	10/10		0	8, 10, 12, 14, 16	Loose, brown coarse sand, some medium sand, some medium and large gravel, dry, no plasticity 10YR4/3
SW	10/10		0, 0, 0, 2.6, 0, 0, 0, 0, 0	18, 20, 22, 24, 26	Loose, brown coarse sand, some medium sand, some medium and large gravel, dry, no plasticity 10YR4/3
GW			0		Loose, grey-brown, large gravel, some corase sand, dry, no plasticity 10YR 4/1
SW	10/10		0	28, 30, 32, 34, 36	Loose, brown, coarse snad, some medium sand, some medium-large gravel, dry, no plastisity 10YR 4/3
SW	3/3		2.7, 0, 0	38, 40	Loose, brown, coarse sand, some medium sand, some gravel, dry, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
70 ft	15.81 (ND)	ND	133.32	ND
79 ft	13.29 (ND)	ND	292.35	ND
89 ft	12.06 (ND)	1.36	1214.14	ND
99 ft	11.46 (ND)	ND	1.16	ND
109 ft	12.30 (ND)	ND	ND	ND
119 ft	12.13 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/6/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-01
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 4**
Coordinates: Northing 1460416.028	Easting: 628794.2204		
TOC Elevation: NA			**Drilling**
Surface Elevation: 290.2'	**Water Level:** 64'		**Start** DATE: 5/5/23 TIME: 0845 / **Finish** DATE: 5/6/23 TIME: 1330
Reference Elevation:	**Time:**		
Reference Description:	**Date:** 5/5/2023		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	7/7		0	42	Loose, brown, coarse sand, some medium sand, some gravel, dry, no plasticity 10YR 4/3
SP			0 2.4 0 0	44 46	Loose, brown, medium sand, dry, no plasticity 10YR 4/3
SW-SM			0		Loose, Brown, medium-coarse sand, some gravel, trace silt, dry, no plasticity 10YR 4/3
SW-SM	8/10		2.7 0 0 0 0 0 1.4	48 50 52 54	Loose, brown, medium-coarse sand, some medium gravel, dry, no plasticity, few silt 49-50' 10YR 4/3
NA				56	No recovery
SW	7/20		0 0 0 0 0 0 0.5 0	58 60 62 64	Loose, brown, medium to coarse sand, some medium to small gravel, dry, no plasticity 10YR 4/2
NA				66 68 70 72 74 76	No recovery
SP	2/2		0 0.6 0	78 80	Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
70 ft	15.81 (ND)	ND	133.32	ND
79 ft	13.29 (ND)	ND	292.35	ND
89 ft	12.06 (ND)	1.36	1214.14	ND
99 ft	11.46 (ND)	ND	1.16	ND
109 ft	12.30 (ND)	ND	ND	ND
119 ft	12.13 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/6/23

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-01
Sampling Method: 4x6 Sonic Sampler			**Sheet** 3 **of** 4
Coordinates: Northing 1460416.028	Easting: 628794.2204		
TOC Elevation: NA			**Drilling**
Surface Elevation: 290.2'	**Water Level:** 64'		**Start** DATE: 5/5/23 / TIME: 0845 — **Finish** DATE: 5/6/23 / TIME: 1330
Reference Elevation:	**Time:**		
Reference Description:	**Date:** 5/5/2023		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW			1.2		Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
NA	2/8			82	
				84	No recovery
				86	
SP	10/10		0	88	Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
			0		
			0	90	
			0		
			0	92	
			0		
			0.8	94	
			0		
			0	96	
			0		
SP	7/10		0	98	Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
			0.5		
			0	100	
			0		
			0	102	
			0.4		
			0.5	104	
NA					
				106	No recovery
SP	13/13		0	108	Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
				110	
				112	
				114	
				116	
				118	
				120	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
70 ft	15.81 (ND)	ND	133.32	ND
79 ft	13.29 (ND)	ND	292.35	ND
89 ft	12.06 (ND)	1.36	1214.14	ND
99 ft	11.46 (ND)	ND	1.16	ND
109 ft	12.30 (ND)	ND	ND	ND
119 ft	12.13 (ND)	ND	ND	ND

Logged by: M. Wright — Date: 5/6/23

Drilling Contractor: Cascade Drilling — Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-01
Sampling Method: 4x6 Sonic Sampler			**Sheet** 4 **of** 4
Coordinates: Northing 1460416.028	Easting: 628794.2204		
TOC Elevation: NA			**Drilling**
Surface Elevation: 290.2'	**Water Level:** 64'		**Start** DATE: 5/5/23 / TIME: 0845 — **Finish** DATE: 5/6/23 / TIME: 1330
Reference Elevation:	**Time:**		
Reference Description:	**Date:** 5/5/2023		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
				122	
SP	5/7		0	124	Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
				126	
					End of Boring

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
70 ft	15.81 (ND)	ND	133.32	ND
79 ft	13.29 (ND)	ND	292.35	ND
89 ft	12.06 (ND)	1.36	1214.14	ND
99 ft	11.46 (ND)	ND	1.16	ND
109 ft	12.30 (ND)	ND	ND	ND
119 ft	12.13 (ND)	ND	ND	ND

Logged by: M. Wright — Date: 5/6/23

Drilling Contractor: Cascade Drilling — Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates: Northing 1460768.174 Easting: 628829.7949
TOC Elevation: NA
Surface Elevation: 293.60
Reference Elevation:
Reference Description:

Job. No.	Client:	USACE/GSA	Location:
160530104	Project:	PRB Evaluation	Former Scotia Navy Depot

Drilling Method: Rotosonic
Soil Boring/Well Number: PRO-02
Sampling Method: 4x6 Sonic Sampler
Sheet 1 of 3

Water Level:				Drilling Start	Drilling Finish
Time:				DATE: 5/8/23	DATE: 5/9/23
Date:				TIME: 1200	TIME: 1000

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW-SM	5/7		0		Loose, brown, fine sand, few small gravel, trace silt, dry, no plasticity 10YR 4/3
SP			0	2 – 4	Loose, brown, medium sand, few small- medium gravel, dry, no plasticity 10YR 4/3
SW-SM			0		Loose, brown, fine sand, few medium gravel, trace silt, dry, no plasticity 10YR 4/3
NA				6	No recovery
SP	10/10		0.5 1.4 0.3	8 – 10	Loose, brown, medium sand, trace small gravel, dry, no plasticity 10YR 4/3
SW-SM			0.3 0.2	12	Loose, brown, medium sand, some fine sand, few silt, dry, no plasticity 10YR 4/3
SP			0 0	14	Loose, brown, medium sand, dry, no plasticity 10YR 4/3
SW			0 0 0	16	Loose, brown, medium sand, few coarse and fine sand, trace silt, dry, no plasticity 10YR 4/3
SW	8/10		0	18	Loose, brown, coarse sand, some medium to large gravel, dry, no plasticity 10YR 4/3
SP			0	20	Loose, brow, medium sand, dry, no plasticity 10YR 4/3
SW			0.7 0.4 0 0	22 – 24	Loose, brown, fine-medium sand, some, medium gravel, dry, no plasticity 10YR 4/3
NA				26	No recovery
SW	8/10		0 0 1.6 0 0.4 0.7 1.8 0	28 – 34	Loose, brown, fine to medium sand, some medium-large gravel, dry, no plasticity 10YR 4/3
NA				36	No recovery
GW	3/3		0.5	38	Loose, brown, medium gravel, some coarse sand, dry, no plasticity 10YR 4/2
SW			0.4 0.3	40	Loose, medium sand, dry, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	19.38 (ND)	9.84	118.68	46
81 ft	14.34 (ND)	3.59 (ND)	5.16	ND
89 ft	13.44 (ND)	ND	1.48	ND
99 ft	15.28 (ND)	ND	ND	ND

Logged by: M. Wright
Date: 5/9/2023
Drilling Contractor: Cascade Drilling
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460768.174	Easting: 628829.7949	
TOC Elevation:	NA		
Surface Elevation:	293.60		
Reference Elevation:			
Reference Description:			

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-02
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 3**
Water Level:			**Drilling** Start: DATE: 5/8/23 TIME: 1200 / Finish: DATE: 5/9/23 TIME: 1000
Time:			
Date:			

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
					Loose, medium sand, some
				42	
				44	
				46	
				48	
				50	
				52	
				54	
				56	
				58	
				60	
				62	
				64	
				66	
				68	
				70	
				72	
				74	
				76	
				78	
				80	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	19.38 (ND)	9.84	118.68	46
81 ft	14.34 (ND)	3.59 (ND)	5.16	ND
89 ft	13.44 (ND)	ND	1.48	ND
99 ft	15.28 (ND)	ND	ND	ND

Logged by: M. Wright
Date: 5/9/2023
Drilling Contractor: Cascade Drilling
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-02
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
Coordinates: Northing 1460768.174	Easting: 628829.7949		
TOC Elevation: NA			**Drilling**
Surface Elevation: 293.60	**Water Level:** 67 ft		**Start** DATE: 5/8/23 / **Finish** DATE: 5/9/23
Reference Elevation:	**Time:**		TIME: 1200 / TIME: 1000
Reference Description:	**Date:**		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW-SM			0		Loose, brown, fine sand, few small gravel, trace silt, dry, no plasticity 10YR 4/3
SP	5/7		0	2 / 4	Loose, brown, medium sand, few small- medium gravel, dry, no plasticity 10YR 4/3
SW-SM			0		Loose, brown, fine sand, few medium gravel, trace silt, dry, no plasticity 10YR 4/3
NA				6	No recovery
SP	10/10		0.5 1.4 0.3	8 / 10	Loose, brown, medium sand, trace small gravel, dry, no plasticity 10YR 4/3
SW-SM			0.3 0.2	12	Loose, brown, medium sand, some fine sand, few silt, dry, no plasticity 10YR 4/3
SP			0 0	14	Loose, brown, medium sand, dry, no plasticity 10YR 4/3
SW			0 0 0	16	Loose, brown, medium sand, few coarse and fine sand, trace silt, dry, no plasticity 10YR 4/3
SW	8/10			18	
SP				20	
SW				22 / 24	
NA				26	No recovery
				28 / 30 / 32 / 34 / 36 / 38 / 40	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	19.38 (ND)	9.84	118.68	46
81 ft	14.34 (ND)	3.59 (ND)	5.16	ND
89 ft	13.44 (ND)	ND	1.48	ND
99 ft	15.28 (ND)	ND	ND	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/9/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460769.664	Easting: 628887.5304	
TOC Elevation:	NA		
Surface Elevation:	293.5		
Reference Elevation:			
Reference Description:			

Job. No.	**Client:**	USACE/GSA	**Location:**
160530104	**Project:**	PRB Evaluation	Former Scotia Navy Depot
Drilling Method:			**Soil Boring/Well Number:**
Rotosonic			PRO-03
Sampling Method:			**Sheet 1 of 3**
4x6 Sonic Sampler			**Drilling**

				Start	**Finish**
Water Level:	67 ft			DATE: 5/6/2023	5/7/2023
Time:				TIME: 1545	TIME: 1200
Date:					

Surface Conditions: Grass field

Weather: Sun

Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	62.02	35.83	178.79	90.92
79 ft	15.78 (ND)	0.22	4.26	ND
90 ft	17.22 (ND)	ND	6.2	ND
99 ft	11.05 (ND)	ND	ND	ND

Logged by: M. Wright

Date: 5/7/2023

Drilling Contractor: Cascade Drilling

Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460769.664	Easting: 628887.5304	
TOC Elevation:	NA		
Surface Elevation:	293.5		
Reference Elevation:			
Reference Description:			

Job. No.	**Client:**	USACE/GSA	**Location:**
160530104	**Project:**	PRB Evaluation	Former Scotia Navy Depot
Drilling Method:			**Soil Boring/Well Number:**
Rotosonic			PRO-03
Sampling Method:			**Sheet 2 of 3**
4x6 Sonic Sampler			**Drilling**

				Start	**Finish**
Water Level:	67 ft			DATE: 5/6/2023	5/7/2023
Time:				TIME: 1545	TIME: 1200
Date:					

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	62.02	35.83	178.79	90.92
79 ft	15.78 (ND)	0.22	4.26	ND
90 ft	17.22 (ND)	ND	6.2	ND
99 ft	11.05 (ND)	ND	ND	ND

Logged by: M. Wright
Date: 5/7/2023
Drilling Contractor: Cascade Drilling
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460769.664	Easting: 628887.5304	
TOC Elevation:	NA		
Surface Elevation:	293.5		
Reference Elevation:			
Reference Description:			

Job. No.	**Client:**	USACE/GSA	**Location:**
160530104	**Project:**	PRB Evaluation	Former Scotia Navy Depot
Drilling Method:			**Soil Boring/Well Number:**
Rotosonic			PRO-03
Sampling Method:			**Sheet 3 of 3**
4x6 Sonic Sampler			**Drilling**

				Start	**Finish**
Water Level:	67 ft			DATE: 5/6/2023	5/7/2023
Time:				TIME: 1545	TIME: 1200
Date:					

Surface Conditions: Grass field

Weather: Sun

Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	62.02	35.83	178.79	90.92
79 ft	15.78 (ND)	0.22	4.26	ND
90 ft	17.22 (ND)	ND	6.2	ND
99 ft	11.05 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/7/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460454.25	Easting: 628783.4333	
TOC Elevation:	NA		
Surface Elevation:	NA		
Reference Elevation:			
Reference Description:			

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-04 & MW-EVAL-01S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 3**

				Drilling	
				Start	**Finish**
Water Level:	57 ft				
Time:				DATE: 5/9/2023	DATE: 5/10/2023
Date:				TIME: 1035	TIME: 1355

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet
				2
				4
				6
				8
				10
				12
				14
				16
				18
				20
				22
				24
				26
				28
				30
				32
				34
				36
				38
				40

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush Mount			
Screen Interval:	65/80	To	75/90	ft bgs
Riser Interval:	0/0	To	65/80	ft bgs
Sand Pack Interval:	63/83	To	65/85	ft bgs
Bentonite Seal:	61/81	To	63/77	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	17.71 (ND)	ND	158.2	ND
81 ft	42.24	3.46 (ND)	115.2	ND
94 ft	16.71 (ND)	ND	14.3	ND
101 ft	18.0 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/10/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460454.25	Easting: 628783.4333	
TOC Elevation:	NA		
Surface Elevation:	NA		
Reference Elevation:			
Reference Description:			

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-04 & MW-EVAL-01S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 3**
Water Level: 57 ft	**Time:**	**Date:**	**Drilling** Start: DATE: 5/9/2023 TIME: 1035; Finish: DATE: 5/10/2023 TIME: 1355

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet
				42
				44
				46
				48
				50
				52
				54
				56
				58
				60
				62
				64
		S		66
		C		68
		V		
		P		70
		t		
		o		72
		l		
		S		74
		10		
				76
				78
				80

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush Mount			
Screen Interval:	65/85	To	75/90	ft bgs
Riser Interval:	0/0	To	65/85	ft bgs
Sand Pack Interval:	63/83	To	65/85	ft bgs
Bentonite Seal:	61/81	To	63/77	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	17.71 (ND)	ND	158.2	ND
81 ft	42.24	3.46 (ND)	115.2	ND
94 ft	16.71 (ND)	ND	14.3	ND
101 ft	18.0 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/10/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460454.249	Easting: 628783.4333	
TOC Elevation:	NA		
Surface Elevation:	NA		
Reference Elevation:			
Reference Description:			

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-04 & MW-EVAL-01S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
Water Level: 57 ft			**Drilling**
Time:			**Start** DATE: 5/9/2023 TIME: 1035
Date:			**Finish** DATE: 5/10/2023 TIME: 1355

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet
				82
				84
		D		
		t		86
		o		
		l		88
		S		
		10		90

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush Mount			
Screen Interval:	65/80	To	75/90	ft bgs
Riser Interval:	0/0	To	65/80	ft bgs
Sand Pack Interval:	63/83	To	65/85	ft bgs
Bentonite Seal:	61/81	To	63/77	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	17.71 (ND)	ND	158.2	ND
81 ft	42.24	3.46 (ND)	115.2	ND
94 ft	16.71 (ND)	ND	14.3	ND
101 ft	18.0 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/10/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-05
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 3**
Water Level: 67 ft			**Drilling**
Time:			**Start:** DATE: 5/17/2023 TIME: 1300
Date:			**Finish:** DATE: 5/18/2023 TIME: 1430

Coordinates: Northing 1460448.281 Easting: 628840.4311
TOC Elevation: NA
Surface Elevation: 289.6
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	14.5/17		0	2	Loose, brown fine to medium sand, some moderate gravel, dry, no plastics 10YR 4/3
				4	
				6	
				8	
				10	
				12	
				14	
NA				16	No recovery
SW	10/10		0	18	Loose, gravel, medium to coarse sand, medium to large gravel, dry, no plasticity 10YR 4/3
				20	
			1	22	
			0.2	24	
			0.7		
			0	26	
			0		
GW	15/20		0	28	Loose, grey, medium gravel, dry, no plasticity 10YR 4/1
ML			0	30	Medium dense, dark grey silt, few small gravel, dry, no plasticity 10YR 4/1
GW			0	32	Loose, sandy gravel, dry, no plasticity 10YR 5/1
SW-SM			0.7	34	Medium dense, fine sand, brown, few silt, some medium gravel, dry, no plasticity 10YR 4/3
			0.9	36	
			1.1	38	
NA					No recovery
SW			0.3	40	Loose, brown, medium sand, some coarse sand, some gravel, dry, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	35.57	ND	97.34	2.49
81 ft	32.42	ND	104.06	2.69
91 ft	35.5	ND	437.22	ND
101 ft	673.79	102.9	17.13	ND
111 ft	50.49	ND	0.43	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/18/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-05
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 3**
			Drilling
Water Level: 67 ft			**Start** DATE: 5/17/2023 / TIME: 1300
Time:			**Finish** DATE: 5/18/2023 / TIME: 1430
Date:			

Coordinates: Northing 1460448.281 Easting: 628840.4311
TOC Elevation: NA
Surface Elevation: 289.6
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	15/20		0	42	Loose, brown, medium sand, some coarse sand, some gravel, dry, no plasticity 10YR 4/3
NA				44–46	No recovery
SW			0	48	Loose brown sand, some gravel, dry no plasticity 10YR 5/3
SP-SM			0	50	Dense, brown-gray silty sand, some gravel, dry, no plasticity 10YR 5/2
SW	15/20		0	52–62	Loose, brown, medium sand, some gravel, dry, no plasticity 10YR 4/3
NA				64–66	No recovery
SP	10/20		0 / 0.4 / 0.9 / 1.1 / 0.3 / 0.5 / 0.2 / 0	68–76	Loose, brown-gray fine sand, wet, no plasticity 10YR 4/2
NA				78–80	No recovery

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	35.57	ND	97.34	2.49
81 ft	32.42	ND	104.06	2.69
91 ft	35.5	ND	437.22	ND
101 ft	673.79	102.9	17.13	ND
111 ft	50.49	ND	0.43	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/18/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-05
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
			Drilling
Water Level: 67 ft			**Start** DATE: 5/17/2023 / TIME: 1300
Time:			**Finish** DATE: 5/18/2023 / TIME: 1430
Date:			

Coordinates: Northing 1460448.281 Easting: 628840.4311
TOC Elevation: NA
Surface Elevation: 289.6
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
				82	
SP	10/20			84	No recovery
				86	
			0.4	88	
			0.1		
			0.4	90	
SP					Loose, brown-gray, fine sand, wet, no plasticity 10YR 4/2
			0	92	
				94	
			0.3		
				96	
	8/20			98	
				100	
NA					No recovery
				102	
				104	
				106	
				108	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	35.57	ND	97.34	2.49
81 ft	32.42	ND	104.06	2.69
91 ft	35.5	ND	437.22	ND
101 ft	673.79	102.9	17.13	ND
111 ft	50.49	ND	0.43	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/18/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-06
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 4**
Coordinates: Northing 1460305.596	Easting: 628785.3777		
TOC Elevation: NA			**Drilling**
Surface Elevation: 288.8	**Water Level:** 62 ft		**Start** DATE: 5/4/2023 / **Finish** DATE: 5/5/2023
Reference Elevation:	**Time:**		TIME: 0650 / TIME: 0630
Reference Description:	**Date:**		

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	7/7		0	2 – 4	Loose, brown, coarse sand, few medium sand, large gravel, wet (rain), no plasticity, few silts 10YR 4/3
SW			0	6	Loose, brown, medium sand, few fine sand, medium gravel, wet (rain), some silt, no plasticity 10YR 4/3
SW	10/10		0	8 – 16	Loose, brown, coarse sand, some large gravel, dry, no plasticity 10YR 4/3
SW	10/10		0	18 – 20	Loose, brown, coarse sand, some large and medium gravel, dry, no plasticity 10YR 4/3
SP			0	22	Loose, brown, medium sand, few medium gravel, dry, no plasticity 10YR 4/3
SW			0	24 – 26	Loose, brown, coarse sand, some medium sand, large and medium gravel, dry, no plasticity 10YR 4/3
SW	10/10		0	28 – 32	Loose, brown, coarse sand, large and medium gravel, dry, no plasticity 10YR 4/3
SP			0	34	Loose, brown, medium sand, few medium gravel, dry, no plasticity 10YR 4/3
SW			0	36	Loose, brown, coarse sand, some medium sand, some large and medium gravel 10YR 4/3
SP	10/10		0	38 – 40	Loose, brown, coarse sand, dry, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	18.60 (ND)	ND	205.23	ND
79 ft	16.2 (ND)	ND	208.41	ND
90 ft	16.73 (ND)	ND	128.02	ND
99 ft	16.00 (ND)	2.18	867.39	ND

Logged by: M. Wright — Date: 5/5/2023

Drilling Contractor: Cascade Drilling — Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-06
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 4**

Coordinates: Northing 1460305.596 Easting: 628785.3777
TOC Elevation: NA
Surface Elevation: 288.8
Reference Elevation:
Reference Description:

Water Level:	62 ft		
Time:			
Date:			

Drilling	
Start	**Finish**
DATE: 5/4/2023	DATE: 5/5/2023
TIME: 0650	TIME: 0630

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SP	10/10		0	42	Loose, brown, coarse sand, dry, no plasticity 10YR 4/3
SW-SM			0	44 46	Medium dense, brown, fine sand, some large gravel, some silt, dry, no plasticity 10YR 5/3
SW			0	48 50 52	Loose, medium and coarse sand, large and medium gravel, few silt at 50-51', dry, no plasticity 10YR 4/3
			0.4	54	
SP			0		Loose, medium sand, trace gravel, dry, brown, no plasticity 10YR 4/3
SW			0	56	Loose, medium and coarse sand, large and medium gravel, brown, dry, no plasticity 10YR 4/3
SP	5/10		0	58	Loose, medium and coarse sand, large and medium gravel, brown, no plasticity 10YR 4/3
SW			0	60	Loose, medium-coarse sand, some medium gravel, brown, moist, no plasticity 10YR 4/3
GW			0	62	Loose, grey brown, large gravel, some coarse sand, wet, no plasticity 10YR 4/2
NA				64 66	No recovery
SP	3.5/10		0.6	68	Loose, brown fine sand, wet, no plasticity 10YR 4/3
SW			0.8		Loose, brown , medium-coarse sand, few gravel, wet, no plasticity 10YR 4/3
SP			0	70	Loose, brown, fine sand, wet, no plasticity 10YR 4/3
NA				72 74 76	No recovery
SP	6/10		0	78 80	Loose, brown grey, fine sand, wet, no plasticity 10YR 4/2

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	18.60 (ND)	ND	205.23	ND
79 ft	16.2 (ND)	ND	208.41	ND
90 ft	16.73 (ND)	ND	128.02	ND
99 ft	16.00 (ND)	2.18	867.39	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/5/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates: Northing 1460305.596 Easting: 628785.3777
TOC Elevation: NA
Surface Elevation: 288.8
Reference Elevation:
Reference Description:

Job. No.	Client:	USACE/GSA	Location:
160530104	Project:	PRB Evaluation	Former Scotia Navy Depot

Drilling Method:	Soil Boring/Well Number:
Rotosonic	PRO-06
Sampling Method:	**Sheet 3 of 4**
4x6 Sonic Sampler	**Drilling**

Water Level:	62 ft			Start	Finish
Time:				DATE: 5/4/2023	DATE: 5/5/2023
Date:				TIME: 0650	TIME: 0630

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SP	6/10		0	82	Loose, brown grey, fine sand, wet, no plasticity 10YR 4/2
NA				84 – 86	No recovery
SP	18/20		0.5	88	Loose, brown grey fine sand, wet, no plasticity 10YR 4/2; no hard silt
			0.6	90	
			1.1	92	
			0.8	94	
			0.6	96	
			0.7	98	
			0.5	100	
			0.4		
			0.4	102	
			0.4	104	
			0.3		
NA				106	No recovery
SP	10/10		0	108 – 116	Loose, brown grey fine sand, wet, no plasticity 10YR 4/2; no hard silt
SP	10/10		0	118 – 120	Loose, brown grey fine sand, wet, no plasticity 10YR 4/2; no hard silt

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	18.60 (ND)	ND	205.23	ND
79 ft	16.2 (ND)	ND	208.41	ND
90 ft	16.73 (ND)	ND	128.02	ND
99 ft	16.00 (ND)	2.18	867.39	ND

Logged by: M. Wright Date: 5/5/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460305.596	Easting: 628785.3777	
TOC Elevation:	NA		
Surface Elevation:	288.8		
Reference Elevation:			
Reference Description:			

Job. No.	**Client:**	USACE/GSA
160530104	**Project:**	PRB Evaluation

Location: Former Scotia Navy Depot

Drilling Method: Rotosonic

Soil Boring/Well Number: PRO-06

Sampling Method: 4x6 Sonic Sampler

Sheet 4 of 4

Water Level:	62 ft			**Drilling**	
Time:				**Start**	**Finish**
Date:				DATE: 5/4/2023	DATE: 5/5/2023
				TIME: 0650	TIME: 0630

Surface Conditions: Grass field

Weather: Sun

Temperature: 45-75 degrees F

USCS Class.	**In. Record/ In. Driven**	**Boring Diagram**	**PID (ppm)** 10.6 eV with isobutylene as reference gas	**Depth in Feet**	
				122	
SP	10/10			124	Loose, brown grey fine sand, wet, no plasticity 10YR 4/2; no hard silt
				126	
				128	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	**VC**	**cis DCE**	**TCE**	**PCE**
69 ft	18.60 (ND)	ND	205.23	ND
79 ft	16.2 (ND)	ND	208.41	ND
90 ft	16.73 (ND)	ND	128.02	ND
99 ft	16.00 (ND)	2.18	867.39	ND

Logged by: M. Wright Date: 5/5/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-07
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 3**
Water Level: 65 ft			**Drilling**
Time:			**Start:** DATE: 5/2/2023 TIME: 1452
Date:			**Finish:** DATE: 5/3/2023 TIME: 1700

Coordinates: Northing 1460299.072 Easting: 628820.7397
TOC Elevation: NA
Surface Elevation: 289
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SM	7/7		0	2 / 4 / 6	Loose, brown, silty sand, some large gravel, few small gravel, dry, no plasticity 10YR 3/3
SM	5/10		0	8 / 10	Loose, brown, silty sand, some large gravel, few small gravel, dry, no plasticity 10YR 3/3
SW			0	12	Loose, brown, coarse sand, some small gravel, few medium gravel, dry, no plasticity 10YR 4/3
NA				14 / 16	No recovery
SW	10/10		0	18 / 20 / 22 / 24	Loose, brown, coarse sand, some medium sand, some medium gravel, few large gravel, dry, no plasticity 10YR 4/3
			0.9	26	
SP			0.9		Loose, brown, medium sand, few medium gravel, dry, no plasticity 10YR 4/3
SW	10/10		0	28 / 30 / 32 / 34 / 36	Loose, brown, medium sand, some fine sand, some medium gravel, dry, no plasticity 10YR 4/3
SP			0		Loose, brown, medium sand, few medium gravel, dry, no plasticity 10YR 4/3
SW	20/20		0	38 / 40	Loose, brown, sand, some large and medium gravel, dry, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	15.15 (ND)	ND	193.78	ND
79 ft	15.29 (ND)	ND	184.41	ND
90 ft	17.17 (ND)	ND	229.67	ND
99 ft	16.31 (ND)	ND	770.6	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/3/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-07
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 3**
Water Level: 65 ft			**Drilling**
Time:			**Start** DATE: 5/2/2023 TIME: 1452
Date:			**Finish** DATE: 5/3/2023 TIME: 1700

Coordinates: Northing 1460299.072 Easting: 628820.7397
TOC Elevation: NA
Surface Elevation: 289
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	20/20		0	42	Loose, brown, sand, some large and medium gravel, dry, no plasticity 10YR 4/3
				44	
				46	
SP			0	48	Loose, brown, medium sand, some large and medium gravel, dry, no plasticity 10YR 4/3
				50	
				52	
SW			0	54	Loose, brown, coarse sand, some medium and fine sand, some gravel, dry, no plasticity 10YR 4/3
				56	
SW			0	58	Loose brown, sand, few medium to large gravels, wet, no plasticity 10YR 4/3
				60	
				62	
NA	6/20			64	No recovery
				66	
				68	
				70	
				72	
				74	
				76	
SW	6/20		0	78	Loose, brown, fine sand, trace gravel, wet, no plasticity 10YR 4/3
				80	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	15.15 (ND)	ND	193.78	ND
79 ft	15.29 (ND)	ND	184.41	ND
90 ft	17.17 (ND)	ND	229.67	ND
99 ft	16.31 (ND)	ND	770.6	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/3/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-07
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
			Drilling
Water Level: 65 ft			**Start** DATE: 5/2/2023 / TIME: 1452
Time:			**Finish** DATE: 5/3/2023 / TIME: 1700
Date:			

Coordinates: Northing 1460299.072 Easting: 628820.7397
TOC Elevation: NA
Surface Elevation: 289
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW			0	82	Loose, brown, fine sand, trace gravel, wet, no plasticity 10YR 4/3
NA	6/20			84, 86, 88, 90, 92, 94, 96	No recovery
				98	

Monitoring Well Construction Information

Monitoring Well Diameter:	NA	in		
Bottom of Monitoring Well:	NA	ft bgs		
Stick Up or Flush Mount:	NA			
Screen Interval:	NA	To	NA	ft bgs
Riser Interval:	NA	To	NA	ft bgs
Sand Pack Interval:	NA	To	NA	ft bgs
Bentonite Seal:	NA	To	NA	ft bgs
Grout Interval:	NA	To	NA	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
69 ft	15.15 (ND)	ND	193.78	ND
79 ft	15.29 (ND)	ND	184.41	ND
90 ft	17.17 (ND)	ND	229.67	ND
99 ft	16.31 (ND)	ND	770.6	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/3/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates: Northing 1460855.359 Easting: 628625.913
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Job. No.	Client:	USACE/GSA	Location:
160530104	Project:	PRB Evaluation	Former Scotia Navy Depot

Drilling Method: Rotosonic
Soil Boring/Well Number: PRO-08 & MW-EVAL-02S/D
Sampling Method: 4x6 Sonic Sampler
Sheet 1 of 3

Water Level:	67 ft		
Time:			
Date:			

Drilling

Start	Finish
DATE: 5/10/2023	DATE: 5/12/2023
TIME: 1430	TIME: 1830

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	15/20		0	0-12	Loose, brown, medium to fine sand, some medium gravel, dry no plasticity 10YR 4/3
SP			0	14	Loose, brown, medium sand, dry, no plasticity 10YR 4/3
NA				16	No recovery
SP	17/20		0 0.4	18	Loose, brown, medium sand, dry, no plasticity 10YR 4/3
SP			0.5 0.3 0.2 0	20-26	Loose brown, fine sand, trace silt, dry, no plasticity 10YR 4/3
SW			0.2 0.4 0	28-34	Loose brown, coarse sand, medium sand, some medium to coarse gravel, dry, no plasticity 10YR 4/2
NA				36	No recovery
SM	12/20		0	38	Medium dense, sandy silt, some small gravel, dry, no plasticity 10YR 4/2
SW			0	40	Loose, brown-gray, coarse sand, some large gravel, dry, no plasticity 10YR 4/2

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/96	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/91	To	80/96	ft bgs
Riser Interval:	0/0	To	70/91	ft bgs
Sand Pack Interval:	68/89	To	70/91	ft bgs
Bentonite Seal:	62/82	To	68/89	ft bgs
Grout Interval:	0/0	To	62/82	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	16.72 (ND)	5.05	14.58	16.29
81 ft	21.67	3.48 (ND)	77.3	99.21
91 ft	18.06 (ND)	ND	8.12	5.38
101 ft	13.48 (ND)	ND	ND	ND

Logged by: M. Wright
Date: 5/12/2023
Drilling Contractor: Cascade Drilling
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-08 & MW-EVAL-02S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 2 of 3**
Water Level: 67 ft			**Drilling**
Time:			**Start:** DATE: 5/10/2023 TIME: 1430
Date:			**Finish:** DATE: 5/12/2023 TIME: 1830

Coordinates: Northing 1460855.359 Easting: 628625.913
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
			0		
			0	42	
			0.6		
			0.9	44	
SW			0.4		Loose, brown-gray, coarse sand, some large gravel, dry, no plasticity 10YR 4/2
				46	
			0		
				48	
	12/20				
				50	
				52	
NA					
				54	No recovery
				56	
			0	58	
			0		
			0.3	60	
			0.6		
SW	10/10		1.1	62	Loose, brown, coarse sand, some fine to medium sand, some large to medium gravel, dry, no plasticity 10YR 4/3
			0.9		
			0.7	64	
			0	66	
				68	
		S		70	
				72	
SW			0		Loose, brown, coarse sand, some small and large gravel, wet, no plasticity 10YR 4/3
		C			
	10/20	V		74	
		P			
		t		76	
		o			
		I		78	
NA		S			No recovery
		10		80	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/96	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/91	To	80/96	ft bgs
Riser Interval:	0/0	To	70/91	ft bgs
Sand Pack Interval:	68/89	To	70/91	ft bgs
Bentonite Seal:	62/82	To	68/89	ft bgs
Grout Interval:	0/0	To	62/82	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	16.72 (ND)	5.05	14.58	16.29
81 ft	21.67	3.48 (ND)	77.3	99.21
91 ft	18.06 (ND)	ND	8.12	5.38
101 ft	13.48 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/12/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-08 & MW-EVAL-02S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
			Drilling
Water Level: 67 ft			**Start** DATE: 5/10/2023 / **Finish** DATE: 5/12/2023
Time:			TIME: 1430 / TIME: 1830
Date:			

Coordinates: Northing 1460855.359 Easting: 628625.913
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
				82	
NA	10/20		0	84	No recovery
				86	
				88	
SW			0	90	Loose, brown, coarse sand, some gravel, wet, no plasticity 10YR 4/3
		D		92	
	5/10	o			
		l		94	
NA		S	0		No recovery
		10		96	
				98	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/96	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/91	To	80/96	ft bgs
Riser Interval:	0/0	To	70/91	ft bgs
Sand Pack Interval:	68/89	To	70/91	ft bgs
Bentonite Seal:	62/82	To	68/89	ft bgs
Grout Interval:	0/0	To	62/82	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	16.72 (ND)	5.05	14.58	16.29
81 ft	21.67	3.48 (ND)	77.3	99.21
91 ft	18.06 (ND)	ND	8.12	5.38
101 ft	13.48 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/12/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-09 & MW-EVAL-04S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 1 of 3**

Coordinates: Northing 1460295.496 Easting: 628567.7559
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

				Drilling	
Water Level:	57 ft			**Start**	**Finish**
Time:				DATE: 5/16/2023	DATE: 5/17/2023
Date:				TIME: 1015	TIME: 1000

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SW	6/20		0	2	Loose, brown, coarse sand, some gravel, dry, no plasticity 10YR 4/3
				4	
SP			0	6	Loose, orange-brown, fine sand, trace silt, dry, no plasticity 7.5YR 4/6
NA				8	No recovery
				10	
				12	
				14	
				16	
SW	13.5/20		0.5	18	Loose, brown, well graded sand, some medium gravel, dry, no plasticity 10YR 4/3
			0.8	20	
			1.4	22	
			1.1	24	
SW			0.7	26	Loose, brown-gray, fine sand, some silt, some gravel, dry, no plasticity 10YR 6/1
			0		
SW			0.7	28	loose brown, fine to medium sand, some gravel, dry, no plasticity 10YR 4/3
			1.6	30	
NA				32	No recovery
				34	
				36	
SW	9.5/20		0.5	38	Loose, brown, well graded sand, some medium gravel, dry, no plasticity 10YR 4/3
SM			0.7		Loose, brown, silty sand, some gravel, dry, no plasticity 10YR 4/2
ML			0	40	Dense, brown-gray, silt, few fine sand, some gravel, dry, no plasticity 10YR 6/2

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	65/85	To	75/90	ft bgs
Riser Interval:	0/0	To	65/85	ft bgs
Sand Pack Interval:	63/83	To	75/90	ft bgs
Bentonite Seal:	61/77	To	63/83	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
73 ft	26.34	ND	81.21	2.2
81 ft	21.14	ND	38.67	ND
91 ft	20.19	ND	ND	ND
101 ft	16.67 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/17/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates: Northing 1460295.496 Easting: 628567.7559
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Job. No.	Client:	USACE/GSA	Location:
160530104	Project:	PRB Evaluation	Former Scotia Navy Depot

Drilling Method: Rotosonic
Soil Boring/Well Number: PRO-09 & MW-EVAL-04S/D
Sampling Method: 4x6 Sonic Sampler
Sheet 2 of 3

Water Level:	57 ft			Drilling Start	Drilling Finish
Time:				DATE: 5/16/2023	DATE: 5/17/2023
Date:				TIME: 1015	TIME: 1000

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
ML	9.5/20		0.3		Dense, brown-gray, silt, few fine sand, some gravel, dry, no plasticity 10YR 6/2
			0.7	42	
SM			1.3		Loose, gray, fine sandy silt, some gravel, dry, no plasticity 10YR 7/1
			0.7	44	
ML			1.1		Very dense, dark brown fine sandy silt, some gravel, dry, no plasticity 10YR 4/2
				46	
				48	
				50	
NA				52	No recovery
				54	
				56	
SW	6/10		0.6	58	
			0.4		
			0.2	60	Loose, brown, well graded sand, few medium gravel, moist/wet, no plasticity 10YR 4/3
			0.7		
			0.4	62	
			0.5		
				64	
NA		S	0		No recovery
				66	
GW	9/20	C V P t o l S 10		68	Loose, brown, sandy gravel, wet, no plasticity 10YR 4/3
				70	
SP			0	72	Loose, brown, fine sand, wet, no plasticity 10YR 4/2
				74	
				76	
NA				78	No recovery
				80	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	65/85	To	75/90	ft bgs
Riser Interval:	0/0	To	65/85	ft bgs
Sand Pack Interval:	63/83	To	75/90	ft bgs
Bentonite Seal:	61/77	To	63/83	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
73 ft	26.34	ND	81.21	2.2
81 ft	21.14	ND	38.67	ND
91 ft	20.19	ND	ND	ND
101 ft	16.67 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/17/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No. 160530104	**Client:** USACE/GSA		**Location:** Former Scotia Navy Depot
	Project: PRB Evaluation		
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-09 & MW-EVAL-04S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 3 of 3**
			Drilling
Water Level: 57 ft			**Start** DATE: 5/16/2023 / **Finish** DATE: 5/17/2023
Time:			TIME: 1015 / TIME: 1000
Date:			

Coordinates: Northing 1460295.496 Easting: 628567.7559
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
				82	
NA	9/20			84	No Recovery
		D		86	
		o			
		t		88	
		S			
		10		90	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	75/90	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	65/85	To	75/90	ft bgs
Riser Interval:	0/0	To	65/85	ft bgs
Sand Pack Interval:	63/83	To	75/90	ft bgs
Bentonite Seal:	61/77	To	63/83	ft bgs
Grout Interval:	0/0	To	61/77	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
73 ft	26.34	ND	81.21	2.2
81 ft	21.14	ND	38.67	ND
91 ft	20.19	ND	ND	ND
101 ft	16.67 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/17/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460469.067	Easting: 628530.2019	
TOC Elevation:	NA		
Surface Elevation:	NA		
Reference Elevation:			
Reference Description:			

Job. No.	**Client:**	USACE/GSA	**Location:**
160530104	**Project:**	PRB Evaluation	Former Scotia Navy Depot
Drilling Method:			**Soil Boring/Well Number:**
Rotosonic			PRO-10 & MW-EVAL-03S/D
Sampling Method:			**Sheet 1 of 4**
4x6 Sonic Sampler			**Drilling**
Water Level:	67 ft		**Start** DATE: 5/12/2023 / **Finish** DATE: 5/15/2023
Time:			TIME: 1030 / TIME: 1845
Date:			

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
GW	13/17		0	0–6	Loose, brown, well graded gravel with sand, medium gravel, and medium sand, wet, no plasticity 10YR 3/3
SW			0	8–16	Loose, brown, well graded sand with gravel, coarse sand, and gravel, dry, no plasticity 10YR 3/4
GW			0	18	Loose brown gravel with sand, Small-Large gravels, coarse sand, wet, no plasticity 10YR 3/3
			0.1	20	
GW	13/20		0	22–32	Loose, brown, well graded gravel with sand, Small-Large gravels, sub angular medium-coarse sand, loose, no plasticity 10YR 5/2
SW			0	34–36	Loose, brown/tan, well graded sand with gravel, coarse sand, Small-Medium gravel, loose, wet, no plasticity 10YR 4/2
SW	10/20		0.1 0.2 0	38 40	Loose, brown, well graded sand with gravel, coarse sand, rounded small to medium gravel, wet, no plasticity 10YR 2/2

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/135	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/130	To	80/135	ft bgs
Riser Interval:	0/0	To	80/135	ft bgs
Sand Pack Interval:	68/128	To	82/135	ft bgs
Bentonite Seal:	66/82	To	68/128	ft bgs
Grout Interval:	0	To	66	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	33.34	ND	62.85	ND
81 ft	27.77	ND	117.35	ND
92 ft	31.94	ND	105.98	ND
101 ft	19.71 (ND)	ND	150.56	ND
111 ft	30.15	ND	144.28	ND
121 ft	14.72 (ND)	ND	167.18	ND
131 ft	38.92	ND	205.787	ND
141 ft	33.61	ND	120.13	4.59
151 ft	1.67 (ND)	ND	ND	ND

Logged by: M. Wright — Date: 5/15/2023

Drilling Contractor: Cascade Drilling — Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates: Northing 1460469.067 Easting: 628530.2019
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Job. No.	Client:	USACE/GSA	Location:
160530104	Project:	PRB Evaluation	Former Scotia Navy Depot

Drilling Method: Rotosonic
Soil Boring/Well Number: PRO-10 & MW-EVAL-03S/D
Sampling Method: 4x6 Sonic Sampler
Sheet 2 of 4

Water Level:	67 ft			Drilling Start	Drilling Finish
Time:				DATE: 5/12/2023	DATE: 5/15/2023
Date:				TIME: 1030	TIME: 1845

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SM	10/20		0.1 0.2 0.0	42	Dense, brown, poorly graded sand with silt, coarse sand, wet, slightly plastic 10YR 2/2
SW			0	44 46	Loose, brown, well graded sand with gravel, coarse sand, small to medium gravel, dry, no plasticity 10YR 3/5
GW			0	48 50	Loose, brown, well graded gravel with sand, medium to large gravel, medium to coarse sand, dry, no plasticity 10YR 3/5
SP			0	52	Loose, brown, poorly graed sand with gravel, coarse sand, small gravel, dry, no plasticity 10YR 5/3
GW			0	54 56	Loose, brown, well graded gravel with sand, small to large gravels, medium to coarse sand, dry, no plasticity 10YR 3/4
GW			0	58 60	Loose, brown, well graded gravel with sand, small gravels, coarse sand, wet, no plasticity 10YR 4/3
SP	8/10		0	62 64 66	Dense, orange/brown, poorly graded fine sand, fine sand, moist, no plasticity 10YR 5/8
SP	5/10	S C V P t o	0	68 70 72 74 76	Loose, brown/tan poorly graded fine sand, fine sand, moist, no plasticity 10YR 4/3
SP	6/10	1 S 10	0.6 0 0.1	78 80	Loose, brown/tan poorly graded sand, medium to fine sand, wet, no plasticity 10YR 4/3

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/135	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/130	To	80/135	ft bgs
Riser Interval:	0/0	To	80/135	ft bgs
Sand Pack Interval:	68/128	To	82/135	ft bgs
Bentonite Seal:	66/82	To	68/128	ft bgs
Grout Interval:	0	To	66	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	33.34	ND	62.85	ND
81 ft	27.77	ND	117.35	ND
92 ft	31.94	ND	105.98	ND
101 ft	19.71 (ND)	ND	150.56	ND
111 ft	30.15	ND	144.28	ND
121 ft	14.72 (ND)	ND	167.18	ND
131 ft	38.92	ND	205.787	ND
141 ft	33.61	ND	120.13	4.59
151 ft	1.67 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/15/2023
Drilling Contractor: Cascade Drilling Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Job. No.	**Client:**	USACE/GSA	**Location:**
160530104	**Project:**	PRB Evaluation	Former Scotia Navy Depot
Drilling Method:			**Soil Boring/Well Number:**
Rotosonic			PRO-10 & MW-EVAL-03S/D
Sampling Method:			**Sheet 3 of 4**
4x6 Sonic Sampler			**Drilling**
Water Level:	67 ft		**Start** DATE: 5/12/2023 / **Finish** DATE: 5/15/2023
Time:			TIME: 1030 / TIME: 1845
Date:			

Coordinates: Northing 1460469.067 Easting: 628530.2019
TOC Elevation: NA
Surface Elevation: NA
Reference Elevation:
Reference Description:

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
			0		
			0	82	
			0		
SP	6/10		0	84	Loose, brown/tan poorly graded sand, medium to fine sand, wet, no plasticity 10YR 4/3
			0.1		
			0	86	
			0.1		
			0.1	88	
			0.2		
			0.4	90	
				92	
				94	
				96	
SP	8/20				Loose, brown/tan poorly graded sand, medium to fine sand, wet, no plasticity 10YR 4/3
				98	
			0.2		
				100	
				102	
				104	
				106	
			0	108	
			0.5	110	
			1.7	112	
			1.4		
SP	15/20		0.7	114	Loose, brown fine sand, wet, no plasticity 10YR 4/3
			1.2		
			1.4	116	
			0.7		
			0.5	118	
			0		
				120	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/135	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/130	To	80/135	ft bgs
Riser Interval:	0/0	To	80/135	ft bgs
Sand Pack Interval:	68/128	To	82/135	ft bgs
Bentonite Seal:	66/82	To	68/128	ft bgs
Grout Interval:	0	To	66	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	33.34	ND	62.85	ND
81 ft	27.77	ND	117.35	ND
92 ft	31.94	ND	105.98	ND
101 ft	19.71 (ND)	ND	150.56	ND
111 ft	30.15	ND	144.28	ND
121 ft	14.72 (ND)	ND	167.18	ND
131 ft	38.92	ND	205.787	ND
141 ft	33.61	ND	120.13	4.59
151 ft	1.67 (ND)	ND	ND	ND

Logged by: M. Wright
Drilling Contractor: Cascade Drilling
Date: 5/15/2023
Driller: Scott Parkes

EA Engineering, Science, and Technology, Inc., PBC

LOG OF SOIL BORING

Coordinates:	Northing 1460469.067	Easting: 628530.2019	
TOC Elevation:	NA		
Surface Elevation:	NA		
Reference Elevation:			
Reference Description:			

Job. No. 160530104	**Client:** USACE/GSA	**Project:** PRB Evaluation	**Location:** Former Scotia Navy Depot
Drilling Method: Rotosonic			**Soil Boring/Well Number:** PRO-10 & MW-EVAL-03S/D
Sampling Method: 4x6 Sonic Sampler			**Sheet 4 of 4**
Water Level: 67 ft			**Drilling** Start: DATE: 5/12/2023 TIME: 1030; Finish: DATE: 5/15/2023 TIME: 1845
Time:			
Date:			

Surface Conditions: Grass field
Weather: Sun
Temperature: 45-75 degrees F

USCS Class.	In. Record/ In. Driven	Boring Diagram	PID (ppm) 10.6 eV with isobutylene as reference gas	Depth in Feet	
SP	15/20		0	122–126	Loose, brown fine sand, wet, no plasticity 10YR 4/3
SP	11/20	Dtol S 10	0	128–146	Loose, brown, fine sand, wet, no plasticity 10YR 4/2
				148	

Monitoring Well Construction Information

Monitoring Well Diameter:	2	in		
Bottom of Monitoring Well:	80/135	ft bgs		
Stick Up or Flush Mount:	Flush			
Screen Interval:	70/130	To	80/135	ft bgs
Riser Interval:	0/0	To	80/135	ft bgs
Sand Pack Interval:	68/128	To	82/135	ft bgs
Bentonite Seal:	66/82	To	68/128	ft bgs
Grout Interval:	0	To	66	ft bgs

FROG Sample Results (ppb)

Interval	VC	cis DCE	TCE	PCE
71 ft	33.34	ND	62.85	ND
81 ft	27.77	ND	117.35	ND
92 ft	31.94	ND	105.98	ND
101 ft	19.71 (ND)	ND	150.56	ND
111 ft	30.15	ND	144.28	ND
121 ft	14.72 (ND)	ND	167.18	ND
131 ft	38.92	ND	205.787	ND
141 ft	33.61	ND	120.13	4.59
151 ft	1.67 (ND)	ND	ND	ND

Logged by: M. Wright Date: 5/15/2023

Drilling Contractor: Cascade Drilling Driller: Scott Parkes

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EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.:	EA Personnel:	Client:
MW-EVAL-02S	M.Wright	USACE
Location:	**Well Condition:**	**Weather:**
Scotia Dept		65 sun
Sounding Method:	**Gauge Date:** 5/23/23	**Measurement Ref:**
WLM	**Gauge Time:** 1120	—
Stick Up/Down (ft):	**PID Headspace Reading:**	**Well Diameter (in):**
-	0.0	2

Purge Date:	Purge Time:
5/23/23	1120
Purge Method:	**Field Technician:**
pump + surge	M.Wright

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
82.32	0.163	—
B. Depth to Water (ft):	**E. Well Volume (gal) C*D):**	**Pump Type:**
68.56	2.24	Submersible
C. Liquid Depth (ft) (A-B):	**F. Three Well Volumes (gal) (E3):**	**Pump Intake Depth:**
13.76	6.72	Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
1120	7.07	0.583	422	2.20	14.99	-100	69.21	3.0	—
1125	7.03	0.599	419	1.93	15.15	-119	69.23	3.0	15
1130	7.00	0.651	401	1.70	15.54	-142	69.23	3.0	30
1135	6.98	0.680	370	1.59	15.60	-150	69.25	3.0	45
1140	6.96	0.692	330	1.56	15.61	-162	69.25	3.0	60
1145	6.95	0.690	99.2	1.55	15.21	-160	69.25	3.0	75
1150	6.95	0.689	38.7	1.52	16.89	-158	69.25	3.0	90
1155	6.94	0.684	20.4	1.50	16.09	-155	69.25	3.0	105
1200	6.94	0.684	11.6	1.50	16.15	-153	69.25	3.0	120

Total Quantity of Water Removed (gal): 31.7 Personnel: M. Wright

COMMENTS AND OBSERVATIONS:

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-04D	EA Personnel: M. Wright	Client: USACE
Location: Scotia Depo	Well Condition: New	Weather: 65 Sun
Sounding Method: WLM	Gauge Date: 5/22/23 Gauge Time: 1225	Measurement Ref: —
Stick Up/Down (ft): Flush	PID Headspace Reading: 0.0	Well Diameter (in): 2"

Purge Date: 5/22/23	Purge Time: ~~07~~ 1225
Purge Method: pump + surge	Field Technician: M. Wright

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 63.45	E. Well Volume (gal) C*D):	Pump Type: Submersible
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
~~1230~~	7.04	0.579	71000	2.69	14.45	-152	63.40	2.8	—
1235	7.07	0.579	521	1.98	14.30	-153	63.40	2.8	
1240	7.09	0.580	119.6	1.90	14.26	-153	63.40	2.8	
1245	7.15	0.580	22.4	1.90	14.26	-153	63.40	2.8	
1250	7.17	0.579	17.3	1.87	14.30	-158	63.40	2.8	
1255	7.19	0.576	11.4	1.85	14.35	-160	63.40	2.8	
1300	7.20	0.574	6.9	1.82	14.40	-164	63.40	2.8	
~~1305~~									
~~1310~~									

Total Quantity of Water Removed (gal): _____ Personnel: M. Wright

COMMENTS AND OBSERVATIONS: _____

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-045	EA Personnel: M. Wright	Client: USACE
Location: Scotia Depot	Well Condition: New	Weather: Cool Sun
Sounding Method: WLM	Gauge Date: 5/22/23 Gauge Time: 1115	Measurement Ref: —
Stick Up/Down (ft): Flush	PID Headspace Reading: 0	Well Diameter (in): 2"

Purge Date: 5/23/23	Purge Time: 1115
Purge Method: pump + surge	Field Technician: M. Wright

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 62.25	E. Well Volume (gal) C*D):	Pump Type: Submersible
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
1120	7.12	0.607	71000	5.43	17.21	-45	62.95	3.0	—
1125	7.15	0.589	71000	5.59	15.27	-40	62.98	3.0	
1130	7.11	0.592	71000	4.93	15.00	-43	62.98	3.0	
1135	7.09	0.596	71000	4.62	14.27	-47	62.99	3.0	
1140	7.07	0.590	671	4.58	14.92	-40	62.99	3.0	
1145	7.06	0.585	224	4.50	15.09	-34	62.99	3.0	
1150	7.06	0.583	149	4.45	15.27	-37	63.00	3.0	
1155	7.07	0.581	136	4.42	15.41	-40	63.00	3.0	
1200	7.08	0.579	91.4	4.39	15.57	-42	63.01	3.0	
1205	7.08	0.577	74.6	4.37	15.51	-44	63.01	3.0	
1210	7.07	0.576	57.1	4.37	15.55	-41	63.01	3.0	
1215	7.06	0.574	48.2	4.35	15.58	-39	63.02	3.0	
1220	7.06	0.573	42.1	4.35	15.55	-39	63.02	3.0	
1225	7.08	0.572	34.6	4.33	15.60	-37	63.02	3.0	

Total Quantity of Water Removed (gal): _____ Personnel: M. Wright

COMMENTS AND OBSERVATIONS:

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-035	EA Personnel: M. Wright	Client: USACE
Location: Scotia Depot	Well Condition: New	Weather: 62 sun
Sounding Method: WLM	Gauge Date: 5/22/23	Measurement Ref:
	Gauge Time: 0950	
Stick Up/Down (ft): Flush	PID Headspace Reading:	Well Diameter (in): 2

Purge Date: 5/22/23	Purge Time: 0950
Purge Method: Pump + surge	Field Technician: M. Wright

Well Volume

A. Well Depth (ft): 80.25	D. Well Volume (ft): 0.163	Depth/Height of Top of PVC: —
B. Depth to Water (ft): 65.30	E. Well Volume (gal) C*D): 2.44	Pump Type: Submersible
C. Liquid Depth (ft) (A-B): 14.95	F. Three Well Volumes (gal) (E3): 7.31	Pump Intake Depth: Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
0950	7.05	0.635	71000	4.54	13.13	-28	65.35	2.5	—
0955	7.33	0.626	71000	3.62	12.96	-185	65.41	2.5	12.5
1000	7.34	0.617	71000	5.31	12.73	-179	65.70	2.8	25
1005	7.44	0.612	71000	3.21	12.76	-149	65.71	2.5	37.5
1010	7.30	0.606	854	3.24	13.95	-139	65.72	2.5	50
1015	7.25	0.602	613	3.20	13.06	-134	65.72	2.5	62.5
1020	7.20	0.597	215	3.49	13.21	-124	65.72	2.5	75
1025	7.16	0.595	180	3.69	13.48	-120	65.73	2.5	87.5
1030	7.14	0.593	118	3.64	13.63	-115	65.73	2.5	100
1035	7.13	0.590	81.7	3.61	13.75	-100	65.73	2.5	112.5
1040	7.13	0.585	51.4	3.62	13.90	-96	65.74	2.5	125
1045	7.12	0.587	47.3	3.62	13.85	-98	65.74	2.5	137.5
1050	7.12	0.587	38.4	3.63	13.78	-99	65.74	2.5	150

Total Quantity of Water Removed (gal): 39 Personnel: M. Wright

COMMENTS AND OBSERVATIONS:

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-02D	EA Personnel: M.Wright	Client: USACE
Location: Scotia Depot	Well Condition: New	Weather: 64 Sun
Sounding Method: WLM	Gauge Date: 5/23/23 Gauge Time: 1010	Measurement Ref: —
Stick Up/Down (ft): Flush	PID Headspace Reading: 0.0	Well Diameter (in): 2

Purge Date: 5/23/23	Purge Time: 1015
Purge Method: Pump + Surge	Field Technician: M.Wright

Well Volume

A. Well Depth (ft): 96.44	D. Well Volume (ft): 0.163	Depth/Height of Top of PVC: —
B. Depth to Water (ft): 69.35	E. Well Volume (gal) C*D): 4.49	Pump Type: Submersible
C. Liquid Depth (ft) (A-B): 27.59	F. Three Well Volumes (gal) (E3): 13.49	Pump Intake Depth: Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
1020	7.60	0.490	>1000	3.93	14.89	-18	69.35	3.0	—
1025	7.45	0.485	654	3.41	14.91	-33	69.36	3.0	15
1030	7.31	0.479	200.7	3.12	14.93	-53	69.38	3.0	30
1035	7.28	0.475	47.5	2.89	14.97	-79	69.40	3.0	45
1040	7.27	0.479	200	2.46	14.77	-97	69.40	3.0	60
1045	7.27	0.480	175	2.31	14.61	-111	69.40	3.0	75
1050	7.26	0.486	120	2.00	14.50	-116	69.40	3.0	90
1055	7.23	0.488	47.3	1.89	14.33	-114	69.40	3.0	105
1100	7.20	0.490	38.4	1.85	14.29	-112	69.40	3.0	120
1105	7.19	0.492	11.4	1.80	14.20	-110	69.40	3.0	135

Total Quantity of Water Removed (gal): 35 Personnel: M.Wright

COMMENTS AND OBSERVATIONS:

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-03D	EA Personnel: M. Wright	Client: USACE
Location: Scotia Depot	Well Condition: New	Weather: 60 Sun
Sounding Method: WLM	Gauge Date: 5/22/23 Gauge Time: 0900	Measurement Ref: —
Stick Up/Down (ft): Flush	PID Headspace Reading: 0.0	Well Diameter (in): 2

Purge Date: 5/22/23	Purge Time: 0900
Purge Method: pump + surge	Field Technician: M. Wright

Well Volume

A. Well Depth (ft): 136.02	D. Well Volume (ft): 0.163	Depth/Height of Top of PVC: —
B. Depth to Water (ft): 64.56	E. Well Volume (gal) C*D): 11.65	Pump Type: submersible Torpedo
C. Liquid Depth (ft) (A-B): 71.46	F. Three Well Volumes (gal) (E3): 34.94	Pump Intake Depth: Bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
0905	4.79	0.387	71000	5.51	13.50	-95	64.60	3.5	—
0910	5.83	0.272	71000	5.11	12.64	-171	64.61	3.5	"
0915	6.02	0.264	255	2.64	12.40	-174	64.62	3.5	"
0920	6.30	0.265	194	2.20	12.01	-183	64.62	3.5	
0925	6.43	0.266	71.1	2.19	11.83	-185	64.62	3.5	
0930	6.60	0.264	124	2.10	11.82	-190	64.62	3.5	
0935	6.65	0.265	49.4	2.12	11.90	-192	64.62	3.5	
0940	6.68	0.265	21.1	2.11	11.92	-194	64.62	3.5	
0945	6.69	0.266	38.6	2.09	11.91	-195	64.62	3.5	

Total Quantity of Water Removed (gal): _____ Personnel: Mike Wright

COMMENTS AND OBSERVATIONS: _____

1 L = 0.264172 gal

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-01S	EA Personnel: LBL	Client: USACE
Location:	Well Condition: Brand New	Weather: 49°F, sunny
Sounding Method: Solinst WLM	Gauge Date: 05/17/23 Gauge Time: 0930	Measurement Ref: TOIC
Stick Up/Down (ft): 1.08	PID Headspace Reading:	Well Diameter (in): 2

Purge Date: 5/17/23	Purge Time: 1045
Purge Method: pump + surge	Field Technician: LBL

Well Volume

A. Well Depth (ft): 76.58	D. Well Volume (ft): 0.163 gal/ft	Depth/Height of Top of PVC: 1.08'
B. Depth to Water (ft): 65.29	E. Well Volume (gal) C*D): 1.84	Pump Type: torpedo (down hole)
C. Liquid Depth (ft) (A-B): 11.29	F. Three Well Volumes (gal) (E3): 5.52	Pump Intake Depth: bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
1045	7.03	0.537	>1000	5.35	13.43	-40	65.34	3.6	—
1050	7.02	0.545	>1000	5.30	12.87	-26	65.34	3.6	18.0
1055	7.01	0.552	>1000	5.25	12.49	-23	65.34	3.6	36.0
1100	7.00	0.547	295	5.16	12.81	-31	65.34	3.6	54.0
1105	7.01	0.553	>1000	4.99	12.62	-14	65.34	3.6	72.0
1110	7.01	0.550	212	4.98	12.75	-16	65.34	3.6	90.0
1115	7.01	0.546	130	4.97	13.17	-18	65.34	3.6	108.0
1120	7.02	0.548	127	4.99	12.57	-11	65.34	3.6	126.0
1125	7.01	0.549	121	5.02	12.53	-22	65.34	3.6	144.0
1130	7.00	0.546	11.7	5.00	12.47	-22	65.34	3.6	162.0
1135	6.99	0.548	5.5	4.96	12.43	-20	65.34	3.6	180.0
1140	6.99	0.549	0.0	5.07	12.38	-17	65.34	3.6	198.0

Total Quantity of Water Removed (gal): _____ Personnel: LBL

COMMENTS AND OBSERVATIONS: surge @ 1051, continued purge from earlier in the morning

1 L = 0.264172 gal

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-01S	EA Personnel: LBL	Client: USACE
Location:	Well Condition: Brand New	Weather: 45 F, sunny
Sounding Method: Solinst WLM	Gauge Date: 5/17/23 Gauge Time: 0830	Measurement Ref: TOIC
Stick Up/Down (ft): 1.08	PID Headspace Reading:	Well Diameter (in): 2

Purge Date: 05/17/23	Purge Time: ~~0900 (LBL) 0903~~ 0900
Purge Method: pump + surge	Field Technician: LBL

Well Volume

A. Well Depth (ft): 76.58	D. Well Volume (ft): 0.163 gal/ft	Depth/Height of Top of PVC: 1.08'
B. Depth to Water (ft): 65.29	E. Well Volume (gal) C*D): 1.84	Pump Type: torpedo (down hole)
C. Liquid Depth (ft) (A-B): 11.29	F. Three Well Volumes (gal) (E3): 5.52	Pump Intake Depth: bottom

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
~~0903~~ 0906	7.14	0.565	>1000	5.16	11.78	70	65.37	3.6	21.6
~~0908~~ 0911	7.09	0.565	241	4.93	11.49	-3	65.38	3.6	39.6
~~0913~~ 0916	7.06	0.565	>1000	5.40	11.50	-22	65.41	3.6	57.6
0921	7.06	0.567	195	5.43	11.60	-29	65.38	3.6	75.6
0926	7.09	0.561	>1000	5.34	11.85	-24	65.34	2.1	86.1
0931	7.13	0.560	122	5.46	11.91	-35	65.37	2.1	96.6
0936	7.15	0.564	>1000	5.63	12.30	-14	65.32	2.1	107.1
0941	7.17	0.561	812	5.57	10.98	-22	65.30	2.1	117.6
0946	7.14	0.561	>1000	4.92	11.75	-47	65.30	3.6	135.6
0951	7.11	0.556	>1000	5.34	11.71	-51	69.30	3.6	153.6
0956	7.09	0.553	>1000	5.41	11.68	-55	65.30	3.6	171.6
1001	7.14	0.559	>1000	5.46	11.81	-24	65.30	3.6	189.6
1006	7.12	0.559	>1000	5.39	11.76	-30	65.30	3.6	207.6
1011	7.14	0.558	>1000	5.17	11.63	-53	65.30	3.6	225.6
1016	7.08	0.561	>1000	5.	11.70	-31	65.30	3.6	243.6
				STOP	PURGE				

Total Quantity of Water Removed (gal): 64 gal Personnel: LBL

COMMENTS AND OBSERVATIONS: Surge @ 0913, 0922, 0933, 0944, 1009

Stopped purge @ 1016 due to full drum, resume purge once new drum is ready

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

MONITORING WELL DEVELOPMENT LOG

Well I.D.: MW-EVAL-01D	EA Personnel: M.Wright	Client: USACE
Location: Scotia Navy Depot	Well Condition: New No pad yet	Weather: 50 Sunny
Sounding Method: WLM	Gauge Date: 5/17/23 Gauge Time: 0845	Measurement Ref:
Stick Up/Down (ft): 0.89	PID Headspace Reading:	Well Diameter (in): 2

Purge Date: 5/17/23	Purge Time: 0900
Purge Method: Submersable pump	Field Technician: M. Wright

Well Volume

A. Well Depth (ft): 90.83	D. Well Volume (ft): 0.163	Depth/Height of Top of PVC: 0.89 (pre Flush mount)
B. Depth to Water (ft): 65.05	E. Well Volume (gal) C*D): 4.20	Pump Type: Torpedo
C. Liquid Depth (ft) (A-B): 25.78	F. Three Well Volumes (gal) (E3): 12.60	Pump Intake Depth: Bottom of well

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (mS/cm)	Turbidity (ntu)	DO (mg/L)	Temperature (°C)	ORP (mV)	DTW (ft btoc)	Rate (Lpm)	Volume (liters)
0904	7.32	0.533	>1000	5.99	12.27	-22	65.30	1.4	—
0909	7.14	0.544	273	2.95	11.57	-28	65.35	1.7	
0914	7.08	0.566	>1000	2.73	11.36	-41	65.50	1.7	
0919	7.06	0.541	187	2.29	11.54	-54	65.72	3.0	
0924	7.08	0.547	268	1.89	11.67	-117	65.51	2.2	
0929	7.13	0.551	120	1.78	11.82	-117	65.52	2.2	
0934	7.16	0.544	346	2.06	11.79	-112	65.52	2.0	
0939	7.18	0.547	524	2.05	11.83	-43	65.53	3.0	
0944	7.14	0.544	83.0	2.04	11.68	-118	65.53	3.0	
0949	7.14	0.541	78.6	2.07	11.69	-115	65.53	1.8	
0954	7.17	0.544	58.7	2.11	11.74	-113	65.53	2.5	
0959	7.14	0.545	19.5	2.04	11.72	-111	65.54	3.4	
1004	7.17	0.544	10.7	2.09	11.68	-115	65.54	3.4	
END	Development								

Total Quantity of Water Removed (gal): _____ Personnel: MWright

COMMENTS AND OBSERVATIONS: Surge at 0912, 0920, 0930, 0942, 0952

parameter stable will purge until NTU < 50

WELL PURGING AND SAMPLING RECORD

Site Name/Location Scotia Depot	Project No:	Page 1 of 2
Well ID MW-EVAL-04S	Date 6/12/23	Time 0905
Well Site Description grass near lay down		
Weather/Temp 64° sunny		
Field Technician MW CZ		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) NA	Screened Interval (ft bgs) 65-75
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 8

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 74.18	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 59.46
Product column height (ft) NA	Water column height (ft) 14.72
Product volume (Gallons) NA	Water volume (Gallons) 2.40

PURGE INFORMATION

Pump Type / ID Grundfos 051108	Water Quality Meter Type / ID Horiba 19565
Pump Intake Depth (ft) 70'	Flow-Thru Cell Volume (L) 1
Purge Start Time 0925	Appearance/Odor (Start) clear / NONE
Purge End Time 1050	Appearance/Odor (End)
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)	Total Pump Time (min) 85	

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)
6/12/23	0925	300	—	6.24	0.684	16.66	48	365	6.21	59.45
	0930	—	1.5	6.75	0.630	15.56	34	518	5.85	59.45
	0935	—	3.0	6.87	0.627	15.80	33	282	5.74	59.45
	0940	—	4.5	6.93	0.627	16.33	32	162	5.74	59.40
	0945	—	6.0	6.99	0.628	16.07	32	124	5.80	59.50
	0950	—	7.5	7.03	0.629	16.16	32	90.1	5.79	59.55
	0955	—	9.0	7.05	0.628	16.32	32	69.9	5.76	59.43
	1000	—	10.5	7.07	0.629	16.44	32	52.7	5.76	59.45
	1005	—	12	7.09	0.629	16.65	31	39.8	5.71	59.50
	1010	—	13.5	7.16	0.630	16.97	31	30	5.71	59.43
	1015	—	15	7.10	0.629	17.09	30	22.5	5.64	59.46

COMMENTS PID = 0.9 ppm

SAMPLE COLLECTION

Sample Date 6/12/23	Sample Time 1045
Sample ID	
QA/QC Collected / ID MS/MSD for VOC	Sample Appearance/Odor clear/NONE
Analyses VOC, MNA, & CSIA	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EVAL-045	Date 06/12/23	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)
06/12/23										
	1020	300	16.5	7.11	0.630	18.00	29	18.2	5.60	59.40
	1025	-	18	7.10	0.629	18.36	29	16.5	5.54	59.40
	1030	-	19.5	7.11	0.626	19.29	28	15.0	5.31	59.50
	1035	-	21	7.13	0.623	19.56	28	13.2	5.22	59.40
	1040	-	22.5	7.13	0.621	19.28	27	12.6	5.24	59.40
	1045	-	24	7.15	0.631	16.51	27	13.7	5.81	59.40

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time
Sample ID	
QA/QC Collected / ID SAME AS PAGE 1	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location Scotia Depot	Project No:	Page 1 of
Well ID MW-EVAL-04D	Date 6/12/23	Time 1105
Well Site Description grass near		
Weather/Temp 72 sun + clouds		
Field Technician MW CZ		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) NA	Screened Interval (ft bgs) 85-90
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 8

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 90.7	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 59.40
Product column height (ft) NA	Water column height (ft) 31.3
Product volume (Gallons) NA	Water volume (Gallons) 5.110

PURGE INFORMATION

Pump Type / ID Eco Sub	Water Quality Meter Type / ID Horiba
Pump Intake Depth (ft) 87.5	Flow-Thru Cell Volume (L) 1
Purge Start Time 1115	Appearance/Odor (Start) Turbid None
Purge End Time 1225	Appearance/Odor (End) Clear None
Average Purge Rate (mL/min)	Total Drawdown (ft) 0.10

Well Went Dry (Y/N) -	Stop Time -	Volume removed (L) -
Recovery Time -	Recovery Rate (mL/min) -	Restart Purge Time -
Total Volume Removed (L) 21	Total Pump Time (min) 70	

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)
06/12/23	1115	300	-	7.42	0.499	17.80	19	0.0	0.00	59.40
	1120	-	1.5	7.47	0.494	15.03	18	800	0.00	59.40
	1125	-	3.0	7.48	0.490	15.09	17	528	0.00	59.45
	1130	-	4.5	7.49	0.489	15.57	16	230	0.00	59.50
	1135	-	6.0	7.49	0.489	15.53	16	115	0.00	59.45
	1140	-	7.5	7.50	0.490	15.46	15	67.5	0.00	59.45
	1145	-	9.0	7.52	0.489	15.40	14	47.7	0.00	59.45
	1150	-	10.5	7.52	0.489	15.45	14	29.2	0.00	59.45
	1155	-	12	7.52	0.490	15.40	13	20.8	0.00	59.50
	1200	-	13.5	7.53	0.489	15.85	13	16.1	0.00	59.45
	1209	-	15	7.54	0.489	15.42	13	11.5	0.00	59.45

COMMENTS DO = 0.3 ppm

SAMPLE COLLECTION

Sample Date 6/12/23	Sample Time 1225
Sample ID FSND - MW-EVAL-04D	
QA/QC Collected / ID NONE	Sample Appearance/Odor Clear None
Analyses VOC, MNA, CSIA	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of
Well ID MW-EVAL-040	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)
06/12/24		300								
	1210	-	16.5	7.54	0.489	15.38	12	10.1	0.00	59.45
	1215	-	18	7.54	0.490	15.28	12	8.0	0.00	59.45
	1220	-	19.5	7.55	0.490	15.27	12	6.6	0.00	59.45
	1225	-	21	7.55	0.490	15.21	12	6.5	0.00	59.45

COMMENTS _____

SAMPLE COLLECTION

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

WELL PURGING AND SAMPLING RECORD

Site Name/Location Scotia Depot	Project No:	Page 1 of 1
Well ID MW-EVA-015	Date 6/12/23	Time 1430
Well Site Description grass near wall		
Weather/Temp 81 Sun		
Field Technician MW CZ		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) NA	Screened Interval (ft bgs) 65-75
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 8

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 76.21	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 61.90
Product column height (ft) NA	Water column height (ft) 14.31
Product volume (Gallons) NA	Water volume (Gallons) 2.

PURGE INFORMATION

Pump Type / ID Geo Sub	Water Quality Meter Type / ID Horiba
Pump Intake Depth (ft) 70'	Flow-Thru Cell Volume (L) 1
Purge Start Time 1440	Appearance/Odor (Start) Turbid Brn
Purge End Time 1545	Appearance/Odor (End) Clear Brn
Average Purge Rate (mL/min)	Total Drawdown (ft) 0.05

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

Total Volume Removed (L) 76	Total Pump Time (min) 65

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)
06/12/23	1440	400	-	7.41	0.579	20.03	13	800	6.81	61.75
	1445	-	2	7.44	0.588	15.38	21	755	5.48	61.75
	1450	-	4	7.38	0.587	15.97	22	395	5.33	61.80
	1455	-	6	7.39	0.590	15.95	23	223	5.53	61.80
	1500	-	8	7.35	0.590	15.93	24	154	5.49	61.80
	1505	-	10	7.32	0.590	16.28	25	96.0	5.47	61.80
	1510	-	12	7.41	0.573	16.53	23	58.9	5.78	61.80
	1515	-	14	7.36	0.587	15.93	25	42.7	5.63	61.8
	1520	-	16	7.32	0.590	15.93	27	26.7	5.62	61.8
	1525	-	18	7.31	0.590	16.27	27	18.1	5.62	61.8
	1530	-	20	7.31	0.590	16.53	27	12.7	5.61	61.8

COMMENTS PID = 1.2 ppm DUP for VOCs

SAMPLE COLLECTION

Sample Date 6/12/23	Sample Time 1545
Sample ID FSND-MW-EVA-015-06122023	
QA/QC Collected / ID ~~----~~ Dup VOC	Sample Appearance/Odor Clear Brn
Analyses VOC, MNA	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of
Well ID MW-EMAL-015	Date 06/12/23	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)
06/12/23		400								
	1535	-	22	7.31	0.590	16.43	27	9.6	5.64	61.80
	1540	-	24	7.31	0.590	16.34	27	7.8	5.61	61.80
	1545	-	26	7.31	0.590	16.44	27	6.9	5.62	61.80

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time 1545
Sample ID	
QA/QC Collected / ID	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Scotia Depot	Project No:	Page 1 of 1
Well ID	MW-EVAL-035	Date 06/12/23	Time 1320
Well Site Description	grass near laydown		
Weather/Temp	72 sun + clouds		
Field Technician	MW CZ		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	NA	Screened Interval (ft bgs)	70-80
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	8

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	80.70	Gallons per foot of depth	0.163
Depth to product (ft)	NA	Static water level (ft)	61.50
Product column height (ft)	NA	Water column height (ft)	19.2
Product volume (Gallons)	NA	Water volume (Gallons)	3.13

PURGE INFORMATION

Pump Type / ID	Geosub	Water Quality Meter Type / ID	Horiba
Pump Intake Depth (ft)	75	Flow-Thru Cell Volume (L)	1
Purge Start Time	1325	Appearance/Odor (Start)	Clear none
Purge End Time	1355	Appearance/Odor (End)	Clear None
Average Purge Rate (mL/min)	300	Total Drawdown (ft)	0.05
Well Went Dry (Y/N)	N	Stop Time	—
Recovery Time	—	Recovery Rate (mL/min)	—
Total Volume Removed (L)	9	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)
06/12/23	1325	300	—	7.64	0.619	14.42	12	138	0.00	61.5
	1330	—	1.5	7.55	0.619	14.70	13	79.7	0.00	61.45
	1335	—	3.0	7.50	0.620	14.89	15	26.2	0.42	61.5
	1340	—	4.5	7.48	0.618	14.89	17	12.4	0.55	61.5
	1345	—	6.0	7.47	0.617	14.91	17	8.0	0.47	61.55
	1350	—	7.5	7.48	0.614	14.97	18	4.5	0.54	61.55
	1355	—	9.0	7.49	0.612	15.08	18	3.1	0.59	61.55

COMMENTS _____

SAMPLE COLLECTION

Sample Date	6/12/23	Sample Time	1355
Sample ID	FSND-MW-EVAC-035		
QA/QC Collected / ID	NONE	Sample Appearance/Odor	Clear/None
Analyses	VOC, MNA, CSIA		
Sampler	MW CZ	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 1 of 2
Well ID MW-32	Date 6/12	Time 1625
Well Site Description grass near wall		
Weather/Temp 81 clouds		
Field Technician MW CZ		

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) 92.73	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 61.80
Product column height (ft) NA	Water column height (ft) 30.93
Product volume (Gallons) NA	Water volume (Gallons) 5.04

PURGE INFORMATION

Pump Type / ID Grosa Lo 051108	Water Quality Meter Type / ID Horiba 19565
Pump Intake Depth (ft) 87'	Flow-Thru Cell Volume (L) 1
Purge Start Time 1610	Appearance/Odor (Start) Clear None
Purge End Time 1740	Appearance/Odor (End) Clear None
Average Purge Rate (mL/min)	Total Drawdown (ft) 0

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

Total Volume Removed (L) 21	Total Pump Time (min) 70

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)
6/12/23	1630	300	–	7.73	0.251	20.79	13	12.4	0.75	61.8
	1635	–	1.5	7.58	0.393	16.76	21	31.6	0.00	61.8
	1640	–	3.0	7.56	0.500	15.85	8	33.2	0.00	61.8
	1645	–	4.5	7.55	0.509	16.10	-12	34.5	0.00	61.8
	1650	–	6.0	7.56	0.504	15.86	-46	37.7	0.00	61.8
	1655	–	7.5	7.56	0.498	15.83	-77	34.9	0.00	61.80
	1700	–	9.0	7.57	0.491	15.84	-111	27.2	0.00	61.80
	1705	–	10.5	7.57	0.487	15.73	-131	22.1	0.00	61.8
	1710	–	12	7.57	0.482	15.71	-149	17.3	0.00	61.8
	1715	–	13.5	7.57	0.481	15.69	-158	15.7	0.00	61.8
	1720	–	15	7.58	0.478	15.68	-169	12.9	0.00	61.8

COMMENTS PID = 0.5

SAMPLE COLLECTION

Sample Date 6/12/23	Sample Time 1740
Sample ID FSNO-MW-32-06122023	
QA/QC Collected / ID None	Sample Appearance/Odor Clear None
Analyses CSIA	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-32	Date	Time
Well Site Description		
Weather/Temp		
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)
060 12/23		300								
	1725	-	16.5	7.58	0.477	15.56	-177	11	0.00	61.80
	1730	-	18	7.58	0.476	15.52	-184	8.4	0.00	61.80
	1735	-	19.5	7.58	0.474	15.53	-192	6.5	0.00	61.8
	1740	-	21	7.58	0.475	15.43	-194	5.5	0.00	61.8

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time 1740
Sample ID	
QA/QC Collected / ID	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Scotia Navy Depot	Project No: 160530104	Page 1 of 1
Well ID	MW-06	Date 06/13/23	Time 0740
Well Site Description	South end of site		
Weather/Temp	60°F Cloudy		
Field Technician	MW CL		

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)	73	Gallons per foot of depth	0.163
Depth to product (ft)	NA	Static water level (ft)	62.4
Product column height (ft)	NA	Water column height (ft)	10.6
Product volume (Gallons)	NA	Water volume (Gallons)	1.72

PURGE INFORMATION

Pump Type / ID	GeoSub 051108	Water Quality Meter Type / ID	Horiba 19565
Pump Intake Depth (ft)	63.5	Flow-Thru Cell Volume (L)	1
Purge Start Time	0750	Appearance/Odor (Start)	Clear None
Purge End Time	0820	Appearance/Odor (End)	Clear None
Average Purge Rate (mL/min)	300	Total Drawdown (ft)	0

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			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)
06/13/23	0750	300	-	5.51	0.652	16.41	72	4.1	8.51	62.4
	0755	-	1.5	6.17	0.602	16.50	40	0.0	7.40	62.35
	0800	-	3.0	6.34	0.603	16.08	32	0.0	7.56	62.4
	0805	-	4.5	6.48	0.609	15.93	30	1.9	7.76	62.35
	0810	-	6.0	6.56	0.614	15.91	30	6.3	7.94	62.35
	0815	-	7.5	6.63	0.612	15.86	29	2.2	7.82	62.4
	0820	-	9.0	6.66	0.613	15.87	28	0.3	7.75	62.4

COMMENTS PID: 0.00 ppm

SAMPLE COLLECTION

Sample Date	6/13/23	Sample Time	0820
Sample ID	FSNO-MW-6-06132023		
QA/QC Collected / ID	None	Sample Appearance/Odor	Clear None
Analyses	VOC MNA CSIA		
Sampler	MW CL	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location: Scotia Navy Depot	Project No: 160534001	Page 1 of 2
Well ID: MW-22R	Date: 6/13/23	Time: 0855
Well Site Description: Grass Field		
Weather/Temp: 61 clouds		
Field Technician: MW CZ		

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): 79.01	Gallons per foot of depth: 0.163
Depth to product (ft): NA	Static water level (ft): 66.21
Product column height (ft): NA	Water column height (ft): 12.8
Product volume (Gallons): NA	Water volume (Gallons): 2.01

PURGE INFORMATION

Pump Type / ID: Geo sub 051108		Water Quality Meter Type / ID: Horiba 19565
Pump Intake Depth (ft): 70.5		Flow-Thru Cell Volume (L): 1
Purge Start Time: 0900		Appearance/Odor (Start): Turbid None
Purge End Time: 1005		Appearance/Odor (End): Clear None
Average Purge Rate (mL/min): 400		Total Drawdown (ft): 0.1
Well Went Dry (Y/N): —	Stop Time: —	Volume removed (L): —
Recovery Time: —	Recovery Rate (mL/min): —	Restart Purge Time: —
Total Volume Removed (L): 26		Total Pump Time (min): 65

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)
06/13/23	0900	400	—	6.95	0.516	18.93	24	800	5.41	66.2
	0905	—	2	7.00	0.488	18.66	22	800	4.78	66.2
	0910	—	4	6.97	0.495	18.28	20	735	5.10	66.3
	0915	—	6	6.95	0.498	18.04	19	501	5.16	66.3
	0920	—	8	6.94	0.501	17.92	18	398	5.10	66.2
	0925	—	10	6.94	0.504	17.87	18	331	5.07	66.2
	0930	—	12	6.94	0.506	17.86	17	249	4.89	66.25
	0935	—	14	6.94	0.509	17.89	17	239	4.93	66.2
	0940	—	16	6.94	0.509	17.97	17	162	4.80	66.2
	0945	—	18	6.94	0.509	18.09	16	119	4.67	66.2
	0950	—	20	6.95	0.508	18.24	16	110	4.61	

COMMENTS: PID= 0.1 ppm

SAMPLE COLLECTION

Sample Date: 6/13/23	Sample Time: 1005
Sample ID: FSND-MW-22R-06132023	
QA/QC Collected / ID: NA	Sample Appearance/Odor: Clear None
Analyses: VOC MNA CSIA	
Sampler: MW CZ	Signature:

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of
Well ID MW - 22R	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)
06 13/23		400								
	0955	-	22	6.95	0.507	15.38	16	78.1	4.57	66.2
	1000	-	24	6.95	0.507	15.45	15	75.5	4.47	66.2
	1005	-	26	6.95	0.507	15.40	16	70.5	4.56	66.2

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time 1605
Sample ID	
QA/QC Collected / ID	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Scotia Navy Depot	Project No:	Page 1 of
Well ID	MW-08	Date 06/13/23	Time 1045
Well Site Description	NeFab near storage boxes		
Weather/Temp	60°F & Cloudy		
Field Technician	MW CZ		

WELL CONSTRUCTION DATA

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

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	76.92	Gallons per foot of depth	0.163
Depth to product (ft)	~~67.5~~ NA	Static water level (ft)	66.12
Product column height (ft)	NA	Water column height (ft)	10.80
Product volume (Gallons)	NA	Water volume (Gallons)	1.76

PURGE INFORMATION

Pump Type / ID		Water Quality Meter Type / ID	Horiba U52G
Pump Intake Depth (ft)	67.5	Flow-Thru Cell Volume (L)	/
Purge Start Time	1050	Appearance/Odor (Start)	Turbid None
Purge End Time	1215	Appearance/Odor (End)	Clear None
Average Purge Rate (mL/min)	300	Total Drawdown (ft)	0
Well Went Dry (Y/N)	-	Stop Time	-
Recovery Time	/	Recovery Rate (mL/min)	/
Total Volume Removed (L)	25.5	Total Pump Time (min)	85

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)
06/13/23	1050	300	-	7.30	0.507	19.58	0	736	7.83	66.1
	1055	-	1.5	7.21	0.499	18.88	2	709	6.03	66.1
	1100	-	3.0	7.17	0.512	18.10	3	560	5.95	66.1
	1105	-	4.5	7.18	0.513	18.19	3	380	6.43	66.1
	1110	-	6.0	7.16	0.511	18.19	4	205	5.93	66.1
	1115	-	7.5	7.14	0.509	18.14	5	107	6.19	66.1
	1120	-	9.0	7.13	0.508	18.54	6	87.2	5.91	66.1
	1125	-	10.5	7.13	0.506	18.65	7	63.5	5.69	66.1
	1130	-	12	7.12	0.512	18.28	7	44.8	5.25	66.1
	1135	-	13.5	7.12	0.519	18.40	8	31.1	5.18	66.1
	1140	-	15	7.12	0.520	18.74	8	24.5	5.64	66.1

COMMENTS PID : 0.1 ppm

SAMPLE COLLECTION

Sample Date	6/13/23	Sample Time	1215
Sample ID	FSDO-MW-8-06132023		
QA/QC Collected / ID	DUP for VOC	Sample Appearance/Odor	Clear None
Analyses	VOC		
Sampler	MW	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of
Well ID MW - 08	Date 06/13/23	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)
06/13/23		200								
	1145	–	16.5	7.12	0.514	19.72	8	21.3	5.39	6.6.1
	~~1150~~	~~–~~	~~15~~	~~6.94~~						
	1150	–	18	7.17	0.518	20.32	8	70.9	5.80	6.6.1
	1155	–	19.5	7.16	0.495	19.56	10	64.3	5.85	6.6.1
	1200	–	21	7.14	0.508	19.33	11	54.6	6.02	6.6.1
	1205	–	22.5	7.13	0.504	19.32	12	33.1	5.79	6.6.1
	1210	–	24	7.13	0.504	19.21	13	36.0	5.77	6.6.1
	1215	–	25.5	7.13	0.504	19.11	13	34.8	5.71	6.6.1

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time 1215
Sample ID	
QA/QC Collected / ID	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location Scotia Navy Depot	Project No: 160730104	Page	of 2
Well ID MW-18	Date 06/13/23	Time	1237
Well Site Description Near cheese place			
Weather/Temp 60°F partly cloudy			
Field Technician MW CZ			

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) 73.84	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 62.31
Product column height (ft) NA	Water column height (ft) 11.53
Product volume (Gallons) NA	Water volume (Gallons) 1.88

PURGE INFORMATION

Pump Type / ID Grosub 051108	Water Quality Meter Type / ID Horiba 19565
Pump Intake Depth (ft) 67.5	Flow-Thru Cell Volume (L) 1
Purge Start Time 1240	Appearance/Odor (Start) Turbid None
Purge End Time 1355	Appearance/Odor (End) Clear None
Average Purge Rate (mL/min) 300	Total Drawdown (ft) 0

Well Went Dry (Y/N) –	Stop Time –	Volume removed (L) –
Recovery Time –	Recovery Rate (mL/min) –	Restart Purge Time –
Total Volume Removed (L) 22.5	Total Pump Time (min) 75	

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)
06/13/23	1240	300	–	7.30	0.533	21.00	7	195	4.46	62.3
	1245	–	1.5	7.12	0.518	19.13	13	135	3.19	62.3
	1250	–	3.0	7.05	0.520	19.35	16	122	2.59	62.3
	1255	–	4.5	7.03	0.517	19.38	18	115	2.56	62.3
	1300	–	6.0	7.02	0.516	19.22	19	85.5	2.10	62.3
	1305	–	7.5	7.02	0.517	19.24	20	59.5	2.52	62.3
	1310	–	9.0	7.01	0.514	19.34	21	38.1	2.76	62.3
	1315	–	10.5	7.01	0.511	19.64	22	45.0	2.70	62.3
	1320	–	12	7.01	0.510	19.63	22	34.8	2.66	62.3
	1325	–	13.5	7.01	0.510	19.58	23	26.2	2.67	62.3
	1330	–	15	7.01	0.510	19.53	23	31.7	2.71	62.3

COMMENTS PID - 0.5 ppm

SAMPLE COLLECTION

Sample Date 6	Sample Time 1355
Sample ID FSNP-MW-18-06132023	
QA/QC Collected / ID NA	Sample Appearance/Odor Clear None
Analyses VOC	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of
Well ID MW-18	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)
04/13/23		300								
	1335	—	16.5	7.00	0.511	19.58	23	24.8	2.60	62.3
	1340	—	18	7.00	0.515	19.36	24	17.6	2.56	62.3
	1345	—	19.5	7.00	0.515	19.43	24	8.4	2.55	62.3
	1350	—	21	7.00	0.514	19.55	24	0.1	2.60	62.3
	1355	—	22.5	7.00	0.513	19.57	24	4.5	2.48	62.3

COMMENTS _____

SAMPLE COLLECTION

Sample Date	Sample Time 1355
Sample ID	
QA/QC Collected / ID	Sample Appearance/Odor
Analyses	
Sampler	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location Scotia Navy Depot	Project No: 160539/04	Page 1 of 1
Well ID MW-33	Date 06/13/23	Time 1410
Well Site Description grass near wall + pond		
Weather/Temp 65 clouds		
Field Technician MW CZ		

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) 92.35	Gallons per foot of depth 0.163
Depth to product (ft) NA	Static water level (ft) 61.79
Product column height (ft) NA	Water column height (ft) 30.56
Product volume (Gallons) NA	Water volume (Gallons) 4.98

PURGE INFORMATION

Pump Type / ID Grosab 05/108	Water Quality Meter Type / ID Horiba 19565
Pump Intake Depth (ft) 87	Flow-Thru Cell Volume (L) 1
Purge Start Time 1415	Appearance/Odor (Start) clear none
Purge End Time 1450	Appearance/Odor (End) clear none
Average Purge Rate (mL/min) 300	Total Drawdown (ft) 0.16

Well Went Dry (Y/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)
06/13/23	1415	300	-	7.23	0.513	22.20	15	20.2	3.74	61.79
	1420	-	1.5	7.17	0.507	18.23	19	80.1	3.17	61.65
	1425	-	3.0	7.15	0.512	17.60	19	37.5	3.01	61.75
	1430	-	4.5	7.14	0514	17.49	20	25.5	3.00	61.9
	1435	-	6.0	7.14	0.513	17.33	21	10.3	2.91	61.9
	1440	-	7.5	7.13	0.514	17.27	21	3.0	2.89	62
	1445	-	9.0	7.13	0.513	17.17	22	0.0	2.78	61.9
	1450	-	10.5	7.13	0.514	17.02	22	0.0	2.80	61.95

COMMENTS PID - 0.16 ppm

SAMPLE COLLECTION

Sample Date 6/13/23	Sample Time 1450
Sample ID FSND-MW-33-06132023	
QA/QC Collected / ID NA	Sample Appearance/Odor clear none
Analyses CSIA	
Sampler MW CZ	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location Former Scotia Navy Depot	Project No: 160530104	Page 1	of 2
Well ID MW-EVAL-03D	Date 6/12/23	Time 1000	
Well Site Description near road			
Weather/Temp 72 F, cloudy			
Field Technician LBL, MR			

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) ✓	Screened Interval (ft bgs) 130-135
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 6"

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 135.01	Gallons per foot of depth 0.163 gal/ft
Depth to product (ft) N/A	Static water level (ft) 61.62
Product column height (ft) N/A	Water column height (ft) 73.39
Product volume (Gallons) N/A	Water volume (Gallons) 11.96

PURGE INFORMATION

Pump Type / ID GeoSub 2 / 50053		Water Quality Meter Type / ID Horiba U-52 / 51894
Pump Intake Depth (ft) 132.5		Flow-Thru Cell Volume (L)
Purge Start Time 1010		Appearance/Odor (Start) cloudy, colorless, odorless
Purge End Time 1125		Appearance/Odor (End) clear colorless odorless
Average Purge Rate (mL/min) 0.3		Total Drawdown (ft) 0.0
Well Went Dry (Y/N) N	Stop Time N/A	Volume removed (L) N/A
Recovery Time N/A	Recovery Rate (mL/min) N	Restart Purge Time N/A
Total Volume Removed (L) 22.5		Total Pump Time (min) 75

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)
6/12	1015	0.3	1.5	7.77	0.422	19.30	-138	335	0.11	61.83
	1020		3.0	7.98	0.420	19.58	-148	311	0.00	61.83
	1025		4.5	8.04	0.419	19.68	-149	288	0.00	61.83
	1030		6.0	8.09	0.414	19.83	-150	273	0.00	61.83
	1035		7.5	8.14	0.418	19.91	-150	237	0.00	61.83
	1040		9.0	8.16	0.417	19.94	-151	200	0.00	61.83
	1045		10.5	8.18	0.341	21.99	-96	96.6	0.00	61.83
	1050		12.0	8.20	0.391	22.03	-118	88.7	0.00	61.83
	1055		13.5	8.21	0.393	22.05	-128	85.2	0.00	61.83
	1100		15.0	8.22	0.394	22.18	-134	79.6	0.00	61.83
	1105		16.5	8.25	0.394	22.14	-85	20.0	0.00	61.83

COMMENTS Horiba disconnected + flushed at 10:40 and 11:00

SAMPLE COLLECTION

Sample Date 6/12/23	Sample Time 1125
Sample ID FSND-MW-EVAL-03-06122023	
QA/QC Collected / ID	Sample Appearance/Odor clear colorless odorless
Analyses VOCs, CSIA, TOC, AIR, Anions, Dis. TAL metals, Tot. TAL Metals	
Sampler LBL, MR	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EVAL-03D	Date	Time
Well Site Description		
Weather/Temp		
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)
6/12	1110	0.3	18.0	8.24	0.395	23.34	-114	18.7	0.00	61.83
"	1115	"	19.5	8.24	0.394	22.47	-122	17.8	0.00	61.83
"	1120	"	21.0	8.24	0.393	23.65	-128	17.5	0.00	61.83
"	1125	"	22.5	8.24	0.392	22.86	-132	16.4	0.00	61.83

see pg. 1

COMMENTS _____

see pg. 1

SAMPLE COLLECTION

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

WELL PURGING AND SAMPLING RECORD

Site Name/Location Former Scotia Navy Depot	Project No: 160530104	Page 1 of 2
Well ID MW-EVAL-01D	Date 6/13/23	Time 0730
Well Site Description near power pole + pond		
Weather/Temp 58° F, cloudy		
Field Technician LBL, MR		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	Screened Interval (ft bgs) 85-90
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 89.78	Gallons per foot of depth 0.163
Depth to product (ft) N/A	Static water level (ft) 61.99
Product column height (ft) N/A	Water column height (ft) 27.79
Product volume (Gallons) N/A	Water volume (Gallons) 4.53

PURGE INFORMATION

Pump Type / ID Grundfos / 214811	Water Quality Meter Type / ID Horiba U-52 / 51894
Pump Intake Depth (ft) ~~84.78~~ 87.5	Flow-Thru Cell Volume (L)
Purge Start Time 0750	Appearance/Odor (Start) clear, colorless, odorless
Purge End Time 0850	Appearance/Odor (End) clear, colorless, odorless
Average Purge Rate (mL/min) 0.3	Total Drawdown (ft) 0.02

Well Went Dry (Y/N) N	Stop Time N/A	Volume removed (L) N/A
Recovery Time N/A	Recovery Rate (mL/min) N/A	Restart Purge Time N/A
Total Volume Removed (L) 18.0	Total Pump Time (min) 60	

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)
6/13	0755	0.3	1.5	7.27	0.428	16.08	3	53.6	8.50	62.05
	0800		3.0	7.61	0.431	15.68	-82	49.3	8.13	62.07
	0805		4.5	7.78	0.442	15.46	-110	53.8	7.86	62.07
	0810		6.0	7.91	0.443	16.21	-128	37.6	7.46	62.07
	0815		7.5	7.96	0.444	16.27	-136	36.2	7.19	62.07
	0820		9.0	7.99	0.445	16.29	-140	31.2	6.97	62.07
	0825		10.5	8.02	0.446	16.30	-144	22.3	6.69	62.07
	0830		12.0	8.04	0.448	16.31	-147	21.0	6.38	62.07
	0835		13.5	8.05	0.449	16.34	-149	14.9	6.16	62.07
	0840		15.0	8.06	0.454	16.33	-151	4.4	5.89	62.07
	0845		16.5	8.08	0.456	16.32	-153	4.3	5.55	62.07

COMMENTS _____

SAMPLE COLLECTION

Sample Date 6/13/23	Sample Time 0850
Sample ID FSND-MW-EVAL-01D-06132023	
QA/QC Collected / ID ~~FD-02 (MR)~~	Sample Appearance/Odor clear, colorless, odorless
Analyses VOC, TOC, CSIA, MNA Parameters	
Sampler LBL	Signature LBL

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EVAL-01D	Date	Time
Well Site Description		
Weather/Temp		
Field Technician		

WELL CONSTRUCTION DATA

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

see pg. 1

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)
6/13	0850	0.3	18.0	8.04	0.457	16.31	-154	4.27	5.33	62.07

COMMENTS _____

see pg. 1

SAMPLE COLLECTION

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

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Former Scotia Navy Depot	Project No: 60530104	Page 1 of 2
Well ID	MW-EVAL-02D	Date 6/13/23	Time 0925
Well Site Description	field		
Weather/Temp	61°F, cloudy		
Field Technician	LBL, MR		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	✓	Screened Interval (ft bgs)	91-96
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	95.97	Gallons per foot of depth	0.163
Depth to product (ft)	N/A	Static water level (ft)	66.02
Product column height (ft)	N/A	Water column height (ft)	29.95
Product volume (Gallons)	N/A	Water volume (Gallons)	4.88

PURGE INFORMATION

Pump Type / ID	Grundfos / 214811	Water Quality Meter Type / ID	Horiba U-52 / 51894
Pump Intake Depth (ft)	93.5	Flow-Thru Cell Volume (L)	
Purge Start Time	0935	Appearance/Odor (Start)	clear colorless odorless
Purge End Time	1100	Appearance/Odor (End)	clear colorless odorless
Average Purge Rate (mL/min)		Total Drawdown (ft)	0.0

Well Went Dry (Y/N)	N	Stop Time	N/A	Volume removed (L)	N/A
Recovery Time	N/A	Recovery Rate (mL/min)	N/A	Restart Purge Time	N/A
Total Volume Removed (L)	25.5			Total Pump Time (min)	85

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)
6/13	0940	0.3	1.5	8.14	0.457	17.62	81	>1000	0.00	66.06
	0945		3.0	8.14	0.464	17.04	-23	>1000	0.00	66.06
	0950		4.5	8.13	0.481	17.29	-40	>1000	0.00	66.06
	0955		6.0	8.20	0.481	17.69	-35	524	1.51	66.06
	1000		7.5	8.16	0.476	17.78	-10	490	0.08	66.06
	1005		9.0	8.14	0.478	17.68	-34	269	0.00	66.06
	1010		10.5	8.13	0.478	17.76	-38	160	0.01	66.06
	1015		12.0	8.13	0.479	17.83	-39	104	0.00	66.06
	1020		13.5	8.13	0.479	17.89	-40	76.6	0.00	66.06
	1025		15.0	8.13	0.479	18.00	-40	57.7	0.00	66.06
	1030		16.5	8.13	0.484	17.58	-40	37.5	0.00	66.06

COMMENTS Horiba flow through cell flushed @ 0950
PID: 0.0 ppm

SAMPLE COLLECTION

Sample Date	6/13/23	Sample Time	1100
Sample ID	FSND-MW-EVAL-02D-06132023		
QA/QC Collected / ID		Sample Appearance/Odor	clear colorless odorless
Analyses	VOCs, CSIA, MNA		
Sampler	LBL, MR	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EVAL-02D	Date	Time
Well Site Description		
Weather/Temp		
Field Technician		

WELL CONSTRUCTION DATA

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

see pg. 1

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)
6/13	1035	0.3	18.0	8.13	0.482	17.84	-41	32.5	0.00	66.06
"	1040	"	19.5	8.13	0.481	17.94	-41	23.7	0.00	66.06
"	1045	"	21	8.13	0.480	18.02	-41	20.6	0.00	66.06
"	1050	"	22.5	8.13	0.479	18.09	-41	16.9	0.00	66.06
"	1055	"	24.0	8.13	0.479	18.08	-42	16.3	0.00	66.06
"	1100	"	25.5	8.13	0.480	18.08	-42	16.8	0.00	66.06

COMMENTS _____

see pg. 1

SAMPLE COLLECTION

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

WELL PURGING AND SAMPLING RECORD

Site Name/Location FSNJ	Project No: 160530104	Page 1 of 2
Well ID MW-EVAL-025	Date 6/13/23	Time 1210
Well Site Description Field		
Weather/Temp 62°F, cloudy		
Field Technician LBL, MR		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) -	Screened Interval (ft bgs) 70-80
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 81.05	Gallons per foot of depth 0.163
Depth to product (ft) N/A	Static water level (ft) 65.96
Product column height (ft) N/A	Water column height (ft) 15.09
Product volume (Gallons) N/A	Water volume (Gallons) 2.46

PURGE INFORMATION

Pump Type / ID Grundfos / 214811	Water Quality Meter Type / ID Horiba U-52 / 51894
Pump Intake Depth (ft) 76	Flow-Thru Cell Volume (L) 1
Purge Start Time 1215	Appearance/Odor (Start) cloudy, tan, odorless
Purge End Time 1315	Appearance/Odor (End) clear colorless odorless
Average Purge Rate (mL/min) 0.3	Total Drawdown (ft) 0.0

Well Went Dry (Y/N) N	Stop Time N/A		Volume removed (L) N/A		
Recovery Time N/A	Recovery Rate (mL/min) N/A		Restart Purge Time N/A		
Total Volume Removed (L) 18.0			Total Pump Time (min) 60		

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)
6/13	1220	0.3	1.5	7.67	0.765	17.40	-44	>1000	0.18	66.00
	1225		3.0	7.56	0.786	17.60	-62	962	0.00	66.00
	1230		4.5	7.52	0.781	18.17	-68	790	0.00	66.00
	1235		6.0	7.54	0.765	18.66	-53	459	0.04	66.00
	1240		7.5	7.46	0.772	18.66	-65	232	0.00	66.00
	1245		9.0	7.50	0.771	18.80	-67	87.7	0.00	66.00
	1250		10.5	7.50	0.771	18.81	-69	53.8	0.00	66.00
	1255		12.0	7.50	0.772	18.71	-69	31.0	0.00	66.00
	1300		13.5	7.50	0.772	18.65	-70	19.0	0.00	66.00
	1305		15.0	7.50	0.773	18.71	-71	12.0	0.00	66.00
	1310		16.5	7.50	0.773	18.80	-72	11.7	0.00	66.00

COMMENTS Flushed at 1230
PID = 0.0 ppm

SAMPLE COLLECTION

Sample Date 6/13/23	Sample Time 1315
Sample ID FSNJ-MW-EVAL-025-06132023	
QA/QC Collected / ID N/A	Sample Appearance/Odor clear colorless odorless
Analyses VOC, MNA	
Sampler LBL, MR	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EVAL-02S	Date	Time
Well Site Description		
Weather/Temp		
Field Technician		

WELL CONSTRUCTION DATA

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

See pg. 1

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)
6/13	1315	0.3	18.0	7.51	0.770	18.83	-72	11.5	0.00	66.00

COMMENTS _____

See pg. 1

SAMPLE COLLECTION

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

WELL PURGING AND SAMPLING RECORD

Site Name/Location FSNO	Project No: 160530104	Page 1 of
Well ID MW-30	Date 6/13/23	Time 1400
Well Site Description downgradient of wall		
Weather/Temp 70 F, sunny		
Field Technician LBL, MR		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl) /	Screened Interval (ft bgs) 82-92
Well Diameter (in.) 2	Nominal Borehole Diameter (in.) 6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft) 91.40	Gallons per foot of depth 0.163
Depth to product (ft) N/A	Static water level (ft) 63.28
Product column height (ft) N/A	Water column height (ft) 28.12
Product volume (Gallons) N/A	Water volume (Gallons) 4.58

PURGE INFORMATION

Pump Type / ID Grundfos / 214811		Water Quality Meter Type / ID Horiba U-52 / 51894
Pump Intake Depth (ft) 86.4		Flow-Thru Cell Volume (L) 1
Purge Start Time 1410		Appearance/Odor (Start) clear NONE
Purge End Time 1455		Appearance/Odor (End) clear NONE
Average Purge Rate (mL/min) 0.3		Total Drawdown (ft) 0
Well Went Dry (Y/N) N	Stop Time N/A	Volume removed (L) N/A
Recovery Time N/A	Recovery Rate (mL/min) N/A	Restart Purge Time N/A
Total Volume Removed (L) 13.5		Total Pump Time (min) ~~40~~ 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)
6/13	1415	0.3	1.5	8.41	0.334	19.00	-143	>1000	0.22	63.41
	1420		3.0	8.67	0.277	17.61	-214	203	0.00	63.41
	1425		4.5	8.44	0.242	16.33	-181	77.1	0.00	63.41
	1430		6.0	9.14	0.232	16.02	-210	57.0	0.00	63.41
	1435		7.5	9.21	0.232	15.49	-218	0.0	0.00	63.41
	1440		9.0	9.27	0.230	15.11	-225	0.0	0.00	63.41
	1445		10.5	9.30	0.229	15.09	-229	0.0	0.00	63.41
	1450		12.0	9.32	0.229	15.05	-232	0.0	0.00	63.41
	1455		13.5	9.33	0.230	15.07	-234	0.0	0.00	63.41

COMMENTS Flushed at 1420.
PID = 0.0 ppm

SAMPLE COLLECTION

Sample Date 6/13/23	Sample Time 1455
Sample ID FSNO-MW-30-06132023	
QA/QC Collected / ID N/A	Sample Appearance/Odor clear NONE
Analyses CSIA	
Sampler LBL, MR	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location FSND	Project No: 160530104	Page 1	of 2
Well ID MW-3D	Date 6/13/23	Time 1520	
Well Site Description field, upgradient of wall			
Weather/Temp 72F, cloudy			
Field Technician LBL, MR			

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	-	Screened Interval (ft bgs)	82-92
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	90.93	Gallons per foot of depth	0.163
Depth to product (ft)	N/A	Static water level (ft)	62.16
Product column height (ft)	N/A	Water column height (ft)	29.17
Product volume (Gallons)	N/A	Water volume (Gallons)	4.75

PURGE INFORMATION

Pump Type / ID Grundfos / 214811		Water Quality Meter Type / ID Horiba U-52 / 51894	
Pump Intake Depth (ft)	87'	Flow-Thru Cell Volume (L)	1
Purge Start Time 1525		Appearance/Odor (Start)	clear colorless, odorless
Purge End Time 1555		Appearance/Odor (End)	clear colorless, odorless
Average Purge Rate (mL/min)	0.3	Total Drawdown (ft)	0.0
Well Went Dry (Y/N) N	Stop Time N/A	Volume removed (L)	N/A
Recovery Time N/A	Recovery Rate (mL/min) N/A	Restart Purge Time	N/A
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)
6/13	1530	0.3	1.5	6.38	0.442	14.51	-148	6.5	0.00	62.49
	1535		3.0	8.28	0.448	14.94	-161	8.4	0.00	62.49
	1540		4.5	8.26	0.450	15.05	-168	4.8	0.00	62.49
	1545		6.0	8.25	0.450	15.07	-172	0.0	0.00	62.49
	1550		7.5	8.25	0.451	15.03	-176	0.0	0.00	62.49
	1555		9.0	8.26	0.450	15.07	-179	0.0	0.00	62.49

COMMENTS PID=0.0 ppm

SAMPLE COLLECTION

Sample Date 6/13/23		Sample Time 1555	
Sample ID FSND-MW-3D-06132023			
QA/QC Collected / ID N/A		Sample Appearance/Odor	clear colorless odorless
Analyses CSIA			
Sampler LBL, MR		Signature	

Appendix C

Waste Manifests

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Waste Management Green Ridge LF
424 Peters Rd
Gansevoort, NY, 12831
Ph: (518) 636-2141

Reprint
Ticket# 121955

Customer Name	LANDREMEDIATION-126656NY LAND	Carrier	WM WASTE MANAGEMENT		
Ticket Date	07/20/2023	Vehicle#	408811	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0000513		
State Waste Code		Gen EPA ID			
Manifest	001				
Destination		Grid	I 25 LIFT 1		
Profile	126656NY (NON-HAZARDOUS DRILL CUTTINGS (INVESTIGATION DERIVE))				
Generator	190-USGSAGLENVILLE U.S. General Services Administration				

	Time	Scale	Operator	Inbound		
In	07/20/2023 11: Inbound	SD #605115			Gross	50780 lb
Out	07/20/2023 11: Outbound	SD #605115			Tare	35060 lb
					Net	15720 lb
					Tons	7.86

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil RCG-Tons	100	7.86	Tons				SCH

Total Tax

Driver`s Signature

Total Ticket

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
			001

GENERATOR

5. Generator's Name and Mailing Address
US General Services Administration
302 B St, Glenville NY 12302
Generator's Phone: David Baker 212-577-7926

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Waste Management — U.S. EPA ID Number: 4A-162

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
WM of NY Green Ridge RDF
424 Peters Rd., Gansevoort, NY 12831
Facility's Phone: 518-636-2141
U.S. EPA ID Number: NY State Facility ID # 5-4146-00018/00009

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-Hazardous Drill Cuttings Profile # 126656 NY	1	RO	15	T	ESTIMATED
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
In Case of Emergency
Keith Decker 518 229-7214
Profile # 126656 NY

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Keith Decker as Agent for GSA — Signature: Keith Decker — Month 07 Day 20 Year 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tomasso — Signature: Tomasso — Month Day Year
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month 7 Day 20 Year 23

DESIGNATED FACILITY TO GENERATOR

169-BLC-O 5 11977 (Rev. 9/09)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	315-736-0080	5037665022

GENERATOR

5. Generator's Name and Mailing Address: US General Services Administration, 302 B. Street, Glenville, NY 12302
Generator's Site Address (if different than mailing address):
Generator's Phone: 315-377-7100

6. Transporter 1 Company Name: Covanta Environmental Solutions — U.S. EPA ID Number: PAR000049026

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Industrial Oil Tank Service Corp, 120 Dry Road, Oriskany, NY 13424 — U.S. EPA ID Number: NYR000005595
Facility's Phone: 315-736-0080

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA, Non DOT Regulated Material	01	TT	2000	G	N/A
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Depart Oriskany 5:15 Arrive Site 7:15
Depart Site 7:15 Arrive Oriskany
WP: 5026378 - IBW Water

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Keith Parker — Signature: [signature] — Month: 7 — Day: 14 — Year: 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month: 7 — Day: 14 — Year: 23

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

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Appendix D

Survey Results

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Appendix D Table 1. Historical Survey 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	Adjusted Reference Point Elevation (ft) June 2023	Difference between June 2023 and recent previous survey reference point elevation (ft)
MW-01S	65-75	290.3	-	-	-	290.02	-
MW-01D	85-90	290.3	-	-	-	290.02	-
MW-02S	70-80	294.4	-	-	-	294.14	-
MW-02D	91-96	294.4	-	-	-	294.14	-
MW-03S	70-80	289.3	-	-	-	289.11	-
MW-03D	130-135	289.3	-	-	-	289.11	-
MW-04S	65-75	287.1	-	-	-	286.9	-
MW-04D	85-90	287.1	-	-	-	286.9	-
B-1	48-68	-	287.14	-	-	-	-
B-1R	48-68	-	-	287.42	-	287.42	0
B-3	47.5-67.5	-	287.05	-	-	287.05	0
MW-4	63.8-73.8	289.58	291.74	-	-	291.74	0
MW-5	62.5-72.5	287.95	290.11	-	-	289.44	-0.67
MW-6	58.5-68.5	286.28	288.58	-	-	287.91	-0.67
MW-7	61-71	286.8	289.26	-	-	288.32	-0.94
MW-8	-	-	-	293.03	-	292.33	-0.7
MW-9	110-120	285.98	288.33	-	-	287.65	-0.68
MW-11	65-80	295.73	295.12	-	-	-	-
MW-11R	65-80	-	-	295.56	-	294.93	-0.63
MW-12R	60-80	-	-	292.34	-	291.59	-0.75
MW-13	65-80	292.62	293.85	-	-	293.85	0
MW-14	65-80	-	296.2	-	294.21	293.5	-0.71
MW-15	65-80	-	293.67	-	292.72	291.99	-0.73
MW-16	55-70	-	288.33	-	-	287.66	-0.67
MW-17	60-75	-	295.24	292.05	-	291.31	-0.74
MW-18	60-75	-	295.24	291.97	-	291.26	-0.71
MW-19	62-77	-	297.67	295.33	-	294.6	-0.73
MW-20	63-78	-	301.55	298.55	-	297.78	-0.77
MW-21	57-72	-	296.52	-	294.01	294.01	0
MW-22	63-78	-	298.91	-	-	-	-
MW-22R	63-78	-	-	296.35	-	295.61	-0.74
MW-23	63-78	-	300.54	-	-	299.86	-0.68
MW-24	90-100	290.24	292.45	-	-	292.45	0
MW-25	65-75	288.16	290.26	288.11	-	287.39	-0.72
MW-26	100-110	287.23	286.45	-	-	286.96	0.51
MW-27	100-110	286.08	288.32	-	-	288.59	0.27
MW-28	67-72	292.55	292.25	-	293.65	292.97	-0.68

Appendix D Table 1. Historical Survey 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	Adjusted Reference Point Elevation (ft) June 2023	Difference between June 2023 and recent previous survey reference point elevation (ft)
MW-29	67-72	292.50	292.13	-	293.05	292.37	-0.68
MW-30	82-92	291.76	291.63	-	292.84	291.61	-1.23
MW-31	82-92	291.80	291.54	-	292.27	290.54	-1.73
MW-32	82-92	290.12	289.75	-	-	289.7	-0.05
MW-33	82-92	290.27	289.91	-	-	289.87	-0.04
MW-34	82-92	287.30	287.05	-	-	286.99	-0.06
MW-35	82-92	287.25	286.96	-	-	286.91	-0.05
MW-36	70-80	292.61	292.36	-	-	292.36	0
GEP-1	59.6-74.6	-	294.98	295.2	291.21	292.18	0.97
GEP-2	60.6-75.6	-	296.02	-	293.93	293.18	-0.75
GEP-3	59.6-74.6	-	292.97	-	291.9	291.23	-0.67
GEP-4	60.15-75.15	-	295.62	292.88	292.9	292.9	0

Notes:

"-" data is not available due to inaccessibility, damage to monitoring well location, or well was not located

bgs = Below ground surface

ft = Foot (Feet)

GENERAL NOTES:

1. *INFORMATION SHOWN HEREON IS FROM A FIELD SURVEY COMPLETED BY M.J. ENGINEERING AND LAND SURVEYING, P.C. ON JUNE 13 & 14, 2023.*
2. *THE HORIZONTAL DATUM IS REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83/2011, EPOCH 2010.00), NEW YORK STATE PLANE EAST ZONE 3101.*
3. *THE VERTICAL DATUM IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), GEOID18.*
4. *NORTH IS ORIENTED TO GRID NORTH FROM GPS OBSERVATION.*

Point Table

Description	Riser Elevation	Casing Elevation	Ground Elevation	Northing	Easting
MW-01		290.02'	290.3'	1460454.2490	628783.4333
MW-02		294.14'	294.4'	1460855.3590	628625.9130
MW-03		289.11'	289.3'	1460469.0670	628530.2019
MW-04		286.90'	287.1'	1460295.4960	628567.7559
MW-5	289.44'	289.66'	287.4'	1460758.6910	627609.7671
MW-6	287.91'	288.15'	285.5'	1460580.9400	627777.5267
MW-7	288.32'	288.84'	285.9'	1460274.7730	628066.1051
MW-8	292.33'	292.50'	292.6'	1461279.6480	627832.7341
MW-9	287.65'	288.37'	285.5'	1460594.1200	627761.6247
MW-11R	294.93'	295.09'	295.1'	1461299.2190	628769.0230
MW-12R	291.59'	291.97'	292.0'	1461148.1460	628276.8949
MW-14	293.50'	293.64'	293.7'	1460939.6490	629235.4290
MW-15	291.99'	292.10'	292.4'	1460678.7360	629090.8194
MW-16	287.66'	288.23'	285.9'	1459888.1890	628439.0026
MW-17	291.31'	291.60'	291.6'	1460819.9070	629292.3499
MW-18	291.26'	291.46'	291.7'	1460650.0190	629215.9608
MW-19	294.60'	294.94'	295.0'	1460913.5080	629541.4965
MW-20	297.78'	298.08'	297.9'	1460937.3120	629837.3864
MW-22	295.61'	296.04'	296.0'	1460620.8430	629732.7763
MW-23	299.86'	300.04'	297.2'	1460924.1920	630179.1801
MW-24	292.45'	292.74'	290.2'	1460450.2700	628766.6576

Point Table

Description	Riser Elevation	Casing Elevation	Ground Elevation	Northing	Easting
MW-25	287.39'	287.87'	287.9'	1460314.8100	629261.3712
MW-26	286.96'	287.21'	287.3'	1460185.6810	628729.6590
MW-27	288.59'	289.41'	286.3'	1460261.8430	628073.6221
MW-28	292.97'	293.23'	293.3'	1460850.6440	628871.3621
MW-29	292.37'	292.65'	292.7'	1460840.7380	628890.5330
MW-30	291.61'	291.90'	291.8'	1460642.5560	628845.0056
MW-31	290.54'	290.76'	290.7'	1460640.1860	628864.8640
MW-32	289.70'	290.12'	290.1'	1460394.6430	628813.9062
MW-33	289.87'	290.23'	290.2'	1460392.0140	628833.9135
MW-34	286.99'	287.33'	287.3'	1460146.6200	628782.4010
MW-35	286.91'	287.32'	287.3'	1460143.8710	628802.2397
MW-36	292.36'	292.68'	292.6'	1460546.1190	629892.1292
GEP-01	292.18'	292.54'	292.6'	1460680.9020	628892.5549
GEP-02	293.18'	293.40'	293.5'	1460776.8030	629149.1718
GEP-03	291.23'	291.41'	291.5'	1460591.5150	629044.9059
PRO-01		290.09'	290.2'	1460416.0280	628794.2204
PRO-02		293.69'	293.6'	1460768.1740	628829.7949
PRO-03		293.38'	293.5'	1460769.6640	628887.5304
PRO-05		288.86'	289.6'	1460448.2810	628840.4311
PRO-06		288.77	288.8'	1460305.5960	628785.3777
PRO-07		289.02'	289.0'	1460299.0720	628820.7397

SUBMITTAL / REVISIONS					
No.	DATE	DESCRIPTION	BY	REVIEWED BY:	DATE

PROJ. MANAGER:	JGM
CHIEF DESIGNER:	
DESIGNED BY:	
DRAWN BY:	JAR
CHECKED BY:	JEQ

SEAL

SEAL

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LAND SURVEYOR FOR A LAND SURVEYOR, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

MONITORING WELLS AND TEST PIT LOCATIONS

PREPARED FOR EA ENGINEERING P.C. & EA SCIENCE & TECHNOLOGY
FORMER SCOTIA NAVAL DEPOT

GLENVILLE

SCHENECTADY COUNTY NEW YORK

SCALE: 1" = 80'
CONTRACT No.:
MJ PROJ. No.: MJ1429.05
DATE: JUNE 26, 2023

1 OF 1

File Name: G:\MJ1429.05 EA Science Former Scotia Naval Base\Current Submissions\20230707_Submission to Client\CAD\MJ1429.05_EA Science Former Scotia Naval Base_XSRVY.dwg (Layout: Layout1)
Date: Fri, Jul 07, 2023 - 1:52 PM (Name: pmiller)

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Appendix E

Laboratory Report Summaries

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ANALYTICAL RESULTS SUMMARY

VOLATILE ORGANICS
METALS
GC SEMI-VOLATILES
SEMI-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 : O2643

ATTENTION : Jim Hayward

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

Laboratory Certification ID # 20012

CHEMTECH

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2.2) TCLP VOA- Case Narrative 6

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

Cover Page

Order ID : O2643

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O2643-01	FSND-IDW-S-05042023
O2643-02	FSND-EQB-02-05042023
O2643-03	FSND-IDW-AQ-05042023
O2643-04	FSND-PRO-06-79-05042023
O2643-05	FSND-EQB-01-05032023
O2643-06	FSND-PRO-07-90-05032023
O2643-07	FSND-PRO-07-90-05032023MS
O2643-08	FSND-PRO-07-90-05032023MSD
O2643-09	FSND-PRO-06-99-05042023
O2643-10	FSND-PRO-07-99-05032023
O2643-11	FSND-DUP-01-05032023
O2643-12	TB

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
Date: 5/21/2023
By Nimisha Pandya QA/QC Supervisor at 10:10 am, May 22, 2023

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 # O2643
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and 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.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {O2643-07MS} with File ID: VX035675.D recoveries met the requirements for all compounds except for 1,2-Dibromo-3-Chloropropane[129%], 4-Methyl-2-Pentanone[132%], Methyl Acetate[144%] and Trichloroethene[40%] due to matrix interference.

The MSD {O2643-08MSD} with File ID: VX035676.D recoveries met the acceptable requirements except for Trichloroethene[60%] due to matrix interference.

The sample # FSND-PRO-07-90-05032023MS and FSND-PRO-07-90-05032023MSD is failing for Methyl Acetate, Trichloroethene, 4-Methyl-2-Pentanone, 1,2-Dibromo-3-Chloropropane and the original sample(FSND-PRO-07-90-05032023) is reported with M flag for this compounds.

The RPD for {O2643-08MSD} with File ID: VX035676.D met criteria except for 2-Butanone[22%], Acetone[25%] and Trichloroethene[40%] due to difference in results of MS and MSD.
The Blank Spike met requirements for all samples .

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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 (82X042523W.M) for Methylene Chloride, t-1,3-Dichloropropene, Bromoform. Lab confirmed that samples are not having any positive hits of those analytes in the samples ,lab has used all the vials for analysis and do not have more vials for any further corrective action therefore lab will report analysis as final analysis.

The Continuous Calibration File ID VX035525.D met the requirements except for Acetone are failing marginally high therefore no corrective action taken.
The Continuous Calibration File ID VX035551.D met the requirements except for Bromoform and t-1,3-Dichloropropene are failing high but no positive hit in associate sample therefore no corrective action taken.
The Continuous Calibration File ID VX035652.D met the requirements except for Chloromethane is failing marginally Low therefore no corrective action taken.

The Tuning criteria met requirements.
Samples FSND-PRO-07-90-05032023, FSND-PRO-06-99-05042023, FSND-PRO-07-99-05032023 and FSND-DUP-01-05032023 were diluted due to high concentrations.

E. Additional Comments:
The Sample #FSND-PRO-07-99-05032023, FSND-DUP-01-05032023 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1.
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 10:10 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: TCLP VOA

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for TCLP VOA.

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 TCLP VOA was based on method 8260D and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
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 Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

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.
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.

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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 10:10 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: TCLP BNA

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for TCLP BNA.

C. Analytical Techniques:
The samples were analyzed on instrument BNA_G using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of TCLP BNA was based on method 8270E and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The MS {O2643-03MS} with File ID: BG057413.D recoveries met the requirements for all compounds except for 2,4-Dinitrotoluene[56%], due to matrix interference no corrective action is required .

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 .
The Tuning criteria met requirements.

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E. Additional Comments:

The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.
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 10:11 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: TCLP Pesticide

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for TCLP Pesticide.

C. Analytical Techniques:
The analysis was performed on instrument ECD_L. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11 The rear column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 7HM-G016-17. .The analysis of TCLP Pesticides was based on method 8081B and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
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 .

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.

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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 10:11 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: PCB

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for PCB.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.The analysis of PCBs was based on method 8082A and extraction was done based on method 3510.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
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 Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

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.

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

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Signature N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:11 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: TCLP Herbicide

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for TCLP Herbicide.

C. Analytical Techniques:
The analysis was performed on instrument ECD_S. The front column is RTX-CLPesticides which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 11139. The rear column is RTX-CLPesticides2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 11324The analysis of TCLP Herbicides was based on method 8151A and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
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 .

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.

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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 10:11 am, May 22, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2643
Test Name: TCLP Mercury,TCLP ICP Metals

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 05/05/2023.
11 Water samples were received on 05/05/2023.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: PCB, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction and VOC-TCLVOA-10. This data package contains results for TCLP Mercury,TCLP ICP Metals.

C. Analytical Techniques:
The analysis of TCLP ICP Metals was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

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 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.
The Serial Dilution met the acceptable 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 10:12 am, May 22, 2023

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 **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"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: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (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 #: O2643

	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:** 05/21/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:12 am, May 22, 2023

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

Hit Summary Sheet
SW-846

SDG No.: O2643

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-EQB-02-05042023**									
O2643-02	FSND-EQB-02-050	Water	Acetone		2.30	J	1.20	3.80	5.00	ug/L
O2643-02	FSND-EQB-02-050	Water	Toluene		0.29	J	0.14	0.50	1.00	ug/L
			Total Voc :		2.59					
O2643-02	FSND-EQB-02-050	Water	Hexanal	*	5.20	J	0		0	ug/L
O2643-02	FSND-EQB-02-050	Water	Ethyl Acetate	*	9.10	J	0.37		1.00	ug/L
O2643-02	FSND-EQB-02-050	Water	Tetrahydrofuran	*	1.90	J	0.85		5.00	ug/L
			Total Tics :		16.2					
			Total Concentration:		18.8					
Client ID:	**FSND-PRO-06-79-05042023**									
O2643-04	FSND-PRO-06-79-(	Water	Acetone		5.60		1.20	3.80	5.00	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Trichloroethene		110		0.26	0.75	1.00	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Toluene		0.27	J	0.14	0.50	1.00	ug/L
			Total Voc :		116					
O2643-04	FSND-PRO-06-79-(	Water	Hexanal	*	58.7	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Pentanal	*	7.90	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Heptanal	*	9.30	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Propanal	*	6.20	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Octanal	*	13.8	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Nonanal	*	8.80	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	2-Heptenal, (E)-	*	5.30	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	2-Dodecenal, (E)-	*	5.30	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Dodecane, 1-chloro-	*	8.90	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	Tetradecane, 1-chloro-	*	7.10	J	0		0	ug/L
O2643-04	FSND-PRO-06-79-(	Water	1,2,4-Trimethylbenzene	*	0.29	J	0.16		1.00	ug/L
			Total Tics :		132					
			Total Concentration:		247					
Client ID:	**FSND-EQB-01-05032023**									
O2643-05	FSND-EQB-01-050	Water	Acetone		2.30	J	1.20	3.80	5.00	ug/L
O2643-05	FSND-EQB-01-050	Water	Toluene		0.30	J	0.14	0.50	1.00	ug/L
			Total Voc :		2.60					
O2643-05	FSND-EQB-01-050	Water	Hexanal	*	13.4	J	0		0	ug/L
O2643-05	FSND-EQB-01-050	Water	Ethyl Acetate	*	9.00	J	0.37		1.00	ug/L
O2643-05	FSND-EQB-01-050	Water	Tetrahydrofuran	*	1.90	J	0.85		5.00	ug/L
			Total Tics :		24.3					
			Total Concentration:		26.9					
Client ID:	**FSND-PRO-07-90-05032023**									
O2643-06	FSND-PRO-07-90-(	Water	Trichloroethene		160	EM	0.26	0.75	1.00	ug/L
			Total Voc :		160					

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

Hit Summary Sheet
SW-846

SDG No.: O2643

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
			Total Concentration:		160					
Client ID:	**FSND-PRO-07-90-05032023DL**									
O2643-06DL	FSND-PRO-07-90-(	Water	Trichloroethene		160	D	1.00	3.00	4.00	ug/L
			Total Voc :		160					
			Total Concentration:		160					
Client ID:	**FSND-PRO-06-99-05042023**									
O2643-09	FSND-PRO-06-99-(	Water	1,1-Dichloroethene		15.2		0.21	0.75	1.00	ug/L
O2643-09	FSND-PRO-06-99-(	Water	Acetone		2.20	J	1.20	3.80	5.00	ug/L
O2643-09	FSND-PRO-06-99-(	Water	cis-1,2-Dichloroethene		1.90		0.20	0.75	1.00	ug/L
O2643-09	FSND-PRO-06-99-(	Water	Trichloroethene		530	E	0.26	0.75	1.00	ug/L
			Total Voc :		549					
			Total Concentration:		549					
Client ID:	**FSND-PRO-06-99-05042023DL**									
O2643-09DL	FSND-PRO-06-99-(	Water	1,1-Dichloroethene		14.4	D	2.10	7.50	10.0	ug/L
O2643-09DL	FSND-PRO-06-99-(	Water	Methylene Chloride		6.70	JD	5.00	5.00	10.0	ug/L
O2643-09DL	FSND-PRO-06-99-(	Water	Trichloroethene		510	D	2.60	7.50	10.0	ug/L
			Total Voc :		531					
			Total Concentration:		531					
Client ID:	**FSND-PRO-07-99-05032023**									
O2643-10	FSND-PRO-07-99-(	Water	1,1-Dichloroethene		0.37	J	0.21	0.75	1.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Acetone		13.8		1.20	3.80	5.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Carbon Disulfide		4.20		0.27	0.75	1.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	trans-1,2-Dichloroethene		0.25	J	0.17	0.50	1.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	2-Butanone		7.60		1.20	2.50	5.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Chloroform		0.34	J	0.14	0.50	1.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Trichloroethene		620	E	0.26	0.75	1.00	ug/L
O2643-10	FSND-PRO-07-99-(	Water	2-Hexanone		93.0		0.98	2.50	5.00	ug/L
			Total Voc :		740					
O2643-10	FSND-PRO-07-99-(	Water	Hexanal	*	25.8	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	2-Pentanone	*	45.6	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	2-Heptanone	*	150	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Pentanal	*	6.30	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	2-Octanone	*	150	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Heptanal	*	7.30	J	0		0	ug/L
O2643-10	FSND-PRO-07-99-(	Water	Octanal	*	7.50	J	0		0	ug/L
			Total Tics :		393					
			Total Concentration:		1130					
Client ID:	**FSND-PRO-07-99-05032023DL**									
O2643-10DL	FSND-PRO-07-99-(	Water	Trichloroethene		420	D	2.60	7.50	10.0	ug/L
			Total Voc :		420					

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

Hit Summary Sheet
SW-846

SDG No.: O2643

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
			Total Concentration:		420					
Client ID:	**FSND-DUP-01-05032023**									
O2643-11	FSND-DUP-01-050	Water	1,1-Dichloroethene		0.36	J	0.21	0.75	1.00	ug/L
O2643-11	FSND-DUP-01-050	Water	Acetone		3.80	J	1.20	3.80	5.00	ug/L
O2643-11	FSND-DUP-01-050	Water	Carbon Disulfide		3.50		0.27	0.75	1.00	ug/L
O2643-11	FSND-DUP-01-050	Water	Chloroform		0.28	J	0.14	0.50	1.00	ug/L
O2643-11	FSND-DUP-01-050	Water	Trichloroethene		520	E	0.26	0.75	1.00	ug/L
			Total Voc :		528					
O2643-11	FSND-DUP-01-050	Water	Hexanal	*	35.4	J	0		0	ug/L
			Total Tics :		35.4					
			Total Concentration:		563					
Client ID:	**FSND-DUP-01-05032023DL**									
O2643-11DL	FSND-DUP-01-050	Water	Acetone		11.5	JD	11.5	37.5	50.0	ug/L
O2643-11DL	FSND-DUP-01-050	Water	Trichloroethene		460	D	2.60	7.50	10.0	ug/L
			Total Voc :		472					
			Total Concentration:		472					

SAMPLE DATA

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-02-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035559.D	1		05/08/23 14:51	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.29	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-02-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035559.D	1		05/08/23 14:51	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.1		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	49.8		89 - 112		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		85 - 114		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	236000	5.555				
540-36-3	1,4-Difluorobenzene	388000	6.763				
3114-55-4	Chlorobenzene-d5	361000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	174000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	9.10	J			4.71	ug/L
109-99-9	Tetrahydrofuran	1.90	J			5.04	ug/L
000066-25-1	Hexanal	5.20	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-02-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035559.D	1		05/08/23 14:51	VX050823

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-79-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035622.D	1		05/11/23 20:56	VX051123

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	5.60		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	110		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.27	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-79-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035622.D	1		05/11/23 20:56	VX051123

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.9		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.4		85 - 114		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	184000	5.549				
540-36-3	1,4-Difluorobenzene	335000	6.763				
3114-55-4	Chlorobenzene-d5	303000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	136000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000123-38-6	Propanal	6.20	J			2.29	ug/L
000110-62-3	Pentanal	7.90	J			7.57	ug/L
000066-25-1	Hexanal	58.7	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-79-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035622.D	1		05/11/23 20:56	VX051123

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
000111-71-7	Heptanal	9.30	J			10.9	ug/L
018829-55-5	2-Heptenal, (E)-	5.30	J			11.6	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.29	J			11.8	ug/L
000124-13-0	Octanal	13.8	J			11.9	ug/L
000124-19-6	Nonanal	8.80	J			12.9	ug/L
020407-84-5	2-Dodecenal, (E)-	5.30	J			14.3	ug/L
000112-52-7	Dodecane, 1-chloro-	8.90	JB			15.5	ug/L
002425-54-9	Tetradecane, 1-chloro-	7.10	JB			16.5	ug/L

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035560.D	1		05/08/23 15:14	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.30	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035560.D	1		05/08/23 15:14	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.2		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	50.3		89 - 112		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.3		85 - 114		105%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	238000	5.555				
540-36-3	1,4-Difluorobenzene	393000	6.763				
3114-55-4	Chlorobenzene-d5	366000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	180000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	9.00	J			4.72	ug/L
109-99-9	Tetrahydrofuran	1.90	J			5.03	ug/L
000066-25-1	Hexanal	13.4	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-EQB-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035560.D	1		05/08/23 15:14	VX050823

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035545.D	1		05/05/23 18:44	VX050523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	UM	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	160	EM	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	UM	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035545.D	1		05/05/23 18:44	VX050523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.8		81 - 118		102%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	51.0		89 - 112		102%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.8		85 - 114		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	263000	5.555				
540-36-3	1,4-Difluorobenzene	437000	6.763				
3114-55-4	Chlorobenzene-d5	405000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	197000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035545.D	1		05/05/23 18:44	VX050523

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035556.D	4		05/08/23 13:41	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.00	UD	0.56	2.00	4.00	ug/L
74-87-3	Chloromethane	2.00	UD	1.00	2.00	4.00	ug/L
75-01-4	Vinyl Chloride	3.00	UD	1.00	3.00	4.00	ug/L
74-83-9	Bromomethane	15.0	UD	6.20	15.0	20.0	ug/L
75-00-3	Chloroethane	3.00	UD	1.10	3.00	4.00	ug/L
75-69-4	Trichlorofluoromethane	2.00	UD	0.52	2.00	4.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.00	UD	0.84	2.00	4.00	ug/L
75-35-4	1,1-Dichloroethene	3.00	UD	0.84	3.00	4.00	ug/L
67-64-1	Acetone	15.0	UD	4.60	15.0	20.0	ug/L
75-15-0	Carbon Disulfide	3.00	UD	1.10	3.00	4.00	ug/L
1634-04-4	Methyl tert-butyl Ether	2.00	UD	0.56	2.00	4.00	ug/L
79-20-9	Methyl Acetate	3.00	UD	1.40	3.00	4.00	ug/L
75-09-2	Methylene Chloride	2.00	UD	2.00	2.00	4.00	ug/L
156-60-5	trans-1,2-Dichloroethene	2.00	UD	0.68	2.00	4.00	ug/L
75-34-3	1,1-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
110-82-7	Cyclohexane	10.0	UD	6.40	10.0	20.0	ug/L
78-93-3	2-Butanone	10.0	UD	4.80	10.0	20.0	ug/L
56-23-5	Carbon Tetrachloride	2.00	UD	0.52	2.00	4.00	ug/L
156-59-2	cis-1,2-Dichloroethene	3.00	UD	0.80	3.00	4.00	ug/L
74-97-5	Bromochloromethane	2.00	UD	0.56	2.00	4.00	ug/L
67-66-3	Chloroform	2.00	UD	0.56	2.00	4.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.00	UD	0.56	2.00	4.00	ug/L
108-87-2	Methylcyclohexane	2.00	UD	0.64	2.00	4.00	ug/L
71-43-2	Benzene	2.00	UD	0.48	2.00	4.00	ug/L
107-06-2	1,2-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
79-01-6	Trichloroethene	160	D	1.00	3.00	4.00	ug/L
78-87-5	1,2-Dichloropropane	2.00	UD	0.60	2.00	4.00	ug/L
75-27-4	Bromodichloromethane	2.00	UD	0.60	2.00	4.00	ug/L
108-10-1	4-Methyl-2-Pentanone	10.0	UD	3.00	10.0	20.0	ug/L
108-88-3	Toluene	2.00	UD	0.56	2.00	4.00	ug/L
10061-02-6	t-1,3-Dichloropropene	2.00	UD	0.68	2.00	4.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.00	UD	0.60	2.00	4.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035556.D	4		05/08/23 13:41	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.00	UD	0.52	2.00	4.00	ug/L
591-78-6	2-Hexanone	10.0	UD	3.90	10.0	20.0	ug/L
124-48-1	Dibromochloromethane	2.00	UD	0.60	2.00	4.00	ug/L
106-93-4	1,2-Dibromoethane	2.00	UD	0.52	2.00	4.00	ug/L
127-18-4	Tetrachloroethene	2.00	UD	0.68	2.00	4.00	ug/L
108-90-7	Chlorobenzene	2.00	UD	0.48	2.00	4.00	ug/L
100-41-4	Ethyl Benzene	2.00	UD	0.52	2.00	4.00	ug/L
179601-23-1	m/p-Xylenes	4.00	UD	1.20	4.00	8.00	ug/L
95-47-6	o-Xylene	2.00	UD	0.60	2.00	4.00	ug/L
100-42-5	Styrene	2.00	UD	0.52	2.00	4.00	ug/L
75-25-2	Bromoform	2.00	UD	0.60	2.00	4.00	ug/L
98-82-8	Isopropylbenzene	2.00	UD	0.52	2.00	4.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.00	UD	0.60	2.00	4.00	ug/L
541-73-1	1,3-Dichlorobenzene	2.00	UD	0.92	2.00	4.00	ug/L
106-46-7	1,4-Dichlorobenzene	2.00	UD	0.96	2.00	4.00	ug/L
95-50-1	1,2-Dichlorobenzene	2.00	UD	0.68	2.00	4.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	3.00	UD	1.70	3.00	4.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.00	UD	1.70	2.00	4.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	3.00	UD	2.20	3.00	4.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.9		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	50.2		89 - 112		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.0		85 - 114		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	247000	5.556				
540-36-3	1,4-Difluorobenzene	405000	6.763				
3114-55-4	Chlorobenzene-d5	373000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	180000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-90-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035556.D	4		05/08/23 13:41	VX050823

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035546.D	1		05/05/23 19:08	VX050523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	15.2		0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.90		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	530	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035546.D	1		05/05/23 19:08	VX050523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.3		81 - 118		105%	SPK: 50
1868-53-7	Dibromofluoromethane	51.1		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	50.8		89 - 112		102%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.0		85 - 114		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	277000	5.55				
540-36-3	1,4-Difluorobenzene	469000	6.763				
3114-55-4	Chlorobenzene-d5	442000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	212000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035546.D	1		05/05/23 19:08	VX050523

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023DL	SDG No.:	O2643
Lab Sample ID:	O2643-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035557.D	10		05/08/23 14:04	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5.00	UD	1.40	5.00	10.0	ug/L
74-87-3	Chloromethane	5.00	UD	2.50	5.00	10.0	ug/L
75-01-4	Vinyl Chloride	7.50	UD	2.50	7.50	10.0	ug/L
74-83-9	Bromomethane	37.5	UD	15.5	37.5	50.0	ug/L
75-00-3	Chloroethane	7.50	UD	2.80	7.50	10.0	ug/L
75-69-4	Trichlorofluoromethane	5.00	UD	1.30	5.00	10.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5.00	UD	2.10	5.00	10.0	ug/L
75-35-4	1,1-Dichloroethene	14.4	D	2.10	7.50	10.0	ug/L
67-64-1	Acetone	37.5	UD	11.5	37.5	50.0	ug/L
75-15-0	Carbon Disulfide	7.50	UD	2.70	7.50	10.0	ug/L
1634-04-4	Methyl tert-butyl Ether	5.00	UD	1.40	5.00	10.0	ug/L
79-20-9	Methyl Acetate	7.50	UD	3.60	7.50	10.0	ug/L
75-09-2	Methylene Chloride	6.70	JD	5.00	5.00	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	5.00	UD	1.70	5.00	10.0	ug/L
75-34-3	1,1-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
110-82-7	Cyclohexane	25.0	UD	16.0	25.0	50.0	ug/L
78-93-3	2-Butanone	25.0	UD	12.1	25.0	50.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	UD	1.30	5.00	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	7.50	UD	2.00	7.50	10.0	ug/L
74-97-5	Bromochloromethane	5.00	UD	1.40	5.00	10.0	ug/L
67-66-3	Chloroform	5.00	UD	1.40	5.00	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	5.00	UD	1.40	5.00	10.0	ug/L
108-87-2	Methylcyclohexane	5.00	UD	1.60	5.00	10.0	ug/L
71-43-2	Benzene	5.00	UD	1.20	5.00	10.0	ug/L
107-06-2	1,2-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
79-01-6	Trichloroethene	510	D	2.60	7.50	10.0	ug/L
78-87-5	1,2-Dichloropropane	5.00	UD	1.50	5.00	10.0	ug/L
75-27-4	Bromodichloromethane	5.00	UD	1.50	5.00	10.0	ug/L
108-10-1	4-Methyl-2-Pentanone	25.0	UD	7.40	25.0	50.0	ug/L
108-88-3	Toluene	5.00	UD	1.40	5.00	10.0	ug/L
10061-02-6	t-1,3-Dichloropropene	5.00	UD	1.70	5.00	10.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	5.00	UD	1.50	5.00	10.0	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023DL	SDG No.:	O2643
Lab Sample ID:	O2643-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035557.D	10		05/08/23 14:04	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.00	UD	1.30	5.00	10.0	ug/L
591-78-6	2-Hexanone	25.0	UD	9.80	25.0	50.0	ug/L
124-48-1	Dibromochloromethane	5.00	UD	1.50	5.00	10.0	ug/L
106-93-4	1,2-Dibromoethane	5.00	UD	1.30	5.00	10.0	ug/L
127-18-4	Tetrachloroethene	5.00	UD	1.70	5.00	10.0	ug/L
108-90-7	Chlorobenzene	5.00	UD	1.20	5.00	10.0	ug/L
100-41-4	Ethyl Benzene	5.00	UD	1.30	5.00	10.0	ug/L
179601-23-1	m/p-Xylenes	10.0	UD	3.10	10.0	20.0	ug/L
95-47-6	o-Xylene	5.00	UD	1.50	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	1.50	5.00	10.0	ug/L
98-82-8	Isopropylbenzene	5.00	UD	1.30	5.00	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5.00	UD	1.50	5.00	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	5.00	UD	2.30	5.00	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	UD	2.40	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	4.30	7.50	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	UD	4.30	5.00	10.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	7.50	UD	5.50	7.50	10.0	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.1		81 - 118		98%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		80 - 119		102%	SPK: 50
2037-26-5	Toluene-d8	50.5		89 - 112		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.6		85 - 114		105%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	247000	5.55				
540-36-3	1,4-Difluorobenzene	402000	6.763				
3114-55-4	Chlorobenzene-d5	375000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	178000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-06-99-05042023DL	SDG No.:	O2643
Lab Sample ID:	O2643-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035557.D	10		05/08/23 14:04	VX050823

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035657.D	1		05/15/23 12:07	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.37	J	0.21	0.75	1.00	ug/L
67-64-1	Acetone	13.8		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	4.20		0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.25	J	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	7.60		1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.34	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	620	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035657.D	1		05/15/23 12:07	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	93.0		0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	48.3		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.8		85 - 114		102%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	205000	5.55				
540-36-3	1,4-Difluorobenzene	379000	6.763				
3114-55-4	Chlorobenzene-d5	346000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	163000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000107-87-9	2-Pentanone	45.6	J			7.45	ug/L
000110-62-3	Pentanal	6.30	J			7.57	ug/L
000066-25-1	Hexanal	25.8	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035657.D	1		05/15/23 12:07	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
000110-43-0	2-Heptanone	150	J			10.8	ug/L
000111-71-7	Heptanal	7.30	J			10.9	ug/L
000111-13-7	2-Octanone	150	J			11.8	ug/L
000124-13-0	Octanal	7.50	J			11.9	ug/L

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-10DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035687.D	10		05/16/23 13:43	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5.00	UD	1.40	5.00	10.0	ug/L
74-87-3	Chloromethane	5.00	UD	2.50	5.00	10.0	ug/L
75-01-4	Vinyl Chloride	7.50	UD	2.50	7.50	10.0	ug/L
74-83-9	Bromomethane	37.5	UD	15.5	37.5	50.0	ug/L
75-00-3	Chloroethane	7.50	UD	2.80	7.50	10.0	ug/L
75-69-4	Trichlorofluoromethane	5.00	UD	1.30	5.00	10.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5.00	UD	2.10	5.00	10.0	ug/L
75-35-4	1,1-Dichloroethene	7.50	UD	2.10	7.50	10.0	ug/L
67-64-1	Acetone	37.5	UD	11.5	37.5	50.0	ug/L
75-15-0	Carbon Disulfide	7.50	UD	2.70	7.50	10.0	ug/L
1634-04-4	Methyl tert-butyl Ether	5.00	UD	1.40	5.00	10.0	ug/L
79-20-9	Methyl Acetate	7.50	UD	3.60	7.50	10.0	ug/L
75-09-2	Methylene Chloride	5.00	UD	5.00	5.00	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	5.00	UD	1.70	5.00	10.0	ug/L
75-34-3	1,1-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
110-82-7	Cyclohexane	25.0	UD	16.0	25.0	50.0	ug/L
78-93-3	2-Butanone	25.0	UD	12.1	25.0	50.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	UD	1.30	5.00	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	7.50	UD	2.00	7.50	10.0	ug/L
74-97-5	Bromochloromethane	5.00	UD	1.40	5.00	10.0	ug/L
67-66-3	Chloroform	5.00	UD	1.40	5.00	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	5.00	UD	1.40	5.00	10.0	ug/L
108-87-2	Methylcyclohexane	5.00	UD	1.60	5.00	10.0	ug/L
71-43-2	Benzene	5.00	UD	1.20	5.00	10.0	ug/L
107-06-2	1,2-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
79-01-6	Trichloroethene	420	D	2.60	7.50	10.0	ug/L
78-87-5	1,2-Dichloropropane	5.00	UD	1.50	5.00	10.0	ug/L
75-27-4	Bromodichloromethane	5.00	UD	1.50	5.00	10.0	ug/L
108-10-1	4-Methyl-2-Pentanone	25.0	UD	7.40	25.0	50.0	ug/L
108-88-3	Toluene	5.00	UD	1.40	5.00	10.0	ug/L
10061-02-6	t-1,3-Dichloropropene	5.00	UD	1.70	5.00	10.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	5.00	UD	1.50	5.00	10.0	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-10DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035687.D	10		05/16/23 13:43	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.00	UD	1.30	5.00	10.0	ug/L
591-78-6	2-Hexanone	25.0	UD	9.80	25.0	50.0	ug/L
124-48-1	Dibromochloromethane	5.00	UD	1.50	5.00	10.0	ug/L
106-93-4	1,2-Dibromoethane	5.00	UD	1.30	5.00	10.0	ug/L
127-18-4	Tetrachloroethene	5.00	UD	1.70	5.00	10.0	ug/L
108-90-7	Chlorobenzene	5.00	UD	1.20	5.00	10.0	ug/L
100-41-4	Ethyl Benzene	5.00	UD	1.30	5.00	10.0	ug/L
179601-23-1	m/p-Xylenes	10.0	UD	3.10	10.0	20.0	ug/L
95-47-6	o-Xylene	5.00	UD	1.50	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	1.50	5.00	10.0	ug/L
98-82-8	Isopropylbenzene	5.00	UD	1.30	5.00	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5.00	UD	1.50	5.00	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	5.00	UD	2.30	5.00	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	UD	2.40	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	4.30	7.50	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	UD	4.30	5.00	10.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	7.50	UD	5.50	7.50	10.0	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.3		81 - 118		97%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.4		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		85 - 114		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	167000	5.556				
540-36-3	1,4-Difluorobenzene	304000	6.763				
3114-55-4	Chlorobenzene-d5	272000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	120000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-PRO-07-99-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-10DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035687.D	10		05/16/23 13:43	VX051623

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035658.D	1		05/15/23 12:30	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.36	J	0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.80	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	3.50		0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.28	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	520	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035658.D	1		05/15/23 12:30	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	48.4		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.6		85 - 114		103%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	200000	5.549				
540-36-3	1,4-Difluorobenzene	367000	6.763				
3114-55-4	Chlorobenzene-d5	341000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	163000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000066-25-1	Hexanal	35.4	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023	SDG No.:	O2643
Lab Sample ID:	O2643-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035658.D	1		05/15/23 12:30	VX051523

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035688.D	10		05/16/23 14:06	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5.00	UD	1.40	5.00	10.0	ug/L
74-87-3	Chloromethane	5.00	UD	2.50	5.00	10.0	ug/L
75-01-4	Vinyl Chloride	7.50	UD	2.50	7.50	10.0	ug/L
74-83-9	Bromomethane	37.5	UD	15.5	37.5	50.0	ug/L
75-00-3	Chloroethane	7.50	UD	2.80	7.50	10.0	ug/L
75-69-4	Trichlorofluoromethane	5.00	UD	1.30	5.00	10.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5.00	UD	2.10	5.00	10.0	ug/L
75-35-4	1,1-Dichloroethene	7.50	UD	2.10	7.50	10.0	ug/L
67-64-1	Acetone	11.5	JD	11.5	37.5	50.0	ug/L
75-15-0	Carbon Disulfide	7.50	UD	2.70	7.50	10.0	ug/L
1634-04-4	Methyl tert-butyl Ether	5.00	UD	1.40	5.00	10.0	ug/L
79-20-9	Methyl Acetate	7.50	UD	3.60	7.50	10.0	ug/L
75-09-2	Methylene Chloride	5.00	UD	5.00	5.00	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	5.00	UD	1.70	5.00	10.0	ug/L
75-34-3	1,1-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
110-82-7	Cyclohexane	25.0	UD	16.0	25.0	50.0	ug/L
78-93-3	2-Butanone	25.0	UD	12.1	25.0	50.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	UD	1.30	5.00	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	7.50	UD	2.00	7.50	10.0	ug/L
74-97-5	Bromochloromethane	5.00	UD	1.40	5.00	10.0	ug/L
67-66-3	Chloroform	5.00	UD	1.40	5.00	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	5.00	UD	1.40	5.00	10.0	ug/L
108-87-2	Methylcyclohexane	5.00	UD	1.60	5.00	10.0	ug/L
71-43-2	Benzene	5.00	UD	1.20	5.00	10.0	ug/L
107-06-2	1,2-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
79-01-6	Trichloroethene	460	D	2.60	7.50	10.0	ug/L
78-87-5	1,2-Dichloropropane	5.00	UD	1.50	5.00	10.0	ug/L
75-27-4	Bromodichloromethane	5.00	UD	1.50	5.00	10.0	ug/L
108-10-1	4-Methyl-2-Pentanone	25.0	UD	7.40	25.0	50.0	ug/L
108-88-3	Toluene	5.00	UD	1.40	5.00	10.0	ug/L
10061-02-6	t-1,3-Dichloropropene	5.00	UD	1.70	5.00	10.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	5.00	UD	1.50	5.00	10.0	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035688.D	10		05/16/23 14:06	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.00	UD	1.30	5.00	10.0	ug/L
591-78-6	2-Hexanone	25.0	UD	9.80	25.0	50.0	ug/L
124-48-1	Dibromochloromethane	5.00	UD	1.50	5.00	10.0	ug/L
106-93-4	1,2-Dibromoethane	5.00	UD	1.30	5.00	10.0	ug/L
127-18-4	Tetrachloroethene	5.00	UD	1.70	5.00	10.0	ug/L
108-90-7	Chlorobenzene	5.00	UD	1.20	5.00	10.0	ug/L
100-41-4	Ethyl Benzene	5.00	UD	1.30	5.00	10.0	ug/L
179601-23-1	m/p-Xylenes	10.0	UD	3.10	10.0	20.0	ug/L
95-47-6	o-Xylene	5.00	UD	1.50	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	1.50	5.00	10.0	ug/L
98-82-8	Isopropylbenzene	5.00	UD	1.30	5.00	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5.00	UD	1.50	5.00	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	5.00	UD	2.30	5.00	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	UD	2.40	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	4.30	7.50	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	UD	4.30	5.00	10.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	7.50	UD	5.50	7.50	10.0	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.3		81 - 118		97%	SPK: 50
1868-53-7	Dibromofluoromethane	47.2		80 - 119		94%	SPK: 50
2037-26-5	Toluene-d8	48.5		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.2		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	188000	5.55				
540-36-3	1,4-Difluorobenzene	348000	6.763				
3114-55-4	Chlorobenzene-d5	321000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	142000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-DUP-01-05032023DL	SDG No.:	O2643
Lab Sample ID:	O2643-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035688.D	10		05/16/23 14:06	VX051623

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:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	TB	SDG No.:	O2643
Lab Sample ID:	O2643-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035558.D	1		05/08/23 14:27	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	TB	SDG No.:	O2643
Lab Sample ID:	O2643-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035558.D	1		05/08/23 14:27	VX050823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.8		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	51.4		80 - 119		103%	SPK: 50
2037-26-5	Toluene-d8	51.2		89 - 112		102%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.2		85 - 114		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	252000	5.55				
540-36-3	1,4-Difluorobenzene	408000	6.763				
3114-55-4	Chlorobenzene-d5	381000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	178000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/03/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	TB	SDG No.:	O2643
Lab Sample ID:	O2643-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035558.D	1		05/08/23 14:27	VX050823

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:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP VOA	8260D			05/15/23	
O2643-02	**FSND-EQB-02-05042023**	**Water**			**05/04/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/08/23	
O2643-03	**FSND-IDW-AQ-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP VOA	8260D			05/05/23	
O2643-04	**FSND-PRO-06-79-05042023**	**Water**			**05/04/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/11/23	
O2643-05	**FSND-EQB-01-05032023**	**Water**			**05/03/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/08/23	
O2643-06	**FSND-PRO-07-90-05032023**	**Water**			**05/03/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/05/23	
O2643-06DL	**FSND-PRO-07-90-05032023DL**	**Water**			**05/03/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/08/23	
O2643-09	**FSND-PRO-06-99-05042023**	**Water**			**05/04/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/05/23	
O2643-09DL	**FSND-PRO-06-99-05042023DL**	**Water**			**05/04/23**			**05/05/23**
			VOC-TCLVOA-10	8260-Low			05/08/23	

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LAB CHRONICLE

O2643-10	**FSND-PRO-07-99-050 32023**	**Water**			**05/03/23**		**05/05/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2643-10DL	**FSND-PRO-07-99-050 32023DL**	**Water**			**05/03/23**		**05/05/23**
			VOC-TCLVOA-10	8260-Low		05/16/23	
O2643-11	**FSND-DUP-01-050320 23**	**Water**			**05/03/23**		**05/05/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2643-11DL	**FSND-DUP-01-050320 23DL**	**Water**			**05/03/23**		**05/05/23**
			VOC-TCLVOA-10	8260-Low		05/16/23	
O2643-12	**TB**	**Water**			**05/03/23**		**05/05/23**
			VOC-TCLVOA-10	8260-Low		05/08/23	

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Hit Summary Sheet
SW-846

SDG No.: O2643

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-IDW-S-05042023**								
O2643-01	FSND-IDW-S-0504	TCLP	2-Butanone	13.1	J	1.20	2.50	25.0	ug/L
O2643-01	FSND-IDW-S-0504	TCLP	Trichloroethene	3.30	J	0.26	0.75	5.00	ug/L
			Total Voc :	16.4					
			Total Concentration:	16.4					
Client ID:	**FSND-IDW-AQ-05042023**								
O2643-03	FSND-IDW-AQ-05	TCLP	Chloroform	4.30	J	0.14	0.50	5.00	ug/L
O2643-03	FSND-IDW-AQ-05	TCLP	Trichloroethene	4.50	J	0.26	0.75	5.00	ug/L
			Total Voc :	8.80					
			Total Concentration:	8.80					

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035674.D	1		05/15/23 18:42	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	5.00	ug/L
78-93-3	2-Butanone	13.1	J	1.20	2.50	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	5.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	5.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.75	U	0.16	0.75	5.00	ug/L
79-01-6	Trichloroethene	3.30	J	0.26	0.75	5.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	5.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	5.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.3		81 - 118		97%	SPK: 50
1868-53-7	Dibromofluoromethane	48.1		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	49.4		89 - 112		99%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.6		85 - 114		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	180000	5.556				
540-36-3	1,4-Difluorobenzene	330000	6.763				
3114-55-4	Chlorobenzene-d5	306000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	137000	12.024				

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
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D = Dilution
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A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-AQ-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-03	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035542.D	1		05/05/23 17:35	VX050523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	5.00	ug/L
67-66-3	Chloroform	4.30	J	0.14	0.50	5.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.75	U	0.16	0.75	5.00	ug/L
79-01-6	Trichloroethene	4.50	J	0.26	0.75	5.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	5.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	5.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.9		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	41.6		80 - 119		83%	SPK: 50
2037-26-5	Toluene-d8	50.9		89 - 112		102%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.7		85 - 114		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	286000	5.55				
540-36-3	1,4-Difluorobenzene	475000	6.763				
3114-55-4	Chlorobenzene-d5	429000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	201000	12.024				

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LAB CHRONICLE

OrderID:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP VOA	8260D			05/09/23	
			TCLP VOA	8260D			05/15/23	
O2643-03	**FSND-IDW-AQ-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP VOA	8260D			05/05/23	

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: O2643

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :									
				0.000					
			Total Svoc :		**0.00**				
			Total Concentration:		**0.00**				

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057410.D	1	05/10/23 11:10	05/12/23 15:22	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
110-86-1	Pyridine	40.0	U	17.8	40.0	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	40.0	U	14.3	40.0	50.0	ug/L
95-48-7	2-Methylphenol	40.0	U	20.6	40.0	50.0	ug/L
65794-96-9	3+4-Methylphenols	80.0	U	21.6	80.0	100	ug/L
67-72-1	Hexachloroethane	40.0	U	16.4	40.0	50.0	ug/L
98-95-3	Nitrobenzene	40.0	U	17.2	40.0	50.0	ug/L
87-68-3	Hexachlorobutadiene	40.0	U	19.3	40.0	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	40.0	U	15.2	40.0	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	40.0	U	15.7	40.0	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	40.0	U	25.4	40.0	50.0	ug/L
118-74-1	Hexachlorobenzene	40.0	U	19.1	40.0	50.0	ug/L
87-86-5	Pentachlorophenol	80.0	U	25.5	80.0	100	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	136		19 - 119		91%	SPK: 150
13127-88-3	Phenol-d6	122		10 - 130		82%	SPK: 150
4165-60-0	Nitrobenzene-d5	86.9		44 - 120		87%	SPK: 100
321-60-8	2-Fluorobiphenyl	97.0		44 - 119		97%	SPK: 100
118-79-6	2,4,6-Tribromophenol	149		43 - 140		99%	SPK: 150
1718-51-0	Terphenyl-d14	95.2		50 - 134		95%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	18600	8.36				
1146-65-2	Naphthalene-d8	73600	11.197				
15067-26-2	Acenaphthene-d10	51800	14.975				
1517-22-2	Phenanthrene-d10	113000	17.718				
1719-03-5	Chrysene-d12	106000	22.024				
1520-96-3	Perylene-d12	116000	25.531				

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057410.D	1	05/10/23 11:10	05/12/23 15:22	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-AQ-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-03	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057412.D	1	05/10/23 11:10	05/12/23 16:51	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
110-86-1	Pyridine	40.0	U	17.8	40.0	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	40.0	U	14.3	40.0	50.0	ug/L
95-48-7	2-Methylphenol	40.0	U	20.6	40.0	50.0	ug/L
65794-96-9	3+4-Methylphenols	80.0	U	21.6	80.0	100	ug/L
67-72-1	Hexachloroethane	40.0	U	16.4	40.0	50.0	ug/L
98-95-3	Nitrobenzene	40.0	U	17.2	40.0	50.0	ug/L
87-68-3	Hexachlorobutadiene	40.0	U	19.3	40.0	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	40.0	U	15.2	40.0	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	40.0	U	15.7	40.0	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	40.0	UM	25.4	40.0	50.0	ug/L
118-74-1	Hexachlorobenzene	40.0	U	19.1	40.0	50.0	ug/L
87-86-5	Pentachlorophenol	80.0	U	25.5	80.0	100	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	110		19 - 119		73%	SPK: 150
13127-88-3	Phenol-d6	99.8		10 - 130		67%	SPK: 150
4165-60-0	Nitrobenzene-d5	72.8		44 - 120		73%	SPK: 100
321-60-8	2-Fluorobiphenyl	79.7		44 - 119		80%	SPK: 100
118-79-6	2,4,6-Tribromophenol	154		43 - 140		103%	SPK: 150
1718-51-0	Terphenyl-d14	88.7		50 - 134		89%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	15200	8.366				
1146-65-2	Naphthalene-d8	60700	11.204				
15067-26-2	Acenaphthene-d10	48300	14.981				
1517-22-2	Phenanthrene-d10	130000	17.718				
1719-03-5	Chrysene-d12	119000	22.024				
1520-96-3	Perylene-d12	125000	25.531				

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-AQ-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-03	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057412.D	1	05/10/23 11:10	05/12/23 16:51	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
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() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152612TB	SDG No.:	O2643
Lab Sample ID:	PB152612TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057408.D	1	05/10/23 11:10	05/12/23 13:57	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
110-86-1	Pyridine	40.0	U	17.8	40.0	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	40.0	U	14.3	40.0	50.0	ug/L
95-48-7	2-Methylphenol	40.0	U	20.6	40.0	50.0	ug/L
65794-96-9	3+4-Methylphenols	80.0	U	21.6	80.0	100	ug/L
67-72-1	Hexachloroethane	40.0	U	16.4	40.0	50.0	ug/L
98-95-3	Nitrobenzene	40.0	U	17.2	40.0	50.0	ug/L
87-68-3	Hexachlorobutadiene	40.0	U	19.3	40.0	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	40.0	U	15.2	40.0	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	40.0	U	15.7	40.0	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	40.0	U	25.4	40.0	50.0	ug/L
118-74-1	Hexachlorobenzene	40.0	U	19.1	40.0	50.0	ug/L
87-86-5	Pentachlorophenol	80.0	U	25.5	80.0	100	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	137		19 - 119		91%	SPK: 150
13127-88-3	Phenol-d6	133		10 - 130		88%	SPK: 150
4165-60-0	Nitrobenzene-d5	73.3		44 - 120		73%	SPK: 100
321-60-8	2-Fluorobiphenyl	77.2		44 - 119		77%	SPK: 100
118-79-6	2,4,6-Tribromophenol	137		43 - 140		91%	SPK: 150
1718-51-0	Terphenyl-d14	80.2		50 - 134		80%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	16100	8.367				
1146-65-2	Naphthalene-d8	67700	11.204				
15067-26-2	Acenaphthene-d10	58600	14.981				
1517-22-2	Phenanthrene-d10	164000	17.719				
1719-03-5	Chrysene-d12	162000	22.031				
1520-96-3	Perylene-d12	163000	25.538				

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152612TB	SDG No.:	O2643
Lab Sample ID:	PB152612TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057408.D	1	05/10/23 11:10	05/12/23 13:57	PB152709

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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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152613TB	SDG No.:	O2643
Lab Sample ID:	PB152613TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057429.D	1	05/10/23 11:10	05/13/23 06:07	PB152709

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
110-86-1	Pyridine	40.0	U	17.8	40.0	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	40.0	U	14.3	40.0	50.0	ug/L
95-48-7	2-Methylphenol	40.0	U	20.6	40.0	50.0	ug/L
65794-96-9	3+4-Methylphenols	80.0	U	21.6	80.0	100	ug/L
67-72-1	Hexachloroethane	40.0	U	16.4	40.0	50.0	ug/L
98-95-3	Nitrobenzene	40.0	U	17.2	40.0	50.0	ug/L
87-68-3	Hexachlorobutadiene	40.0	U	19.3	40.0	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	40.0	U	15.2	40.0	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	40.0	U	15.7	40.0	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	40.0	U	25.4	40.0	50.0	ug/L
118-74-1	Hexachlorobenzene	40.0	U	19.1	40.0	50.0	ug/L
87-86-5	Pentachlorophenol	80.0	U	25.5	80.0	100	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	146		19 - 119		97%	SPK: 150
13127-88-3	Phenol-d6	141		10 - 130		94%	SPK: 150
4165-60-0	Nitrobenzene-d5	82.3		44 - 120		82%	SPK: 100
321-60-8	2-Fluorobiphenyl	89.8		44 - 119		90%	SPK: 100
118-79-6	2,4,6-Tribromophenol	156		43 - 140		104%	SPK: 150
1718-51-0	Terphenyl-d14	89.8		50 - 134		90%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	15500	8.364				
1146-65-2	Naphthalene-d8	61700	11.201				
15067-26-2	Acenaphthene-d10	49700	14.973				
1517-22-2	Phenanthrene-d10	139000	17.716				
1719-03-5	Chrysene-d12	133000	22.022				
1520-96-3	Perylene-d12	137000	25.523				

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152613TB	SDG No.:	O2643
Lab Sample ID:	PB152613TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG057429.D	1	05/10/23 11:10	05/13/23 06:07	PB152709

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
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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:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP BNA	8270E		05/10/23	05/12/23	
O2643-03	**FSND-IDW-AQ-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP BNA	8270E		05/10/23	05/12/23	

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Hit Summary Sheet
SW-846

SDG No.: O2643 **Order ID:** O2643

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 :									

Total Concentration: 0.000

SAMPLE DATA

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Analytical Method:	SW8081	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Pesticide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	SW3541B		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL082662.D	1	05/10/23 12:06	05/11/23 17:54	PB152710

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
58-89-9	gamma-BHC (Lindane)	0.25	U	0.064	0.25	0.50	ug/L
76-44-8	Heptachlor	0.25	U	0.073	0.25	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.25	U	0.10	0.25	0.50	ug/L
72-20-8	Endrin	0.10	U	0.043	0.10	0.50	ug/L
72-43-5	Methoxychlor	0.25	U	0.066	0.25	0.50	ug/L
8001-35-2	Toxaphene	5.00	U	1.80	5.00	10.0	ug/L
57-74-9	Chlordane	2.50	U	0.97	2.50	5.00	ug/L
SURROGATES							
2051-24-3	Decachlorobiphenyl	20.6		30 - 135		103%	SPK: 20
877-09-8	Tetrachloro-m-xylene	18.5		44 - 124		92%	SPK: 20

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:	
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152612TB	SDG No.:	O2643
Lab Sample ID:	PB152612TB	Matrix:	TCLP
Analytical Method:	SW8081	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Pesticide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	SW3541B		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL082665.D	1	05/10/23 12:06	05/11/23 18:37	PB152710

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
58-89-9	gamma-BHC (Lindane)	0.25	U	0.064	0.25	0.50	ug/L
76-44-8	Heptachlor	0.25	U	0.073	0.25	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.25	U	0.10	0.25	0.50	ug/L
72-20-8	Endrin	0.10	U	0.043	0.10	0.50	ug/L
72-43-5	Methoxychlor	0.25	U	0.066	0.25	0.50	ug/L
8001-35-2	Toxaphene	5.00	U	1.80	5.00	10.0	ug/L
57-74-9	Chlordane	2.50	U	0.97	2.50	5.00	ug/L
SURROGATES							
2051-24-3	Decachlorobiphenyl	19.8		30 - 135		99%	SPK: 20
877-09-8	Tetrachloro-m-xylene	18.1		44 - 124		91%	SPK: 20

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
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J = Estimated Value
B = Analyte Found in Associated Method Blank
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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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LAB CHRONICLE

OrderID:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP Herbicide	8151A		05/10/23	05/10/23	
			TCLP Pesticide	8081B		05/10/23	05/11/23	
O2643-03	**FSND-IDW-AQ-05042023**	**WATER**			**05/04/23**			**05/05/23**
			PCB	8082A		05/08/23	05/09/23	

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Hit Summary Sheet
SW-846

SDG No.: O2643 **Order ID:** O2643

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 :									

Total Concentration: 0.000

SAMPLE DATA

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-AQ-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-03	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO094835.D	1	05/08/23 08:56	05/09/23 00:26	PB152626

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	0.40	U	0.15	0.40	0.50	ug/L
11104-28-2	Aroclor-1221	0.40	U	0.22	0.40	0.50	ug/L
11141-16-5	Aroclor-1232	0.40	U	0.18	0.40	0.50	ug/L
53469-21-9	Aroclor-1242	0.40	U	0.18	0.40	0.50	ug/L
12672-29-6	Aroclor-1248	0.40	U	0.15	0.40	0.50	ug/L
11097-69-1	Aroclor-1254	0.40	U	0.15	0.40	0.50	ug/L
37324-23-5	Aroclor-1262	0.40	U	0.16	0.40	0.50	ug/L
11100-14-4	Aroclor-1268	0.40	U	0.13	0.40	0.50	ug/L
11096-82-5	Aroclor-1260	0.40	U	0.16	0.40	0.50	ug/L
SURROGATES							
877-09-8	Tetrachloro-m-xylene	16.7		35 - 137		83%	SPK: 20
2051-24-3	Decachlorobiphenyl	11.5		40 - 135		58%	SPK: 20

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:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-03	**FSND-IDW-AQ-05042023**	**WATER**			**05/04/23**			**05/05/23**
			PCB	8082A		05/08/23	05/09/23	

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: O2643 **Order ID:** O2643

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 :									

Total Concentration: 0.000

SAMPLE DATA

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	8151A		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022972.D	1	05/10/23 11:35	05/10/23 21:33	PB152711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
94-75-7	2,4-D	15.0	U	5.70	15.0	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	15.0	U	5.40	15.0	20.0	ug/L
SURROGATES							
19719-28-9	2,4-DCAA	583		32 - 138		117%	SPK: 500

Comments:

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M = MS/MSD acceptance criteria did not meet requirements

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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

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	
Project:	Scotia, NY - Annual Testing	Date Received:	05/10/23
Client Sample ID:	PB152612TB	SDG No.:	O2643
Lab Sample ID:	PB152612TB	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	8151A		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022993.D	1	05/10/23 11:35	05/11/23 14:58	PB152711

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
94-75-7	2,4-D	15.0	U	5.70	15.0	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	15.0	U	5.40	15.0	20.0	ug/L
SURROGATES							
19719-28-9	2,4-DCAA	666		32 - 138		133%	SPK: 500

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
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B = Analyte Found in Associated Method Blank
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() = Laboratory InHouse Limit

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LAB CHRONICLE

OrderID:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP Herbicide	8151A		05/10/23	05/10/23	
			TCLP Pesticide	8081B		05/10/23	05/10/23	
O2643-03	**FSND-IDW-AQ-05042023**	**WATER**			**05/04/23**			**05/05/23**
			PCB	8082A		05/08/23	05/09/23	

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Hit Summary Sheet
SW-846

SDG No.: O2643 **Order ID:** O2643

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-IDW-S-05042023									
O2643-01	FSND-IDW-S-05042023	TCLP	Barium	482	J	39.2	125	500	ug/L
O2643-01	FSND-IDW-S-05042023	TCLP	Cadmium	1.09	J	1.00	7.50	30.0	ug/L
Client ID : FSND-IDW-AQ-05042023									
O2643-03	FSND-IDW-AQ-05042023	TCLP	Barium	428	J	39.2	125	500	ug/L
O2643-03	FSND-IDW-AQ-05042023	TCLP	Chromium	454		8.00	25.0	50.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-S-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-01	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	80.0	U	1	34.8	80.0	100	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7440-39-3	Barium	482	J	1	39.2	125	500	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7440-43-9	Cadmium	1.09	J	1	1.00	7.50	30.0	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7440-47-3	Chromium	25.0	U	1	8.00	25.0	50.0	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7439-92-1	Lead	48.0	U	1	35.1	48.0	60.0	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7439-97-6	Mercury	1.60	U	1	0.78	1.60	2.00	ug/L	05/08/23 11:25	05/08/23 16:13	SW7470A	
7782-49-2	Selenium	80.0	U	1	58.8	80.0	100	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050
7440-22-4	Silver	25.0	U	1	6.60	25.0	50.0	ug/L	05/08/23 13:30	05/11/23 13:28	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP METALS				

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:	05/04/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/05/23
Client Sample ID:	FSND-IDW-AQ-05042023	SDG No.:	O2643
Lab Sample ID:	O2643-03	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	80.0	U	1	34.8	80.0	100	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7440-39-3	Barium	428	J	1	39.2	125	500	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7440-43-9	Cadmium	7.50	U	1	1.00	7.50	30.0	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7440-47-3	Chromium	454		1	8.00	25.0	50.0	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7439-92-1	Lead	48.0	U	1	35.1	48.0	60.0	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7439-97-6	Mercury	1.60	U	1	0.78	1.60	2.00	ug/L	05/08/23 11:25	05/08/23 17:11	SW7470A	
7782-49-2	Selenium	80.0	U	1	58.8	80.0	100	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050
7440-22-4	Silver	25.0	U	1	6.60	25.0	50.0	ug/L	05/08/23 13:30	05/11/23 13:32	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP METALS				

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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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2643	**OrderDate:**	5/5/2023 10:02:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	O11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2643-01	**FSND-IDW-S-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP ICP Metals	6010D		05/08/23	05/11/23	
			TCLP Mercury	7470A		05/08/23	05/08/23	
O2643-03	**FSND-IDW-AQ-05042023**	**TCLP**			**05/04/23**			**05/05/23**
			TCLP ICP Metals	6010D		05/08/23	05/11/23	
			TCLP Mercury	7470A		05/08/23	05/08/23	

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. 02643
COC Number 2038387

12
12.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 209 W Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Jim Hayward
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Scotia Navy Depot
PROJECT NO.: 160530104 LOCATION: Scotia, NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaest.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: Northeastap@eaest.com PO#: 160530104 (0029/0003)
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) 10 DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 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 EQIS, NYSDEC

ANALYSIS

1 VOC-TCL w/ 10 TICs
2 TCLP BNA
3 TCLP ZHE Extraction
4 TCLP VOA
5 TCLP metals Mercury
6 TCLP Herbicides/Pesticides
7 PCB
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			A						← Specify Preservatives: A-HCl, B-HN03, C-H2SO4, D-NaOH, E-ICE, F-OTHER
1.	FSND-EQB-02-05042023	W		X	5/4/23	1600	2	X									
2.	FSND-EDW-5-05042023	S	X		5/4/23	1600	5		X	X	X	X	X				
3.	FSND-IDW-AQ-05042023	W	X		5/4/23	1645	5		X		X	X		X			
4.	FSND-PRO-06-79-05042023	W		X	5/4/23	1046	3	X									
5.	FSND-~~EB~~-EQB-01-05032023	W		X	5/3/23	1600	2	X									
6.	FSND-PRO-07-90-05032023	W		X	5/3/23	1203	6	X									MS MSD
7.	FSND-PRO-06-99-05042023	W		X	5/4/23	1334	2	X									
8.	FSND-PRO-07-99-05032023	W		X	5/3/23	1316	2	X									
9.	FSND-DUP-01-05032023	W		X	5/3/23	-	2	X									
10.	TB	W		X	4/24/23	-	2	X									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	1830 5/4/2023	1.
2.	9:30 5/5/23	2.
3.		3.

Conditions of bottles or coolers at receipt: ☒ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.3 °C
Comments: TB #1

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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 : O2643 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/5/2023 10:02:00 AM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 5/5/2023 9:30:00 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
O2643-02	FSND-EQB-02-05042023	Water	05/04/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-04	FSND-PRO-06-79-05042023	Water	05/04/2023	10:46					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-05	FSND-EQB-01-05032023	Water	05/03/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-06	FSND-PRO-07-90-05032023	Water	05/03/2023	12:03					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-07	O2643-06MS	Water	05/03/2023	12:03					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-08	O2643-06MSD	Water	05/03/2023	12:03					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-09	FSND-PRO-06-99-05042023	Water	05/03/2023	13:34					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-10	FSND-PRO-07-99-05032023	Water	05/03/2023	13:16					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2643-11	FSND-DUP-01-05032023	Water	05/03/2023	00:00					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O2643 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/5/2023 10:02:00 AM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 5/5/2023 9:30:00 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
O2643-12	TB	Water	05/03/2023	00:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days

Relinguished By :
Date / Time : 5/5/23 11:15

Received By : Sam
Date / Time : 05/05/23 11:15 Dept 4

Storage Area : VOA Refridgerator Room

CHEMTECH

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 : O2751

ATTENTION : Jim Hayward

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

Laboratory Certification ID # 20012

Table Of Contents for O2751

1) Signature Page 3

2) Case Narrative 4

2.1) VOC-TCLVOA-10- Case Narrative 4

3) Qualifier Page 6

4) QA Checklist 7

5) VOC-TCLVOA-10 Data 8

6) Shipping Document 70

6.1) CHAIN OF CUSTODY 71

6.2) Lab Certificate 73

6.3) Internal COC 74

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Cover Page

Order ID : O2751

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O2751-01	FSND-PRO-01-70-05052023
O2751-02	FSND-PRO-01-89-05062023
O2751-03	FSND-PRO-01-99-05062023
O2751-04	FSND-PRO-03-71-05072023
O2751-05	FSND-PRO-03-89-05072023
O2751-06	FSND-PRO-02-71-05082023
O2751-07	FSND-PRO-02-81-05082023
O2751-08	FSND-PRO-04-71-05092023
O2751-09	FSND-PRO-04-81-05092023
O2751-10	FSND-DUP-02-05062023
O2751-11	FSND-EQB-03-05052023
O2751-12	FSND-EQB-04-05062023
O2751-13	FSND-EQB-05-05072023
O2751-14	FSND-EQB-06-05082023
O2751-15	FSND-EQB-07-05092023
O2751-16	FSND-TB-01-05102023

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, May 24, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH
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CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2751
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
16 Water samples were received on 05/11/2023.

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.
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 Initial Calibration met the requirements .

The Continuous Calibration File ID VX035652.D met the requirements except for Chloromethane is failing marginally low therefore no corrective action taken.

The Tuning criteria met requirements.

Samples FSND-PRO-01-89-05062023, FSND-PRO-02-71-05082023 were diluted due to high concentrations.

E. Additional Comments:
The Sample #FSND-EQB-05-05072023 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1.

Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

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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 12:39 pm, May 24, 2023

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: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (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 #: O2751

	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:** 05/22/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:39 pm, May 24, 2023

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

Hit Summary Sheet
SW-846

SDG No.: O2751

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-PRO-01-70-05052023**									
O2751-01	FSND-PRO-01-70-(	Water	Acetone		5.30		1.20	3.80	5.00	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Carbon Disulfide		0.54	J	0.27	0.75	1.00	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Trichloroethene		93.7		0.26	0.75	1.00	ug/L
			Total Voc :		99.5					
O2751-01	FSND-PRO-01-70-(	Water	Hexanal	*	130	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Pentanal	*	14.7	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Heptanal	*	6.50	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Propanal	*	17.0	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Octanal	*	5.30	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	2-Octenal, (E)-	*	8.70	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	2-Decenal, (E)-	*	9.00	J	0		0	ug/L
O2751-01	FSND-PRO-01-70-(	Water	Acrolein	*	7.10	J	6.00		25.0	ug/L
			Total Tics :		198					
			Total Concentration:		298					
Client ID:	**FSND-PRO-01-89-05062023**									
O2751-02	FSND-PRO-01-89-(	Water	1,1-Dichloroethene		1.10		0.21	0.75	1.00	ug/L
O2751-02	FSND-PRO-01-89-(	Water	Acetone		5.40		1.20	3.80	5.00	ug/L
O2751-02	FSND-PRO-01-89-(	Water	Carbon Disulfide		0.35	J	0.27	0.75	1.00	ug/L
O2751-02	FSND-PRO-01-89-(	Water	trans-1,2-Dichloroethene		0.65	J	0.17	0.50	1.00	ug/L
O2751-02	FSND-PRO-01-89-(	Water	cis-1,2-Dichloroethene		1.40		0.20	0.75	1.00	ug/L
O2751-02	FSND-PRO-01-89-(	Water	Trichloroethene		690	E	0.26	0.75	1.00	ug/L
			Total Voc :		699					
			Total Concentration:		699					
Client ID:	**FSND-PRO-01-89-05062023DL**									
O2751-02DL	FSND-PRO-01-89-(	Water	Trichloroethene		570	D	2.60	7.50	10.0	ug/L
			Total Voc :		570					
			Total Concentration:		570					
Client ID:	**FSND-PRO-01-99-05062023**									
O2751-03	FSND-PRO-01-99-(	Water	1,1-Dichloroethene		1.80		0.21	0.75	1.00	ug/L
O2751-03	FSND-PRO-01-99-(	Water	Acetone		4.40	J	1.20	3.80	5.00	ug/L
O2751-03	FSND-PRO-01-99-(	Water	Trichloroethene		0.59	J	0.26	0.75	1.00	ug/L
			Total Voc :		6.79					
O2751-03	FSND-PRO-01-99-(	Water	Hexanal	*	5.90	J	0		0	ug/L
			Total Tics :		5.90					
			Total Concentration:		12.7					
Client ID:	**FSND-PRO-03-71-05072023**									
O2751-04	FSND-PRO-03-71-(	Water	Chloromethane		4.20		0.25	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	1,1-Dichloroethene		0.23	J	0.21	0.75	1.00	ug/L

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Hit Summary Sheet
SW-846

SDG No.: O2751

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2751-04	FSND-PRO-03-71-(	Water	Acetone		590		1.20	3.80	5.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Carbon Disulfide		0.29	J	0.27	0.75	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Methyl Acetate		18.7		0.36	0.75	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	1,1-Dichloroethane		0.23	J	0.16	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Butanone		190		1.20	2.50	5.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	cis-1,2-Dichloroethene		1.80		0.20	0.75	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Chloroform		0.28	J	0.14	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	1,1,1-Trichloroethane		4.80		0.14	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Benzene		22.9		0.12	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Trichloroethene		63.2		0.26	0.75	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Toluene		17.2		0.14	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Hexanone		33.9		0.98	2.50	5.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Tetrachloroethene		3.60		0.17	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Ethyl Benzene		3.60		0.13	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	m/p-Xylenes		1.70	J	0.31	1.00	2.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	o-Xylene		3.20		0.15	0.50	1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Styrene		2.60		0.13	0.50	1.00	ug/L
			Total Voc :		962					
O2751-04	FSND-PRO-03-71-(	Water	unknown1.459	*	76.7	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Hexanal	*	74.3	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Heptanone	*	34.5	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Pentanal	*	30.9	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Octanone	*	39.9	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Heptanal	*	39.8	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Octanal	*	41.1	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Nonanal	*	55.6	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Decanone	*	24.4	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	2-Nonanone	*	33.2	J	0		0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Tetrahydrofuran	*	6.80	J	0.85		5.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Acrolein	*	400	J	6.00		25.0	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Acrylonitrile	*	1.10	J	0.80		5.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	n-propylbenzene	*	2.10	J	0.15		1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	p-Isopropyltoluene	*	0.60	J	0.16		1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	n-Butylbenzene	*	1.60	J	0.24		1.00	ug/L
O2751-04	FSND-PRO-03-71-(	Water	Naphthalene	*	2.80	J	0.63		1.00	ug/L
			Total Tics :		865					
			Total Concentration:		1830					

Client ID: **FSND-PRO-03-89-05072023**

Hit Summary Sheet
SW-846

SDG No.: O2751

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2751-05	FSND-PRO-03-89-(	Water	Acetone		5.10		1.20	3.80	5.00	ug/L
O2751-05	FSND-PRO-03-89-(	Water	2-Butanone		1.60	J	1.20	2.50	5.00	ug/L
O2751-05	FSND-PRO-03-89-(	Water	Benzene		0.39	J	0.12	0.50	1.00	ug/L
O2751-05	FSND-PRO-03-89-(	Water	Trichloroethene		8.30		0.26	0.75	1.00	ug/L
O2751-05	FSND-PRO-03-89-(	Water	Toluene		0.60	J	0.14	0.50	1.00	ug/L
			Total Voc :		16.0					
O2751-05	FSND-PRO-03-89-(	Water	Hexanal	*	7.00	J	0		0	ug/L
O2751-05	FSND-PRO-03-89-(	Water	Propene	*	24.6	J	0		0	ug/L
O2751-05	FSND-PRO-03-89-(	Water	1-Propene, 2-methyl-	*	15.1	J	0		0	ug/L
			Total Tics :		46.7					
			Total Concentration:		62.7					
Client ID:	**FSND-PRO-02-71-05082023**									
O2751-06	FSND-PRO-02-71-(	Water	1,1-Dichloroethene		0.33	J	0.21	0.75	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	Acetone		1.70	J	1.20	3.80	5.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	trans-1,2-Dichloroethene		0.38	J	0.17	0.50	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	Carbon Tetrachloride		0.53	J	0.13	0.50	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	cis-1,2-Dichloroethene		2.80		0.20	0.75	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	Chloroform		0.41	J	0.14	0.50	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	1,1,1-Trichloroethane		9.90		0.14	0.50	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	Trichloroethene		150	E	0.26	0.75	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	1,1,2-Trichloroethane		0.29	J	0.13	0.50	1.00	ug/L
O2751-06	FSND-PRO-02-71-(	Water	Tetrachloroethene		9.00		0.17	0.50	1.00	ug/L
			Total Voc :		175					
			Total Concentration:		175					
Client ID:	**FSND-PRO-02-71-05082023DL**									
O2751-06DL	FSND-PRO-02-71-(	Water	Trichloroethene		120	D	1.00	3.00	4.00	ug/L
O2751-06DL	FSND-PRO-02-71-(	Water	Tetrachloroethene		7.00	D	0.68	2.00	4.00	ug/L
			Total Voc :		127					
			Total Concentration:		127					
Client ID:	**FSND-PRO-02-81-05082023**									
O2751-07	FSND-PRO-02-81-(	Water	Trichloroethene		4.20		0.26	0.75	1.00	ug/L
			Total Voc :		4.20					
			Total Concentration:		4.20					
Client ID:	**FSND-PRO-04-71-05092023**									
O2751-08	FSND-PRO-04-71-(	Water	Acetone		1.40	J	1.20	3.80	5.00	ug/L
O2751-08	FSND-PRO-04-71-(	Water	Trichloroethene		79.3		0.26	0.75	1.00	ug/L
O2751-08	FSND-PRO-04-71-(	Water	Tetrachloroethene		0.38	J	0.17	0.50	1.00	ug/L
			Total Voc :		81.1					
			Total Concentration:		81.1					
Client ID:	**FSND-PRO-04-81-05092023**									

Hit Summary Sheet
SW-846

SDG No.: O2751

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2751-09	FSND-PRO-04-81-(	Water	1,1-Dichloroethene		0.85	J	0.21	0.75	1.00	ug/L
O2751-09	FSND-PRO-04-81-(	Water	Acetone		2.60	J	1.20	3.80	5.00	ug/L
O2751-09	FSND-PRO-04-81-(	Water	Carbon Disulfide		0.31	J	0.27	0.75	1.00	ug/L
O2751-09	FSND-PRO-04-81-(	Water	trans-1,2-Dichloroethene		0.37	J	0.17	0.50	1.00	ug/L
O2751-09	FSND-PRO-04-81-(	Water	cis-1,2-Dichloroethene		1.60		0.20	0.75	1.00	ug/L
O2751-09	FSND-PRO-04-81-(	Water	Trichloroethene		61.1		0.26	0.75	1.00	ug/L
			Total Voc :		66.8					
O2751-09	FSND-PRO-04-81-(	Water	Propene	*	14.8	J	0		0	ug/L
O2751-09	FSND-PRO-04-81-(	Water	1-Propene, 2-methyl-	*	7.50	J	0		0	ug/L
			Total Tics :		22.3					
			Total Concentration:		89.1					
Client ID:	**FSND-DUP-02-05062023**									
O2751-10	FSND-DUP-02-050	Water	1,1-Dichloroethene		1.20		0.21	0.75	1.00	ug/L
O2751-10	FSND-DUP-02-050	Water	Acetone		3.40	J	1.20	3.80	5.00	ug/L
O2751-10	FSND-DUP-02-050	Water	Trichloroethene		0.98	J	0.26	0.75	1.00	ug/L
			Total Voc :		5.58					
			Total Concentration:		5.58					
Client ID:	**FSND-EQB-03-05052023**									
O2751-11	FSND-EQB-03-050	Water	Acetone		2.40	J	1.20	3.80	5.00	ug/L
O2751-11	FSND-EQB-03-050	Water	Trichloroethene		0.52	J	0.26	0.75	1.00	ug/L
O2751-11	FSND-EQB-03-050	Water	Toluene		0.25	J	0.14	0.50	1.00	ug/L
			Total Voc :		3.17					
O2751-11	FSND-EQB-03-050	Water	Ethyl Acetate	*	11.0	J	0.37		1.00	ug/L
O2751-11	FSND-EQB-03-050	Water	Tetrahydrofuran	*	2.20	J	0.85		5.00	ug/L
			Total Tics :		13.2					
			Total Concentration:		16.4					
Client ID:	**FSND-EQB-04-05062023**									
O2751-12	FSND-EQB-04-050	Water	Acetone		2.10	J	1.20	3.80	5.00	ug/L
O2751-12	FSND-EQB-04-050	Water	Trichloroethene		0.46	J	0.26	0.75	1.00	ug/L
O2751-12	FSND-EQB-04-050	Water	Toluene		0.23	J	0.14	0.50	1.00	ug/L
			Total Voc :		2.79					
O2751-12	FSND-EQB-04-050	Water	Ethyl Acetate	*	9.40	J	0.37		1.00	ug/L
O2751-12	FSND-EQB-04-050	Water	Tetrahydrofuran	*	1.90	J	0.85		5.00	ug/L
			Total Tics :		11.3					
			Total Concentration:		14.1					
Client ID:	**FSND-EQB-05-05072023**									
O2751-13	FSND-EQB-05-050	Water	Acetone		2.20	J	1.20	3.80	5.00	ug/L
			Total Voc :		2.20					
O2751-13	FSND-EQB-05-050	Water	Ethyl Acetate	*	11.7	J	0.37		1.00	ug/L
			Total Tics :		11.7					

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Hit Summary Sheet
SW-846

SDG No.: O2751

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
			Total Concentration:		13.9					
Client ID:	**FSND-EQB-06-05082023**									
O2751-14	FSND-EQB-06-050	Water	Acetone		3.10	J	1.20	3.80	5.00	ug/L
O2751-14	FSND-EQB-06-050	Water	Trichloroethene		0.27	J	0.26	0.75	1.00	ug/L
			Total Voc :		3.37					
O2751-14	FSND-EQB-06-050	Water	Ethyl Acetate	*	11.3	J	0.37		1.00	ug/L
			Total Tics :		11.3					
			Total Concentration:		14.7					
Client ID:	**FSND-EQB-07-05092023**									
O2751-15	FSND-EQB-07-050	Water	Acetone		2.40	J	1.20	3.80	5.00	ug/L
			Total Voc :		2.40					
O2751-15	FSND-EQB-07-050	Water	Ethyl Acetate	*	11.8	J	0.37		1.00	ug/L
O2751-15	FSND-EQB-07-050	Water	Tetrahydrofuran	*	2.00	J	0.85		5.00	ug/L
			Total Tics :		13.8					
			Total Concentration:		16.2					

SAMPLE DATA

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-70-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035659.D	1		05/15/23 12:53	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	5.30		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.54	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	93.7		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-70-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035659.D	1		05/15/23 12:53	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.4		81 - 118		99%	SPK: 50
1868-53-7	Dibromofluoromethane	48.5		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.4		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		85 - 114		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	194000	5.55				
540-36-3	1,4-Difluorobenzene	360000	6.763				
3114-55-4	Chlorobenzene-d5	339000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	161000	12.018				
TENTATIVE IDENTIFIED COMPOUNDS							
107-02-8	Acrolein	7.10	J			2.24	ug/L
000123-38-6	Propanal	17.0	J			2.29	ug/L
000110-62-3	Pentanal	14.7	J			7.57	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-70-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035659.D	1		05/15/23 12:53	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
000066-25-1	Hexanal	130	J			9.52	ug/L
000111-71-7	Heptanal	6.50	J			10.9	ug/L
000124-13-0	Octanal	5.30	J			11.9	ug/L
002548-87-0	2-Octenal, (E)-	8.70	J			12.6	ug/L
003913-81-3	2-Decenal, (E)-	9.00	J			14.3	ug/L

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:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035660.D	1		05/15/23 13:16	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	1.10		0.21	0.75	1.00	ug/L
67-64-1	Acetone	5.40		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.35	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.65	J	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.40		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	690	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035660.D	1		05/15/23 13:16	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.1		81 - 118		94%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.0		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.0		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	189000	5.55				
540-36-3	1,4-Difluorobenzene	342000	6.763				
3114-55-4	Chlorobenzene-d5	309000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	139000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035660.D	1		05/15/23 13:16	VX051523

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:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023DL	SDG No.:	O2751
Lab Sample ID:	O2751-02DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035689.D	10		05/16/23 14:29	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5.00	UD	1.40	5.00	10.0	ug/L
74-87-3	Chloromethane	5.00	UD	2.50	5.00	10.0	ug/L
75-01-4	Vinyl Chloride	7.50	UD	2.50	7.50	10.0	ug/L
74-83-9	Bromomethane	37.5	UD	15.5	37.5	50.0	ug/L
75-00-3	Chloroethane	7.50	UD	2.80	7.50	10.0	ug/L
75-69-4	Trichlorofluoromethane	5.00	UD	1.30	5.00	10.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5.00	UD	2.10	5.00	10.0	ug/L
75-35-4	1,1-Dichloroethene	7.50	UD	2.10	7.50	10.0	ug/L
67-64-1	Acetone	37.5	UD	11.5	37.5	50.0	ug/L
75-15-0	Carbon Disulfide	7.50	UD	2.70	7.50	10.0	ug/L
1634-04-4	Methyl tert-butyl Ether	5.00	UD	1.40	5.00	10.0	ug/L
79-20-9	Methyl Acetate	7.50	UD	3.60	7.50	10.0	ug/L
75-09-2	Methylene Chloride	5.00	UD	5.00	5.00	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	5.00	UD	1.70	5.00	10.0	ug/L
75-34-3	1,1-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
110-82-7	Cyclohexane	25.0	UD	16.0	25.0	50.0	ug/L
78-93-3	2-Butanone	25.0	UD	12.1	25.0	50.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	UD	1.30	5.00	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	7.50	UD	2.00	7.50	10.0	ug/L
74-97-5	Bromochloromethane	5.00	UD	1.40	5.00	10.0	ug/L
67-66-3	Chloroform	5.00	UD	1.40	5.00	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	5.00	UD	1.40	5.00	10.0	ug/L
108-87-2	Methylcyclohexane	5.00	UD	1.60	5.00	10.0	ug/L
71-43-2	Benzene	5.00	UD	1.20	5.00	10.0	ug/L
107-06-2	1,2-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
79-01-6	Trichloroethene	570	D	2.60	7.50	10.0	ug/L
78-87-5	1,2-Dichloropropane	5.00	UD	1.50	5.00	10.0	ug/L
75-27-4	Bromodichloromethane	5.00	UD	1.50	5.00	10.0	ug/L
108-10-1	4-Methyl-2-Pentanone	25.0	UD	7.40	25.0	50.0	ug/L
108-88-3	Toluene	5.00	UD	1.40	5.00	10.0	ug/L
10061-02-6	t-1,3-Dichloropropene	5.00	UD	1.70	5.00	10.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	5.00	UD	1.50	5.00	10.0	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023DL	SDG No.:	O2751
Lab Sample ID:	O2751-02DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035689.D	10		05/16/23 14:29	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.00	UD	1.30	5.00	10.0	ug/L
591-78-6	2-Hexanone	25.0	UD	9.80	25.0	50.0	ug/L
124-48-1	Dibromochloromethane	5.00	UD	1.50	5.00	10.0	ug/L
106-93-4	1,2-Dibromoethane	5.00	UD	1.30	5.00	10.0	ug/L
127-18-4	Tetrachloroethene	5.00	UD	1.70	5.00	10.0	ug/L
108-90-7	Chlorobenzene	5.00	UD	1.20	5.00	10.0	ug/L
100-41-4	Ethyl Benzene	5.00	UD	1.30	5.00	10.0	ug/L
179601-23-1	m/p-Xylenes	10.0	UD	3.10	10.0	20.0	ug/L
95-47-6	o-Xylene	5.00	UD	1.50	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	1.50	5.00	10.0	ug/L
98-82-8	Isopropylbenzene	5.00	UD	1.30	5.00	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5.00	UD	1.50	5.00	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	5.00	UD	2.30	5.00	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	UD	2.40	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	4.30	7.50	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	UD	4.30	5.00	10.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	7.50	UD	5.50	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	48.7		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.0		85 - 114		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	186000	5.55				
540-36-3	1,4-Difluorobenzene	340000	6.763				
3114-55-4	Chlorobenzene-d5	315000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	142000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-89-05062023DL	SDG No.:	O2751
Lab Sample ID:	O2751-02DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035689.D	10		05/16/23 14:29	VX051623

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:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-99-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-03	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035692.D	1		05/16/23 15:39	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	1.80		0.21	0.75	1.00	ug/L
67-64-1	Acetone	4.40	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.59	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-99-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-03	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035692.D	1		05/16/23 15:39	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.4		81 - 118		99%	SPK: 50
1868-53-7	Dibromofluoromethane	48.0		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.5		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.7		85 - 114		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	178000	5.55				
540-36-3	1,4-Difluorobenzene	332000	6.763				
3114-55-4	Chlorobenzene-d5	306000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	144000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000066-25-1	Hexanal	5.90	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-01-99-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-03	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035692.D	1		05/16/23 15:39	VX051623

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:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-71-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035662.D	1		05/15/23 14:03	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	4.20		0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	J	0.21	0.75	1.00	ug/L
67-64-1	Acetone	590		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.29	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	18.7		0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.23	J	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	190		1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.80		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.28	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	4.80		0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	22.9		0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	63.2		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	17.2		0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-71-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035662.D	1		05/15/23 14:03	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	33.9		0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	3.60		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	3.60		0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.70	J	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	3.20		0.15	0.50	1.00	ug/L
100-42-5	Styrene	2.60		0.13	0.50	1.00	ug/L
75-25-2	Bromoform	0.50	U	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	49.1		80 - 119		98%	SPK: 50
2037-26-5	Toluene-d8	49.1		89 - 112		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.5		85 - 114		105%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	202000	5.55				
540-36-3	1,4-Difluorobenzene	370000	6.757				
3114-55-4	Chlorobenzene-d5	346000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	170000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.459	76.7	J			1.46	ug/L
107-02-8	Acrolein	400	J			2.24	ug/L
107-13-1	Acrylonitrile	1.10	J			3.08	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-71-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035662.D	1		05/15/23 14:03	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
109-99-9	Tetrahydrofuran	6.80	J			5.01	ug/L
000110-62-3	Pentanal	30.9	J			7.57	ug/L
000066-25-1	Hexanal	74.3	J			9.52	ug/L
000110-43-0	2-Heptanone	34.5	J			10.8	ug/L
000111-71-7	Heptanal	39.8	J			10.9	ug/L
103-65-1	n-propylbenzene	2.10	J			11.3	ug/L
000111-13-7	2-Octanone	39.9	J			11.8	ug/L
000124-13-0	Octanal	41.1	J			11.9	ug/L
99-87-6	p-Isopropyltoluene	0.60	J			12.0	ug/L
104-51-8	n-Butylbenzene	1.60	J			12.3	ug/L
000821-55-6	2-Nonanone	33.2	J			12.8	ug/L
000124-19-6	Nonanal	55.6	J			12.9	ug/L
000693-54-9	2-Decanone	24.4	J			13.6	ug/L
91-20-3	Naphthalene	2.80	J			13.8	ug/L

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:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-89-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035663.D	1		05/15/23 14:26	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	1.60	J	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.39	J	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	8.30		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.60	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-89-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035663.D	1		05/15/23 14:26	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.7		81 - 118		95%	SPK: 50
1868-53-7	Dibromofluoromethane	48.1		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.2		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.0		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	189000	5.55				
540-36-3	1,4-Difluorobenzene	346000	6.763				
3114-55-4	Chlorobenzene-d5	313000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	139000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000115-07-1	Propene	24.6	J			1.14	ug/L
000115-11-7	1-Propene, 2-methyl-	15.1	J			1.36	ug/L
000066-25-1	Hexanal	7.00	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-03-89-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035663.D	1		05/15/23 14:26	VX051523

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:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035664.D	1		05/15/23 14:49	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.33	J	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.38	J	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.53	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	2.80		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.41	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	9.90		0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	150	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035664.D	1		05/15/23 14:49	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.29	J	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	9.00		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.8		81 - 118		98%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.0		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.3		85 - 114		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	186000	5.55				
540-36-3	1,4-Difluorobenzene	345000	6.763				
3114-55-4	Chlorobenzene-d5	318000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	141000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035664.D	1		05/15/23 14:49	VX051523

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:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023DL	SDG No.:	O2751
Lab Sample ID:	O2751-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035686.D	4		05/16/23 13:20	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.00	UD	0.56	2.00	4.00	ug/L
74-87-3	Chloromethane	2.00	UD	1.00	2.00	4.00	ug/L
75-01-4	Vinyl Chloride	3.00	UD	1.00	3.00	4.00	ug/L
74-83-9	Bromomethane	15.0	UD	6.20	15.0	20.0	ug/L
75-00-3	Chloroethane	3.00	UD	1.10	3.00	4.00	ug/L
75-69-4	Trichlorofluoromethane	2.00	UD	0.52	2.00	4.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.00	UD	0.84	2.00	4.00	ug/L
75-35-4	1,1-Dichloroethene	3.00	UD	0.84	3.00	4.00	ug/L
67-64-1	Acetone	15.0	UD	4.60	15.0	20.0	ug/L
75-15-0	Carbon Disulfide	3.00	UD	1.10	3.00	4.00	ug/L
1634-04-4	Methyl tert-butyl Ether	2.00	UD	0.56	2.00	4.00	ug/L
79-20-9	Methyl Acetate	3.00	UD	1.40	3.00	4.00	ug/L
75-09-2	Methylene Chloride	2.00	UD	2.00	2.00	4.00	ug/L
156-60-5	trans-1,2-Dichloroethene	2.00	UD	0.68	2.00	4.00	ug/L
75-34-3	1,1-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
110-82-7	Cyclohexane	10.0	UD	6.40	10.0	20.0	ug/L
78-93-3	2-Butanone	10.0	UD	4.80	10.0	20.0	ug/L
56-23-5	Carbon Tetrachloride	2.00	UD	0.52	2.00	4.00	ug/L
156-59-2	cis-1,2-Dichloroethene	3.00	UD	0.80	3.00	4.00	ug/L
74-97-5	Bromochloromethane	2.00	UD	0.56	2.00	4.00	ug/L
67-66-3	Chloroform	2.00	UD	0.56	2.00	4.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.00	UD	0.56	2.00	4.00	ug/L
108-87-2	Methylcyclohexane	2.00	UD	0.64	2.00	4.00	ug/L
71-43-2	Benzene	2.00	UD	0.48	2.00	4.00	ug/L
107-06-2	1,2-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
79-01-6	Trichloroethene	120	D	1.00	3.00	4.00	ug/L
78-87-5	1,2-Dichloropropane	2.00	UD	0.60	2.00	4.00	ug/L
75-27-4	Bromodichloromethane	2.00	UD	0.60	2.00	4.00	ug/L
108-10-1	4-Methyl-2-Pentanone	10.0	UD	3.00	10.0	20.0	ug/L
108-88-3	Toluene	2.00	UD	0.56	2.00	4.00	ug/L
10061-02-6	t-1,3-Dichloropropene	2.00	UD	0.68	2.00	4.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.00	UD	0.60	2.00	4.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023DL	SDG No.:	O2751
Lab Sample ID:	O2751-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035686.D	4		05/16/23 13:20	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.00	UD	0.52	2.00	4.00	ug/L
591-78-6	2-Hexanone	10.0	UD	3.90	10.0	20.0	ug/L
124-48-1	Dibromochloromethane	2.00	UD	0.60	2.00	4.00	ug/L
106-93-4	1,2-Dibromoethane	2.00	UD	0.52	2.00	4.00	ug/L
127-18-4	Tetrachloroethene	7.00	D	0.68	2.00	4.00	ug/L
108-90-7	Chlorobenzene	2.00	UD	0.48	2.00	4.00	ug/L
100-41-4	Ethyl Benzene	2.00	UD	0.52	2.00	4.00	ug/L
179601-23-1	m/p-Xylenes	4.00	UD	1.20	4.00	8.00	ug/L
95-47-6	o-Xylene	2.00	UD	0.60	2.00	4.00	ug/L
100-42-5	Styrene	2.00	UD	0.52	2.00	4.00	ug/L
75-25-2	Bromoform	2.00	UD	0.60	2.00	4.00	ug/L
98-82-8	Isopropylbenzene	2.00	UD	0.52	2.00	4.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.00	UD	0.60	2.00	4.00	ug/L
541-73-1	1,3-Dichlorobenzene	2.00	UD	0.92	2.00	4.00	ug/L
106-46-7	1,4-Dichlorobenzene	2.00	UD	0.96	2.00	4.00	ug/L
95-50-1	1,2-Dichlorobenzene	2.00	UD	0.68	2.00	4.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	3.00	UD	1.70	3.00	4.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.00	UD	1.70	2.00	4.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	3.00	UD	2.20	3.00	4.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.3		81 - 118		95%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.1		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	203000	5.55				
540-36-3	1,4-Difluorobenzene	368000	6.763				
3114-55-4	Chlorobenzene-d5	335000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	150000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-71-05082023DL	SDG No.:	O2751
Lab Sample ID:	O2751-06DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035686.D	4		05/16/23 13:20	VX051623

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:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-81-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035691.D	1		05/16/23 15:16	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	4.20		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-81-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035691.D	1		05/16/23 15:16	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.5		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	48.1		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.4		85 - 114		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	184000	5.55				
540-36-3	1,4-Difluorobenzene	342000	6.763				
3114-55-4	Chlorobenzene-d5	313000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	140000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-02-81-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035691.D	1		05/16/23 15:16	VX051623

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:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-71-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035666.D	1		05/15/23 15:36	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	79.3		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-71-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035666.D	1		05/15/23 15:36	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.38	J	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.9		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.0		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.3		85 - 114		97%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	188000	5.55				
540-36-3	1,4-Difluorobenzene	345000	6.763				
3114-55-4	Chlorobenzene-d5	315000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	137000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-71-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035666.D	1		05/15/23 15:36	VX051523

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:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-81-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035667.D	1		05/15/23 15:59	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.85	J	0.21	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	0.31	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.37	J	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.60		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	61.1		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-81-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035667.D	1		05/15/23 15:59	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	48.3		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.6		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.9		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	194000	5.55				
540-36-3	1,4-Difluorobenzene	357000	6.757				
3114-55-4	Chlorobenzene-d5	326000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	146000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000115-07-1	Propene	14.8	J			1.14	ug/L
000115-11-7	1-Propene, 2-methyl-	7.50	J			1.36	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-PRO-04-81-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035667.D	1		05/15/23 15:59	VX051523

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:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-DUP-02-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035668.D	1		05/15/23 16:22	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	1.20		0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.40	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.98	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-DUP-02-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035668.D	1		05/15/23 16:22	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.4		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	48.1		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.8		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	189000	5.55				
540-36-3	1,4-Difluorobenzene	350000	6.763				
3114-55-4	Chlorobenzene-d5	316000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	144000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-DUP-02-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035668.D	1		05/15/23 16:22	VX051523

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:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-03-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035669.D	1		05/15/23 16:45	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.40	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.52	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.25	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-03-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035669.D	1		05/15/23 16:45	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.6		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	48.0		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.6		85 - 114		97%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	184000	5.55				
540-36-3	1,4-Difluorobenzene	342000	6.763				
3114-55-4	Chlorobenzene-d5	305000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	138000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	11.0	J			4.71	ug/L
109-99-9	Tetrahydrofuran	2.20	J			5.04	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/05/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-03-05052023	SDG No.:	O2751
Lab Sample ID:	O2751-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035669.D	1		05/15/23 16:45	VX051523

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:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-04-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035670.D	1		05/15/23 17:09	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.46	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.23	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-04-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035670.D	1		05/15/23 17:09	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	47.7		81 - 118		95%	SPK: 50
1868-53-7	Dibromofluoromethane	47.1		80 - 119		94%	SPK: 50
2037-26-5	Toluene-d8	48.2		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.1		85 - 114		100%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	200000	5.55				
540-36-3	1,4-Difluorobenzene	370000	6.757				
3114-55-4	Chlorobenzene-d5	342000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	157000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	9.40	J			4.72	ug/L
109-99-9	Tetrahydrofuran	1.90	J			5.03	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/06/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-04-05062023	SDG No.:	O2751
Lab Sample ID:	O2751-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035670.D	1		05/15/23 17:09	VX051523

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:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-05-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035671.D	1		05/15/23 17:32	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-05-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035671.D	1		05/15/23 17:32	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	48.8		81 - 118		98%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.0		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.5		85 - 114		101%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	184000	5.556				
540-36-3	1,4-Difluorobenzene	341000	6.763				
3114-55-4	Chlorobenzene-d5	313000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	144000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	11.7	J			4.71	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/07/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-05-05072023	SDG No.:	O2751
Lab Sample ID:	O2751-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035671.D	1		05/15/23 17:32	VX051523

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:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-06-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035672.D	1		05/15/23 17:55	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.27	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-06-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035672.D	1		05/15/23 17:55	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	48.5		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	48.4		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.8		85 - 114		98%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	186000	5.556				
540-36-3	1,4-Difluorobenzene	341000	6.763				
3114-55-4	Chlorobenzene-d5	315000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	140000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	11.3	J			4.71	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/08/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-06-05082023	SDG No.:	O2751
Lab Sample ID:	O2751-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035672.D	1		05/15/23 17:55	VX051523

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:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-07-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035673.D	1		05/15/23 18:19	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.40	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-07-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035673.D	1		05/15/23 18:19	VX051523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	48.1		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.6		85 - 114		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	186000	5.55				
540-36-3	1,4-Difluorobenzene	337000	6.757				
3114-55-4	Chlorobenzene-d5	310000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	143000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	11.8	J			4.71	ug/L
109-99-9	Tetrahydrofuran	2.00	J			5.04	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/09/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-EQB-07-05092023	SDG No.:	O2751
Lab Sample ID:	O2751-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035673.D	1		05/15/23 18:19	VX051523

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:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-TB-01-05102023	SDG No.:	O2751
Lab Sample ID:	O2751-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035690.D	1		05/16/23 14:53	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-TB-01-05102023	SDG No.:	O2751
Lab Sample ID:	O2751-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035690.D	1		05/16/23 14:53	VX051623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	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	47.4		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	47.7		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.4		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	181000	5.556				
540-36-3	1,4-Difluorobenzene	336000	6.763				
3114-55-4	Chlorobenzene-d5	301000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	130000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/10/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/11/23
Client Sample ID:	FSND-TB-01-05102023	SDG No.:	O2751
Lab Sample ID:	O2751-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035690.D	1		05/16/23 14:53	VX051623

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:	O2751	**OrderDate:**	5/11/2023 9:53:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2751-01	**FSND-PRO-01-70-05052023**	**Water**			**05/05/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/15/23	
O2751-02	**FSND-PRO-01-89-05062023**	**Water**			**05/06/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/15/23	
O2751-02DL	**FSND-PRO-01-89-05062023DL**	**Water**			**05/06/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/16/23	
O2751-03	**FSND-PRO-01-99-05062023**	**Water**			**05/06/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/16/23	
O2751-04	**FSND-PRO-03-71-05072023**	**Water**			**05/07/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/15/23	
O2751-05	**FSND-PRO-03-89-05072023**	**Water**			**05/07/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/15/23	
O2751-06	**FSND-PRO-02-71-05082023**	**Water**			**05/08/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/15/23	
O2751-06DL	**FSND-PRO-02-71-05082023DL**	**Water**			**05/08/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/16/23	
O2751-07	**FSND-PRO-02-81-05082023**	**Water**			**05/08/23**			**05/11/23**
			VOC-TCLVOA-10	8260-Low			05/16/23	

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

LAB CHRONICLE

O2751-08	**FSND-PRO-04-71-05092023**	**Water**			**05/09/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-09	**FSND-PRO-04-81-05092023**	**Water**			**05/09/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-10	**FSND-DUP-02-05062023**	**Water**			**05/06/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-11	**FSND-EQB-03-05052023**	**Water**			**05/05/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-12	**FSND-EQB-04-05062023**	**Water**			**05/06/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-13	**FSND-EQB-05-05072023**	**Water**			**05/07/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-14	**FSND-EQB-06-05082023**	**Water**			**05/08/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-15	**FSND-EQB-07-05092023**	**Water**			**05/09/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/15/23	
O2751-16	**FSND-TB-01-051020203**	**Water**			**05/10/23**		**05/11/23**
			VOC-TCLVOA-10	8260-Low		05/16/23	

SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 02751

COC Number:

CLIENT INFORMATION

COMPANY: **EA Engineering**
ADDRESS: **269 West Jefferson Street**
CITY: **Syracuse** STATE: **NY** ZIP: **13202**
ATTENTION: **Lincoln Backman-Lowe**
PHONE: **(716) 364-7282** FAX:

PROJECT INFORMATION

PROJECT NAME: **Former Scotia Navy Depot - PRB Eval.**
PROJECT #: **160530104.0029.0003** LOCATION: **Scotia, NY**
PROJECT MANAGER: **Jim Hayward**
E-MAIL: **jhayward@eaest.com**
PHONE: **(315) 345-0063** FAX:

BILLING INFORMATION

BILL TO: NE Accounts Payable PO# 160530104.0029.0003
ADDRESS: 25 Western Ave, 2nd Floor
CITY: Marlboro STATE: NY ZIP: 12542
ATTENTION: Melanie Diaz PHONE: (845) 565-8100

DATA TURNAROUND INFORMATION

FAX:_____ DAYS*
HARD COPY:_____ DAYS*
EDD_____ DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESEULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☑ Other Level 4 PDF
☑ EDD Format NYSDEC Equis + ERIS EDD

ANALYSIS

	1	2	3	4	5	6	7	8	9
SW8260D									

PRESERVATIVES

	1	2	3	4	5	6	7	8	9
A	X								

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE 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.	FSND-PRO-01-70-05052023	GW		X	5/5/23	1526	2
2.	FSND-PRO-01-89-05062023	GW		X	5/6/23	0840	2
3.	FSND-PRO-01-99-05062023	GW		X	5/6/23	0915	2
4.	FSND-PRO-03-71-05072023	GW		X	5/7/23	0736	2
5.	FSND-PRO-03-89-05072023	GW		X	5/7/23	0851	2
6.	FSND-PRO-02-71-05082023	GW		X	5/8/23	1345	2
7.	FSND-PRO-02-81-05082023	GW		X	5/8/23	1420	2
8.	FSND-PRO-04-71-05092023	GW		X	5/9/23	1242	2
9.	FSND-PRO-04-81-05092023	GW		X	5/9/23	1437	2
10.	FSND-DUP-02-05062023	GW		X	5/6/23	—	2

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	5/10/23 1440	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.	5/11/23 9:23	2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant ☐ Cooler Temp 2.3°C
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: yes
Comments:

If Run #1

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☑ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 02751
COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: EA Engineering	PROJECT NAME: Former Scotia Navy Depot - PRB Eval.	BILL TO: NE Accounts Payable PO# 160530104.0029.0003
ADDRESS: 269 West Jefferson Street	PROJECT #: 160530104.0029.0003 LOCATION: Scotia, NY	ADDRESS: 25 Western Ave, 2nd Floor
CITY: Syracuse STATE: NY ZIP: 13202	PROJECT MANAGER: Jim Hayward	CITY: Marlboro STATE: NY ZIP: 12542
ATTENTION: Lincoln Backman-Lowe	E-MAIL: jhayward@eaest.com	ATTENTION: Melanie Dina PHONE: (845) 565-8100
PHONE: (716) 364-7282 FAX:	PHONE: (315) 345-0063 FAX:	

DATA TURNAROUND INFORMATION

FAX:_____ DAYS*
HARD COPY:_____ DAYS*
EDD_____ DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESEULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☑ Other Level 4 PDF
- ☑ EDD Format NYSDEC Equis + ERIS EDD

ANALYSIS

	1	2	3	4	5	6	7	8	9
SW8260D									

PRESERVATIVES

	1	2	3	4	5	6	7	8	9
A									

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE 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.	FSND-EQB-03-05052023	W		X	5/5/23	1000	2
2.	FSND-EQB-04-05062023	W		X	5/6/23	1000	2
3.	FSND-EQB-05-05072023	W		X	5/7/23	1000	2
4.	FSND-EQB-06-05082023	W		X	5/8/23	1000	2
5.	FSND-EQB-07-05092023	W		X	5/9/23	1000	2
6.	FSND-TB-01-05102023	W		X	5/10/23	0800	2
7.							
8.							
9.							
10.							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	5/10/23 1440	1.
RELINQUISHED BY	DATE/TIME 9:23	RECEIVED BY
2.	5/11/23	2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant ☐ Cooler Temp 2.3
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: yes
Comments:
TR-Geo #1

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☑ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☑ YES ☐ NO

WHITE - CHEMTECH COPYFOR 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 : O2751 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/11/2023 9:53:00 AM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 5/11/2023 9:23:00 AM
Purchase Order :

Project Mgr : Samantha
Report Type : Level 4
EDD Type : NYSDEC EDD V-4
Hard Copy Date :
Date Signoff : 5/11/2023 11:29:30 AM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
O2751-01	FSND-PRO-01-70-05052023	Water	05/05/2023	15:26					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-02	FSND-PRO-01-89-05062023	Water	05/06/2023	08:40					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-03	FSND-PRO-01-99-05062023	Water	05/06/2023	09:15					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-04	FSND-PRO-03-71-05072023	Water	05/07/2023	07:36					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-05	FSND-PRO-03-89-05072023	Water	05/07/2023	08:51					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-06	FSND-PRO-02-71-05082023	Water	05/08/2023	13:45					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-07	FSND-PRO-02-81-05082023	Water	05/08/2023	14:20					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-08	FSND-PRO-04-71-05092023	Water	05/09/2023	12:42					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2751-09	FSND-PRO-04-81-05092023	Water	05/09/2023	14:37					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O2751 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/11/2023 9:53:00 AM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 5/11/2023 9:23:00 AM
Purchase Order :

Project Mgr : Samantha
Report Type : Level 4
EDD Type : NYSDEC EDD V-4
Hard Copy Date :
Date Signoff : 5/11/2023 11:29:30 AM

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	
O2751-10	FSND-DUP-02-05062023	Water	05/06/2023	00:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-11	FSND-EQB-03-05052023	Water	05/05/2023	16:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-12	FSND-EQB-04-05062023	Water	05/06/2023	16:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-13	FSND-EQB-05-05072023	Water	05/07/2023	16:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-14	FSND-EQB-06-05082023	Water	05/08/2023	16:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-15	FSND-EQB-07-05092023	Water	05/09/2023	16:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
O2751-16	FSND-TB-01-05102023	Water	05/10/2023	08:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O2751 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/11/2023 9:53:00 AM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 5/11/2023 9:23:00 AM
Purchase Order :

Project Mgr : Samantha
Report Type : Level 4
EDD Type : NYSDEC EDD V-4
Hard Copy Date :
Date Signoff : 5/11/2023 11:29:30 AM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES

Relinguished By : SB
Date / Time : 5-11-23 10:00

Received By : PP
Date / Time : 5-11-23 10:00

Storage Area : VOA Refridgerator Room

CHEMTECH

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 : O2860

ATTENTION : Jim Hayward

Laboratory Certification ID # 20012

Table Of Contents for O2860

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3) Qualifier Page 6

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6) Shipping Document 73

6.1) CHAIN OF CUSTODY 74

6.2) Lab Certificate 76

6.3) Internal COC 77

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Cover Page

Order ID : O2860

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O2860-01	FSND-PRO-08-71-05112023
O2860-02	FSND-PRO-08-81-05112023
O2860-03	O2860-02MS
O2860-04	O2860-02MSD
O2860-05	FSND-PRO-10-131-05152023
O2860-06	FSND-PRO-10-151-05152023
O2860-07	FSND-PRO-09-73-05162023
O2860-08	FSND-PRO-09-101-05162023
O2860-09	FSND-PRO-05-91-0512023
O2860-10	FSND-PRO-05-101-0512023
O2860-11	FSND-DUP-03-05162023
O2860-12	FSND-TB-03-05182023
O2860-13	FSND-EQB-08-05112023
O2860-14	FSND-EQB-09-05122023
O2860-15	FSND-EQB-10-05152023
O2860-16	FSND-EQB-11-05162023
O2860-17	FSND-EQB-12-05172023
O2860-18	FSND-EQB-13-05182023

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

Date: 5/30/2023

By Nimisha Pandya QA/QC Supervisor at 12:36 pm, Jun 01, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH
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CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O2860
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
18 Water samples were received on 05/19/2023.

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-PRO-10-131-05152023 [4-Bromofluorobenzene - 84%] due to high concentration of some compounds, this sample required dilution, Therefore sample was reanalyzed with dilution and reported while,

FSND-PRO-10-151-05152023 [4-Bromofluorobenzene - 81%], FSND-PRO-10-151-05152023RE [4-Bromofluorobenzene - 80%],the failure sample in surrogates was reanalyzed to confirm the failure as per method and reported while,

FSND-DUP-03-05162023 [Toluene-d8 - 88%],Initially sample was analyzed with 10X dilution as per previous history where some compounds overdiluted as a corrective action sample reanalyzed straight but surrogate failing now no more vials for confirmation therefore straight run reported in hardcopy and dilution run given in miscellaneous data.

The Internal Standards Areas met the acceptable requirements except for FSND-PRO-10-131-05152023 due to high concentration while,
FSND-PRO-10-151-05152023 and FSND-PRO-10-151-05152023RE the failure sample in Internal standard was reanalyzed to confirm the failure as per method and reported.

The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .

CHEMTECH
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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 Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

Samples FSND-PRO-10-131-05152023, FSND-PRO-05-91-0512023 were diluted due to high concentrations.

E. Additional Comments:
The Samples #FSND-PRO-08-71-05112023, FSND-PRO-05-101-0512023, FSND-EQB-08-05112023, FSND-EQB-09-05122023, FSND-EQB-11-05162023, FSND-EQB-13-05182023, have the concentration of some compounds below Method detection limits, therefore it is not reported as Hit in Form1.

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 12:36 pm, Jun 01, 2023

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: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (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 #: O2860

	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:** 05/30/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:37 pm, Jun 01, 2023

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

Hit Summary Sheet
SW-846

SDG No.: O2860

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-PRO-08-71-05112023**									
O2860-01	FSND-PRO-08-71-(	Water	Acetone		16.0		1.20	3.80	5.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Carbon Disulfide		0.33	J	0.27	0.75	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	2-Butanone		3.90	J	1.20	2.50	5.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	cis-1,2-Dichloroethene		0.73	J	0.20	0.75	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Chloroform		0.48	J	0.14	0.50	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	1,1,1-Trichloroethane		0.84	J	0.14	0.50	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Benzene		0.25	J	0.12	0.50	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Trichloroethene		44.0		0.26	0.75	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Toluene		1.30		0.14	0.50	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Tetrachloroethene		5.90		0.17	0.50	1.00	ug/L
O2860-01	FSND-PRO-08-71-(	Water	m/p-Xylenes		0.33	J	0.31	1.00	2.00	ug/L
			Total Voc :		74.1					
O2860-01	FSND-PRO-08-71-(	Water	Hexanal	*	200	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	1-Hexanol, 2-ethyl-	*	10.8	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Pentane	*	11.5	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Pentanal	*	20.8	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Heptanal	*	30.6	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Propanal	*	19.0	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Octanal	*	42.3	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	Nonanal	*	94.1	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	2-Octenal, (E)-	*	18.8	J	0		0	ug/L
O2860-01	FSND-PRO-08-71-(	Water	2-Decenal, (E)-	*	33.1	J	0		0	ug/L
			Total Tics :		481					
			Total Concentration:		555					
Client ID:	**FSND-PRO-08-81-05112023**									
O2860-02	FSND-PRO-08-81-(	Water	Acetone		3.30	J	1.20	3.80	5.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Carbon Tetrachloride		0.63	J	0.13	0.50	1.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	cis-1,2-Dichloroethene		1.00		0.20	0.75	1.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Chloroform		0.43	J	0.14	0.50	1.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	1,1,1-Trichloroethane		1.60		0.14	0.50	1.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Trichloroethene		16.2		0.26	0.75	1.00	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Tetrachloroethene		11.2		0.17	0.50	1.00	ug/L
			Total Voc :		34.4					
O2860-02	FSND-PRO-08-81-(	Water	Hexanal	*	110	J	0		0	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Pentanal	*	10.9	J	0		0	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Heptanal	*	9.40	J	0		0	ug/L
O2860-02	FSND-PRO-08-81-(	Water	Octanal	*	12.9	J	0		0	ug/L

Hit Summary Sheet
SW-846

SDG No.: O2860

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2860-02	FSND-PRO-08-81-(	Water	Nonanal	*	6.00	J	0		0	ug/L
O2860-02	FSND-PRO-08-81-(	Water	2-Decenal, (E)-	*	9.10	J	0		0	ug/L
			Total Tics :		158					
			Total Concentration:		193					
Client ID:	**FSND-PRO-10-131-05152023**									
O2860-05	FSND-PRO-10-131	Water	1,1-Dichloroethene		0.35	J	0.21	0.75	1.00	ug/L
O2860-05	FSND-PRO-10-131	Water	Acetone		6.20		1.20	3.80	5.00	ug/L
O2860-05	FSND-PRO-10-131	Water	Trichloroethene		180	E	0.26	0.75	1.00	ug/L
			Total Voc :		187					
O2860-05	FSND-PRO-10-131	Water	Hexanal	*	7.40	J	0		0	ug/L
			Total Tics :		7.40					
			Total Concentration:		194					
Client ID:	**FSND-PRO-10-131-05152023DL**									
O2860-05DL	FSND-PRO-10-131	Water	Acetone		6.60	JD	4.60	15.0	20.0	ug/L
O2860-05DL	FSND-PRO-10-131	Water	Trichloroethene		180	D	1.00	3.00	4.00	ug/L
			Total Voc :		187					
			Total Concentration:		187					
Client ID:	**FSND-PRO-10-151-05152023**									
O2860-06	FSND-PRO-10-151	Water	Acetone		2.80	J	1.20	3.80	5.00	ug/L
O2860-06	FSND-PRO-10-151	Water	Trichloroethene		0.87	J	0.26	0.75	1.00	ug/L
			Total Voc :		3.67					
			Total Concentration:		3.67					
Client ID:	**FSND-PRO-10-151-05152023RE**									
O2860-06RE	FSND-PRO-10-151	Water	Acetone		3.00	J	1.20	3.80	5.00	ug/L
			Total Voc :		3.00					
			Total Concentration:		3.00					
Client ID:	**FSND-PRO-09-73-05162023**									
O2860-07	FSND-PRO-09-73-(	Water	Chloromethane		0.46	J	0.25	0.50	1.00	ug/L
O2860-07	FSND-PRO-09-73-(	Water	Acetone		3.20	J	1.20	3.80	5.00	ug/L
O2860-07	FSND-PRO-09-73-(	Water	Chloroform		0.25	J	0.14	0.50	1.00	ug/L
O2860-07	FSND-PRO-09-73-(	Water	Trichloroethene		120		0.26	0.75	1.00	ug/L
			Total Voc :		124					
			Total Concentration:		124					
Client ID:	**FSND-PRO-09-101-05162023**									
O2860-08	FSND-PRO-09-101	Water	Acetone		1.60	J	1.20	3.80	5.00	ug/L
O2860-08	FSND-PRO-09-101	Water	Trichloroethene		0.42	J	0.26	0.75	1.00	ug/L
			Total Voc :		2.02					
			Total Concentration:		2.02					
Client ID:	**FSND-PRO-05-91-0512023**									
O2860-09	FSND-PRO-05-91-(	Water	1,1-Dichloroethene		0.35	J	0.21	0.75	1.00	ug/L
O2860-09	FSND-PRO-05-91-(	Water	Acetone		1.60	J	1.20	3.80	5.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: O2860

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2860-09	FSND-PRO-05-91-(	Water	Trichloroethene		640	E	0.26	0.75	1.00	ug/L
			Total Voc :		642					
O2860-09	FSND-PRO-05-91-(	Water	Propene	*	8.00	J	0		0	ug/L
			Total Tics :		8.00					
			Total Concentration:		650					
Client ID:	**FSND-PRO-05-91-0512023DL**									
O2860-09DL	FSND-PRO-05-91-(	Water	Trichloroethene		570	D	2.60	7.50	10.0	ug/L
			Total Voc :		570					
			Total Concentration:		570					
Client ID:	**FSND-PRO-05-101-0512023**									
O2860-10	FSND-PRO-05-101	Water	Acetone		9.80		1.20	3.80	5.00	ug/L
O2860-10	FSND-PRO-05-101	Water	2-Butanone		16.7		1.20	2.50	5.00	ug/L
O2860-10	FSND-PRO-05-101	Water	Trichloroethene		1.60		0.26	0.75	1.00	ug/L
			Total Voc :		28.1					
			Total Concentration:		28.1					
Client ID:	**FSND-DUP-03-05162023**									
O2860-11	FSND-DUP-03-051	Water	Acetone		2.20	J	1.20	3.80	5.00	ug/L
O2860-11	FSND-DUP-03-051	Water	Carbon Disulfide		0.34	J	0.27	0.75	1.00	ug/L
O2860-11	FSND-DUP-03-051	Water	Trichloroethene		130		0.26	0.75	1.00	ug/L
			Total Voc :		133					
			Total Concentration:		133					
Client ID:	**FSND-TB-03-05182023**									
O2860-12	FSND-TB-03-0518	Water	Acetone		3.20	J	1.20	3.80	5.00	ug/L
O2860-12	FSND-TB-03-0518	Water	Benzene		0.28	J	0.12	0.50	1.00	ug/L
O2860-12	FSND-TB-03-0518	Water	Toluene		1.40		0.14	0.50	1.00	ug/L
O2860-12	FSND-TB-03-0518	Water	Ethyl Benzene		0.26	J	0.13	0.50	1.00	ug/L
O2860-12	FSND-TB-03-0518	Water	m/p-Xylenes		1.10	J	0.31	1.00	2.00	ug/L
O2860-12	FSND-TB-03-0518	Water	o-Xylene		0.56	J	0.15	0.50	1.00	ug/L
			Total Voc :		6.80					
O2860-12	FSND-TB-03-0518	Water	Ethyl Acetate	*	10.4	J	0.37		1.00	ug/L
O2860-12	FSND-TB-03-0518	Water	Tetrahydrofuran	*	1.60	J	0.85		5.00	ug/L
O2860-12	FSND-TB-03-0518	Water	1,2,4-Trimethylbenzene	*	0.30	J	0.16		1.00	ug/L
			Total Tics :		12.3					
			Total Concentration:		19.1					
Client ID:	**FSND-EQB-08-05112023**									
O2860-13	FSND-EQB-08-051	Water	Acetone		2.60	J	1.20	3.80	5.00	ug/L
O2860-13	FSND-EQB-08-051	Water	Chloroform		40.1		0.14	0.50	1.00	ug/L
O2860-13	FSND-EQB-08-051	Water	Trichloroethene		0.57	J	0.26	0.75	1.00	ug/L
O2860-13	FSND-EQB-08-051	Water	Bromodichloromethane		1.50		0.15	0.50	1.00	ug/L
			Total Voc :		44.8					

Hit Summary Sheet
SW-846

SDG No.: O2860

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
O2860-13	FSND-EQB-08-051	Water	Tetrahydrofuran	*	17.7	J	0.85		5.00	ug/L
			Total Tics :		17.7					
			Total Concentration:		62.5					
Client ID:	**FSND-EQB-09-05122023**									
O2860-14	FSND-EQB-09-051	Water	Acetone		2.50	J	1.20	3.80	5.00	ug/L
O2860-14	FSND-EQB-09-051	Water	Chloroform		43.9		0.14	0.50	1.00	ug/L
O2860-14	FSND-EQB-09-051	Water	Bromodichloromethane		1.80		0.15	0.50	1.00	ug/L
O2860-14	FSND-EQB-09-051	Water	Toluene		0.29	J	0.14	0.50	1.00	ug/L
O2860-14	FSND-EQB-09-051	Water	Dibromochloromethane		0.20	J	0.15	0.50	1.00	ug/L
			Total Voc :		48.7					
O2860-14	FSND-EQB-09-051	Water	Tetrahydrofuran	*	19.6	J	0.85		5.00	ug/L
			Total Tics :		19.6					
			Total Concentration:		68.3					
Client ID:	**FSND-EQB-10-05152023**									
O2860-15	FSND-EQB-10-051	Water	Acetone		2.10	J	1.20	3.80	5.00	ug/L
O2860-15	FSND-EQB-10-051	Water	Chloroform		37.6		0.14	0.50	1.00	ug/L
O2860-15	FSND-EQB-10-051	Water	Bromodichloromethane		1.40		0.15	0.50	1.00	ug/L
O2860-15	FSND-EQB-10-051	Water	Dibromochloromethane		0.21	J	0.15	0.50	1.00	ug/L
			Total Voc :		41.3					
O2860-15	FSND-EQB-10-051	Water	Tetrahydrofuran	*	15.5	J	0.85		5.00	ug/L
			Total Tics :		15.5					
			Total Concentration:		56.8					
Client ID:	**FSND-EQB-11-05162023**									
O2860-16	FSND-EQB-11-051	Water	Acetone		2.70	J	1.20	3.80	5.00	ug/L
O2860-16	FSND-EQB-11-051	Water	Chloroform		44.3		0.14	0.50	1.00	ug/L
O2860-16	FSND-EQB-11-051	Water	Bromodichloromethane		1.60		0.15	0.50	1.00	ug/L
O2860-16	FSND-EQB-11-051	Water	Toluene		0.21	J	0.14	0.50	1.00	ug/L
			Total Voc :		48.8					
O2860-16	FSND-EQB-11-051	Water	Tetrahydrofuran	*	18.4	J	0.85		5.00	ug/L
			Total Tics :		18.4					
			Total Concentration:		67.2					
Client ID:	**FSND-EQB-12-05172023**									
O2860-17	FSND-EQB-12-051	Water	Acetone		2.40	J	1.20	3.80	5.00	ug/L
O2860-17	FSND-EQB-12-051	Water	Chloroform		40.2		0.14	0.50	1.00	ug/L
O2860-17	FSND-EQB-12-051	Water	Bromodichloromethane		1.40		0.15	0.50	1.00	ug/L
O2860-17	FSND-EQB-12-051	Water	Toluene		0.22	J	0.14	0.50	1.00	ug/L
			Total Voc :		44.2					
O2860-17	FSND-EQB-12-051	Water	Tetrahydrofuran	*	18.0	J	0.85		5.00	ug/L
			Total Tics :		18.0					
			Total Concentration:		62.2					

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

Hit Summary Sheet
SW-846

SDG No.: O2860

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-EQB-13-05182023**									
O2860-18	FSND-EQB-13-051	Water	Acetone		2.30	J	1.20	3.80	5.00	ug/L
O2860-18	FSND-EQB-13-051	Water	Chloroform		42.9		0.14	0.50	1.00	ug/L
O2860-18	FSND-EQB-13-051	Water	Bromodichloromethane		1.60		0.15	0.50	1.00	ug/L
O2860-18	FSND-EQB-13-051	Water	Toluene		0.21	J	0.14	0.50	1.00	ug/L
			Total Voc :		47.0					
O2860-18	FSND-EQB-13-051	Water	Tetrahydrofuran	*	18.7	J	0.85		5.00	ug/L
			Total Tics :		18.7					
			Total Concentration:		65.7					

SAMPLE DATA

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-71-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035760.D	1		05/19/23 15:08	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	16.0		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.33	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	3.90	J	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.73	J	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.48	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.84	J	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.25	J	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	44.0		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	1.30		0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-71-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035760.D	1		05/19/23 15:08	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	5.90		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	0.33	J	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.4		81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	48.2		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.3		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	204000	5.549				
540-36-3	1,4-Difluorobenzene	381000	6.757				
3114-55-4	Chlorobenzene-d5	340000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	151000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000109-66-0	Pentane	11.5	J			1.95	ug/L
000123-38-6	Propanal	19.0	J			2.30	ug/L
000110-62-3	Pentanal	20.8	J			7.57	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-71-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035760.D	1		05/19/23 15:08	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
000066-25-1	Hexanal	200	J			9.52	ug/L
000111-71-7	Heptanal	30.6	J			10.9	ug/L
000124-13-0	Octanal	42.3	J			11.9	ug/L
000104-76-7	1-Hexanol, 2-ethyl-	10.8	J			12.2	ug/L
002548-87-0	2-Octenal, (E)-	18.8	J			12.6	ug/L
000124-19-6	Nonanal	94.1	J			12.9	ug/L
003913-81-3	2-Decenal, (E)-	33.1	J			14.3	ug/L

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:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-81-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035792.D	1		05/22/23 18:08	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.30	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.63	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.00		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.43	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	1.60		0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	16.2		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-81-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035792.D	1		05/22/23 18:08	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	11.2		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51.5		81 - 118		103%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	46.7		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.8		85 - 114		94%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	192000	5.556				
540-36-3	1,4-Difluorobenzene	341000	6.763				
3114-55-4	Chlorobenzene-d5	310000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	137000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000110-62-3	Pentanal	10.9	J			7.57	ug/L
000066-25-1	Hexanal	110	J			9.52	ug/L
000111-71-7	Heptanal	9.40	J			10.9	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-08-81-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-02	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035792.D	1		05/22/23 18:08	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
000124-13-0	Octanal	12.9	J			11.9	ug/L
000124-19-6	Nonanal	6.00	J			12.9	ug/L
003913-81-3	2-Decenal, (E)-	9.10	J			14.3	ug/L

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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035761.D	1		05/19/23 15:31	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.35	J	0.21	0.75	1.00	ug/L
67-64-1	Acetone	6.20		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	180	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035761.D	1		05/19/23 15:31	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	53.1		81 - 118		106%	SPK: 50
1868-53-7	Dibromofluoromethane	46.5		80 - 119		93%	SPK: 50
2037-26-5	Toluene-d8	46.9		89 - 112		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.1	*	85 - 114		84%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	133000	5.55				
540-36-3	1,4-Difluorobenzene	241000	6.763				
3114-55-4	Chlorobenzene-d5	204000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	79800	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000066-25-1	Hexanal	7.40	J			9.52	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035761.D	1		05/19/23 15:31	VX051923

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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023DL	SDG No.:	O2860
Lab Sample ID:	O2860-05DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035783.D	4		05/22/23 14:38	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.00	UD	0.56	2.00	4.00	ug/L
74-87-3	Chloromethane	2.00	UD	1.00	2.00	4.00	ug/L
75-01-4	Vinyl Chloride	3.00	UD	1.00	3.00	4.00	ug/L
74-83-9	Bromomethane	15.0	UD	6.20	15.0	20.0	ug/L
75-00-3	Chloroethane	3.00	UD	1.10	3.00	4.00	ug/L
75-69-4	Trichlorofluoromethane	2.00	UD	0.52	2.00	4.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.00	UD	0.84	2.00	4.00	ug/L
75-35-4	1,1-Dichloroethene	3.00	UD	0.84	3.00	4.00	ug/L
67-64-1	Acetone	6.60	JD	4.60	15.0	20.0	ug/L
75-15-0	Carbon Disulfide	3.00	UD	1.10	3.00	4.00	ug/L
1634-04-4	Methyl tert-butyl Ether	2.00	UD	0.56	2.00	4.00	ug/L
79-20-9	Methyl Acetate	3.00	UD	1.40	3.00	4.00	ug/L
75-09-2	Methylene Chloride	2.00	UD	2.00	2.00	4.00	ug/L
156-60-5	trans-1,2-Dichloroethene	2.00	UD	0.68	2.00	4.00	ug/L
75-34-3	1,1-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
110-82-7	Cyclohexane	10.0	UD	6.40	10.0	20.0	ug/L
78-93-3	2-Butanone	10.0	UD	4.80	10.0	20.0	ug/L
56-23-5	Carbon Tetrachloride	2.00	UD	0.52	2.00	4.00	ug/L
156-59-2	cis-1,2-Dichloroethene	3.00	UD	0.80	3.00	4.00	ug/L
74-97-5	Bromochloromethane	2.00	UD	0.56	2.00	4.00	ug/L
67-66-3	Chloroform	2.00	UD	0.56	2.00	4.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.00	UD	0.56	2.00	4.00	ug/L
108-87-2	Methylcyclohexane	2.00	UD	0.64	2.00	4.00	ug/L
71-43-2	Benzene	2.00	UD	0.48	2.00	4.00	ug/L
107-06-2	1,2-Dichloroethane	2.00	UD	0.64	2.00	4.00	ug/L
79-01-6	Trichloroethene	180	D	1.00	3.00	4.00	ug/L
78-87-5	1,2-Dichloropropane	2.00	UD	0.60	2.00	4.00	ug/L
75-27-4	Bromodichloromethane	2.00	UD	0.60	2.00	4.00	ug/L
108-10-1	4-Methyl-2-Pentanone	10.0	UD	3.00	10.0	20.0	ug/L
108-88-3	Toluene	2.00	UD	0.56	2.00	4.00	ug/L
10061-02-6	t-1,3-Dichloropropene	2.00	UD	0.68	2.00	4.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.00	UD	0.60	2.00	4.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023DL	SDG No.:	O2860
Lab Sample ID:	O2860-05DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035783.D	4		05/22/23 14:38	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.00	UD	0.52	2.00	4.00	ug/L
591-78-6	2-Hexanone	10.0	UD	3.90	10.0	20.0	ug/L
124-48-1	Dibromochloromethane	2.00	UD	0.60	2.00	4.00	ug/L
106-93-4	1,2-Dibromoethane	2.00	UD	0.52	2.00	4.00	ug/L
127-18-4	Tetrachloroethene	2.00	UD	0.68	2.00	4.00	ug/L
108-90-7	Chlorobenzene	2.00	UD	0.48	2.00	4.00	ug/L
100-41-4	Ethyl Benzene	2.00	UD	0.52	2.00	4.00	ug/L
179601-23-1	m/p-Xylenes	4.00	UD	1.20	4.00	8.00	ug/L
95-47-6	o-Xylene	2.00	UD	0.60	2.00	4.00	ug/L
100-42-5	Styrene	2.00	UD	0.52	2.00	4.00	ug/L
75-25-2	Bromoform	2.00	UD	0.60	2.00	4.00	ug/L
98-82-8	Isopropylbenzene	2.00	UD	0.52	2.00	4.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.00	UD	0.60	2.00	4.00	ug/L
541-73-1	1,3-Dichlorobenzene	2.00	UD	0.92	2.00	4.00	ug/L
106-46-7	1,4-Dichlorobenzene	2.00	UD	0.96	2.00	4.00	ug/L
95-50-1	1,2-Dichlorobenzene	2.00	UD	0.68	2.00	4.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	3.00	UD	1.70	3.00	4.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.00	UD	1.70	2.00	4.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	3.00	UD	2.20	3.00	4.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	49.8		81 - 118		100%	SPK: 50
1868-53-7	Dibromofluoromethane	47.5		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	46.6		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.6		85 - 114		91%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	211000	5.555				
540-36-3	1,4-Difluorobenzene	376000	6.763				
3114-55-4	Chlorobenzene-d5	330000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	145000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-131-05152023DL	SDG No.:	O2860
Lab Sample ID:	O2860-05DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035783.D	4		05/22/23 14:38	VX052223

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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035768.D	1		05/19/23 18:14	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.80	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.87	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035768.D	1		05/19/23 18:14	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	58.3		81 - 118		117%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	46.6		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.6	*	85 - 114		81%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	127000	5.549				
540-36-3	1,4-Difluorobenzene	243000	6.763				
3114-55-4	Chlorobenzene-d5	200000	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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035768.D	1		05/19/23 18:14	VX051923

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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023RE	SDG No.:	O2860
Lab Sample ID:	O2860-06RE	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035789.D	1		05/22/23 16:58	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.00	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023RE	SDG No.:	O2860
Lab Sample ID:	O2860-06RE	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035789.D	1		05/22/23 16:58	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	57.4		81 - 118		115%	SPK: 50
1868-53-7	Dibromofluoromethane	49.5		80 - 119		99%	SPK: 50
2037-26-5	Toluene-d8	45.6		89 - 112		91%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.8	*	85 - 114		80%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	116000	5.556				
540-36-3	1,4-Difluorobenzene	219000	6.763				
3114-55-4	Chlorobenzene-d5	182000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	67200	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-10-151-05152023RE	SDG No.:	O2860
Lab Sample ID:	O2860-06RE	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035789.D	1		05/22/23 16:58	VX052223

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:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-73-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035763.D	1		05/19/23 16:18	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.46	J	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.20	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.25	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	120		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-73-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035763.D	1		05/19/23 16:18	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.6		81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	47.2		80 - 119		94%	SPK: 50
2037-26-5	Toluene-d8	47.0		89 - 112		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.5		85 - 114		87%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	135000	5.55				
540-36-3	1,4-Difluorobenzene	252000	6.763				
3114-55-4	Chlorobenzene-d5	217000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	89900	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-73-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035763.D	1		05/19/23 16:18	VX051923

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:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-101-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035764.D	1		05/19/23 16:41	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	1.60	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.42	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-101-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035764.D	1		05/19/23 16:41	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.6		81 - 118		105%	SPK: 50
1868-53-7	Dibromofluoromethane	48.3		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	47.7		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.3		85 - 114		91%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	204000	5.55				
540-36-3	1,4-Difluorobenzene	374000	6.763				
3114-55-4	Chlorobenzene-d5	326000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	142000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-09-101-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035764.D	1		05/19/23 16:41	VX051923

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:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035765.D	1		05/19/23 17:04	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.35	J	0.21	0.75	1.00	ug/L
67-64-1	Acetone	1.60	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	640	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035765.D	1		05/19/23 17:04	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51.7		81 - 118		103%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	47.2		89 - 112		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.4		85 - 114		89%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	198000	5.549				
540-36-3	1,4-Difluorobenzene	357000	6.763				
3114-55-4	Chlorobenzene-d5	306000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	133000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
000115-07-1	Propene	8.00	J			1.14	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035765.D	1		05/19/23 17:04	VX051923

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:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023DL	SDG No.:	O2860
Lab Sample ID:	O2860-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035784.D	10		05/22/23 15:02	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	5.00	UD	1.40	5.00	10.0	ug/L
74-87-3	Chloromethane	5.00	UD	2.50	5.00	10.0	ug/L
75-01-4	Vinyl Chloride	7.50	UD	2.50	7.50	10.0	ug/L
74-83-9	Bromomethane	37.5	UD	15.5	37.5	50.0	ug/L
75-00-3	Chloroethane	7.50	UD	2.80	7.50	10.0	ug/L
75-69-4	Trichlorofluoromethane	5.00	UD	1.30	5.00	10.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	5.00	UD	2.10	5.00	10.0	ug/L
75-35-4	1,1-Dichloroethene	7.50	UD	2.10	7.50	10.0	ug/L
67-64-1	Acetone	37.5	UD	11.5	37.5	50.0	ug/L
75-15-0	Carbon Disulfide	7.50	UD	2.70	7.50	10.0	ug/L
1634-04-4	Methyl tert-butyl Ether	5.00	UD	1.40	5.00	10.0	ug/L
79-20-9	Methyl Acetate	7.50	UD	3.60	7.50	10.0	ug/L
75-09-2	Methylene Chloride	5.00	UD	5.00	5.00	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	5.00	UD	1.70	5.00	10.0	ug/L
75-34-3	1,1-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
110-82-7	Cyclohexane	25.0	UD	16.0	25.0	50.0	ug/L
78-93-3	2-Butanone	25.0	UD	12.1	25.0	50.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	UD	1.30	5.00	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	7.50	UD	2.00	7.50	10.0	ug/L
74-97-5	Bromochloromethane	5.00	UD	1.40	5.00	10.0	ug/L
67-66-3	Chloroform	5.00	UD	1.40	5.00	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	5.00	UD	1.40	5.00	10.0	ug/L
108-87-2	Methylcyclohexane	5.00	UD	1.60	5.00	10.0	ug/L
71-43-2	Benzene	5.00	UD	1.20	5.00	10.0	ug/L
107-06-2	1,2-Dichloroethane	5.00	UD	1.60	5.00	10.0	ug/L
79-01-6	Trichloroethene	570	D	2.60	7.50	10.0	ug/L
78-87-5	1,2-Dichloropropane	5.00	UD	1.50	5.00	10.0	ug/L
75-27-4	Bromodichloromethane	5.00	UD	1.50	5.00	10.0	ug/L
108-10-1	4-Methyl-2-Pentanone	25.0	UD	7.40	25.0	50.0	ug/L
108-88-3	Toluene	5.00	UD	1.40	5.00	10.0	ug/L
10061-02-6	t-1,3-Dichloropropene	5.00	UD	1.70	5.00	10.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	5.00	UD	1.50	5.00	10.0	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023DL	SDG No.:	O2860
Lab Sample ID:	O2860-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035784.D	10		05/22/23 15:02	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	5.00	UD	1.30	5.00	10.0	ug/L
591-78-6	2-Hexanone	25.0	UD	9.80	25.0	50.0	ug/L
124-48-1	Dibromochloromethane	5.00	UD	1.50	5.00	10.0	ug/L
106-93-4	1,2-Dibromoethane	5.00	UD	1.30	5.00	10.0	ug/L
127-18-4	Tetrachloroethene	5.00	UD	1.70	5.00	10.0	ug/L
108-90-7	Chlorobenzene	5.00	UD	1.20	5.00	10.0	ug/L
100-41-4	Ethyl Benzene	5.00	UD	1.30	5.00	10.0	ug/L
179601-23-1	m/p-Xylenes	10.0	UD	3.10	10.0	20.0	ug/L
95-47-6	o-Xylene	5.00	UD	1.50	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	1.50	5.00	10.0	ug/L
98-82-8	Isopropylbenzene	5.00	UD	1.30	5.00	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	5.00	UD	1.50	5.00	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	5.00	UD	2.30	5.00	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	UD	2.40	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	4.30	7.50	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	UD	4.30	5.00	10.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	7.50	UD	5.50	7.50	10.0	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.4		81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	48.4		80 - 119		97%	SPK: 50
2037-26-5	Toluene-d8	46.3		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.2		85 - 114		90%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	172000	5.556				
540-36-3	1,4-Difluorobenzene	324000	6.763				
3114-55-4	Chlorobenzene-d5	283000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	122000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-91-0512023DL	SDG No.:	O2860
Lab Sample ID:	O2860-09DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035784.D	10		05/22/23 15:02	VX052223

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:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-101-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035790.D	1		05/22/23 17:22	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	9.80		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	16.7		1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	1.60		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-101-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035790.D	1		05/22/23 17:22	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.7		81 - 118		105%	SPK: 50
1868-53-7	Dibromofluoromethane	44.9		80 - 119		90%	SPK: 50
2037-26-5	Toluene-d8	46.3		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.7		85 - 114		87%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	195000	5.55				
540-36-3	1,4-Difluorobenzene	360000	6.757				
3114-55-4	Chlorobenzene-d5	308000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	133000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-PRO-05-101-0512023	SDG No.:	O2860
Lab Sample ID:	O2860-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035790.D	1		05/22/23 17:22	VX052223

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:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-DUP-03-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035831.D	1		05/24/23 13:15	VX052423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.34	J	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	130		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-DUP-03-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035831.D	1		05/24/23 13:15	VX052423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	42.7		81 - 118		85%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	43.9	*	89 - 112		88%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.6		85 - 114		87%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	188000	5.549				
540-36-3	1,4-Difluorobenzene	333000	6.763				
3114-55-4	Chlorobenzene-d5	291000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	140000	12.024				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-DUP-03-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035831.D	1		05/24/23 13:15	VX052423

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:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-TB-03-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035785.D	1		05/22/23 15:25	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	3.20	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.28	J	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	1.40		0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-TB-03-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035785.D	1		05/22/23 15:25	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.26	J	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.10	J	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.56	J	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	50.7		81 - 118		101%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	45.8		89 - 112		92%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.1		85 - 114		90%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	197000	5.549				
540-36-3	1,4-Difluorobenzene	352000	6.763				
3114-55-4	Chlorobenzene-d5	308000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	135000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
141-78-6	Ethyl Acetate	10.4	J			4.72	ug/L
109-99-9	Tetrahydrofuran	1.60	J			5.04	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.30	J			11.8	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-TB-03-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035785.D	1		05/22/23 15:25	VX052223

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:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-08-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035762.D	1		05/19/23 15:54	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	40.1		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.57	J	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.50		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-08-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035762.D	1		05/19/23 15:54	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	56.7		81 - 118		113%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		80 - 119		98%	SPK: 50
2037-26-5	Toluene-d8	47.5		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.9		85 - 114		92%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	179000	5.556				
540-36-3	1,4-Difluorobenzene	342000	6.763				
3114-55-4	Chlorobenzene-d5	300000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	130000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	17.7	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/11/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-08-05112023	SDG No.:	O2860
Lab Sample ID:	O2860-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035762.D	1		05/19/23 15:54	VX051923

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:	05/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-09-05122023	SDG No.:	O2860
Lab Sample ID:	O2860-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035786.D	1		05/22/23 15:48	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.50	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	43.9		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.80		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.29	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-09-05122023	SDG No.:	O2860
Lab Sample ID:	O2860-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035786.D	1		05/22/23 15:48	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.20	J	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	58.7		81 - 118		117%	SPK: 50
1868-53-7	Dibromofluoromethane	47.0		80 - 119		94%	SPK: 50
2037-26-5	Toluene-d8	46.6		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.6		85 - 114		89%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	158000	5.55				
540-36-3	1,4-Difluorobenzene	313000	6.763				
3114-55-4	Chlorobenzene-d5	278000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	115000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	19.6	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-09-05122023	SDG No.:	O2860
Lab Sample ID:	O2860-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035786.D	1		05/22/23 15:48	VX052223

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:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-10-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035770.D	1		05/19/23 19:00	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	37.6		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.40		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-10-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035770.D	1		05/19/23 19:00	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.21	J	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	51.8		81 - 118		104%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		80 - 119		96%	SPK: 50
2037-26-5	Toluene-d8	47.7		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.6		85 - 114		91%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	209000	5.55				
540-36-3	1,4-Difluorobenzene	382000	6.763				
3114-55-4	Chlorobenzene-d5	332000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	146000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	15.5	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/15/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-10-05152023	SDG No.:	O2860
Lab Sample ID:	O2860-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035770.D	1		05/19/23 19:00	VX051923

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:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-11-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035787.D	1		05/22/23 16:12	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.70	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	44.3		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.60		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.21	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-11-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035787.D	1		05/22/23 16:12	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	56.6		81 - 118		113%	SPK: 50
1868-53-7	Dibromofluoromethane	50.2		80 - 119		100%	SPK: 50
2037-26-5	Toluene-d8	46.3		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.7		85 - 114		91%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	170000	5.55				
540-36-3	1,4-Difluorobenzene	326000	6.763				
3114-55-4	Chlorobenzene-d5	287000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	122000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	18.4	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/16/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-11-05162023	SDG No.:	O2860
Lab Sample ID:	O2860-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035787.D	1		05/22/23 16:12	VX052223

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:	05/17/32
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-12-05172023	SDG No.:	O2860
Lab Sample ID:	O2860-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035771.D	1		05/19/23 19:23	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.40	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	40.2		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.40		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.22	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/17/32
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-12-05172023	SDG No.:	O2860
Lab Sample ID:	O2860-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035771.D	1		05/19/23 19:23	VX051923

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	58.7		81 - 118		117%	SPK: 50
1868-53-7	Dibromofluoromethane	49.5		80 - 119		99%	SPK: 50
2037-26-5	Toluene-d8	47.8		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.1		85 - 114		92%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	178000	5.55				
540-36-3	1,4-Difluorobenzene	347000	6.763				
3114-55-4	Chlorobenzene-d5	309000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	134000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	18.0	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/17/32
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-12-05172023	SDG No.:	O2860
Lab Sample ID:	O2860-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035771.D	1		05/19/23 19:23	VX051923

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:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-13-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035788.D	1		05/22/23 16:35	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	42.9		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.60		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.21	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-13-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035788.D	1		05/22/23 16:35	VX052223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.7		81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	50.4		80 - 119		101%	SPK: 50
2037-26-5	Toluene-d8	46.3		89 - 112		93%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.9		85 - 114		92%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	169000	5.556				
540-36-3	1,4-Difluorobenzene	317000	6.763				
3114-55-4	Chlorobenzene-d5	283000	10.055				
3855-82-1	1,4-Dichlorobenzene-d4	121000	12.024				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	18.7	J			5.02	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	05/18/23
Project:	Scotia, NY - Annual Testing	Date Received:	05/19/23
Client Sample ID:	FSND-EQB-13-05182023	SDG No.:	O2860
Lab Sample ID:	O2860-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
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
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX035788.D	1		05/22/23 16:35	VX052223

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:	O2860	**OrderDate:**	5/19/2023 10:13:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2860-01	**FSND-PRO-08-71-051 12023**	**Water**			**05/11/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	
O2860-02	**FSND-PRO-08-81-051 12023**	**Water**			**05/11/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/22/23	
O2860-05	**FSND-PRO-10-131-05 152023**	**Water**			**05/15/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	
O2860-05DL	**FSND-PRO-10-131-05 152023DL**	**Water**			**05/15/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/22/23	
O2860-06	**FSND-PRO-10-151-05 152023**	**Water**			**05/15/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	
O2860-06RE	**FSND-PRO-10-151-05 152023RE**	**Water**			**05/15/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/22/23	
O2860-07	**FSND-PRO-09-73-051 62023**	**Water**			**05/16/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	
O2860-08	**FSND-PRO-09-101-05 162023**	**Water**			**05/16/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	
O2860-09	**FSND-PRO-05-91-051 2023**	**Water**			**05/18/23**			**05/19/23**
			VOC-TCLVOA-10	8260-Low			05/19/23	

LAB CHRONICLE

O2860-09DL	**FSND-PRO-05-91-051 2023DL**	**Water**			**05/18/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	
O2860-10	**FSND-PRO-05-101-05 12023**	**Water**			**05/18/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	
O2860-11	**FSND-DUP-03-051620 23**	**Water**			**05/16/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/24/23	
O2860-12	**FSND-TB-03-0518202 3**	**Water**			**05/18/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	
O2860-13	**FSND-EQB-08-051120 23**	**Water**			**05/11/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/19/23	
O2860-14	**FSND-EQB-09-051220 23**	**Water**			**05/12/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	
O2860-15	**FSND-EQB-10-051520 23**	**Water**			**05/15/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/19/23	
O2860-16	**FSND-EQB-11-051620 23**	**Water**			**05/16/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	
O2860-17	**FSND-EQB-12-051720 23**	**Water**			**05/17/32**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/19/23	
O2860-18	**FSND-EQB-13-051820 23**	**Water**			**05/18/23**		**05/19/23**
			VOC-TCLVOA-10	8260-Low		05/22/23	

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 02860
COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: EA Engineering	PROJECT NAME: Former Scotia Navy Depot - PRB Eval.	BILL TO: NE Accounts Payable PO# 160530104.0029.0003
ADDRESS: 269 West Jefferson Street	PROJECT #: 160530104.0029.0003 LOCATION: Scotia, NY	ADDRESS: 25 Western Ave. 2nd Floor
CITY: Syracuse STATE: NY ZIP: 13202	PROJECT MANAGER: Jim Hayward	CITY: Marlboro STATE: NY ZIP: 12542
ATTENTION: Lincoln Backman-Lowe	E-MAIL: jhayward@eaest.com	ATTENTION: Melanie Dina PHONE: (845) 565-8100
PHONE: (716) 364-7282 FAX:	PHONE: (315) 345-0063 FAX:	

DATA TURNAROUND INFORMATION

FAX:_____ DAYS*
HARD COPY:_____ DAYS*
EDD_____ DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☑ Other Level 4 PDF
- ☑ EDD Format NYSDEC Equis + ERIS EDD

ANALYSIS

SW8260D

PRESERVATIVES

A

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
1.	FSND-PRO-08-71-05112023	GW		X	5/11/23	1340	2	X									
2.	FSND-PRO-08-81-05112023	GW		X	5/11/23	1300	6	X									extra bottles for MS/MSD
3.	FSND-PRO-10-131-05152023	GW		X	5/15/23	1042	2	X									
4.	FSND-PRO-10-151-05152023	GW		X	5/15/23	1400	2	X									
5.	FSND-PRO-09-73-05162023	GW		X	5/16/23	1235	2	X									
6.	FSND-PRO-09-101-05162023	GW		X	5/16/23	1540	2	X									
7.	FSND-PRO-05-91-051 2023	GW		X	5/18/23	0845	2	X									
8.	FSND-PRO-05-101-051 2023	GW		X	5/18/23	0921	2	X									
9.	FSND-DUP-03-05162023	GW		X	5/16/23		2	X									
10.	FSND-TB-03-05182023	W		X	5/18/23	1000	2	X									

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

	DATE/TIME	
1. RELINQUISHED BY SAMPLER	5/18/23 1430	1. RECEIVED BY
2. RELINQUISHED BY	5/19/23 9:52	2. RECEIVED BY
3. RELINQUISHED BY	DATE/TIME	3. RECEIVED FOR LAB BY

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant ☐ Cooler Temp 3.2-
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: yes
Comments:

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 02860

COC Number:

CLIENT INFORMATION

COMPANY: **EA Engineering**
ADDRESS: **269 West Jefferson Street**
CITY: **Syracuse** STATE: **NY** ZIP: **13202**
ATTENTION: **Lincoln Backman-Lowe**
PHONE: **(716) 364-7282** FAX:

PROJECT INFORMATION

PROJECT NAME: **Former Scotia Navy Depot - PRB Eval.**
PROJECT #: **160530104.0029.0003** LOCATION: **Scotia, NY**
PROJECT MANAGER: **Jim Hayward**
E-MAIL: **jhayward@eaest.com**
PHONE: **(315) 345-0063** FAX:

BILLING INFORMATION

BILL TO: NE Accounts Payable PO# 160530104.0029.0003
ADDRESS: 25 Western Ave, 2nd Floor
CITY: Marlboro STATE: NY ZIP: 12542
ATTENTION: Melanie Dina PHONE: (845) 565-8100

DATA TURNAROUND INFORMATION

FAX: _____ DAYS*
HARD COPY: _____ DAYS*
EDD _____ DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESEULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☑ Other Level 4 PDF
- ☑ EDD Format NYSDEC Equis + ERIS EDD

ANALYSIS

SW8260D

1	2	3	4	5	6	7	8	9

PRESERVATIVES

1	2	3	4	5	6	7	8	9
A								

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE 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-EQB-08-05112023	W		X	5/11/23	1600	2	X								
2.	FSND-EQB-09-05122023	W		X	5/12/23	1600	2	X								
3.	FSND-EQB-10-05152023	W		X	5/15/23	1600	2	X								
4.	FSND-EQB-11-05162023	W		X	5/16/23	1600	2	X								
5.	FSND-EQB-12-05172023	W		X	5/17/23	1600	2	X								
6.	FSND-EQB-13-05182023	W		X	5/18/23	0800	2	X								
7.																
8.																
9.																
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	5/18/23 1430	1.
RELINQUISHED BY	DATE/TIME 5/19/23 7:32	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant ☐ Cooler Temp 3.2°C
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: yes
Comments:

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR 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 : O2860 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/19/2023 10:13:00 AM
Project Name : Scotia. NY - Annual Testing
Receive DateTime : 5/19/2023 9:32:00 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
O2860-01	FSND-PRO-08-71-05112023	Water	05/11/2023	13:40					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-02	FSND-PRO-08-81-05112023	Water	05/11/2023	13:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-03	O2860-02MS	Water	05/11/2023	13:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-04	O2860-02MSD	Water	05/11/2023	13:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-05	FSND-PRO-10-131-05152023	Water	05/15/2023	10:42					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-06	FSND-PRO-10-151-05152023	Water	05/15/2023	14:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-07	FSND-PRO-09-73-05162023	Water	05/16/2023	12:35					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-08	FSND-PRO-09-101-05162023	Water	05/16/2023	15:40					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-09	FSND-PRO-05-91-0512023	Water	05/18/2023	08:45					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O2860 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/19/2023 10:13:00 AM
Project Name : Scotia. NY - Annual Testing
Receive DateTime : 5/19/2023 9:32:00 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
O2860-10	FSND-PRO-05-101-0512023	Water	05/18/2023	09:21					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-11	FSND-DUP-03-05162023	Water	05/16/2023	00:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-12	FSND-TB-03-05182023	Water	05/18/2023	10:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-13	FSND-EQB-08-05112023	Water	05/11/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-14	FSND-EQB-09-05122023	Water	05/12/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-15	FSND-EQB-10-05152023	Water	05/15/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-16	FSND-EQB-11-05162023	Water	05/16/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O2860-17	FSND-EQB-12-05172023	Water	05/17/2032	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O2860 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 5/19/2023 10:13:00 AM
Project Name : Scotia. NY - Annual Testing
Receive DateTime : 5/19/2023 9:32:00 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
O2860-18	FSND-EQB-13-05182023	Water	05/18/2023	08:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days

Relinguished By :
Date / Time : 5/19/23 11:15

Received By :
Date / Time : 5/19/23 11:15 RB #4
Storage Area : VOA Refridgerator Room

CHEMTECH

ANALYTICAL RESULTS SUMMARY

GENERAL CHEMISTRY
METALS

PROJECT NAME : SCOTIA, NY - ANNUAL TESTING

EA ENGINEERING SCIENCE & TECHNOLOGY

269 W. Jefferson Street

Syracuse, NY - 13202

Phone No: 315-431-4610

ORDER ID : O3177

ATTENTION : Jim Hayward

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

Laboratory Certification ID # 20012

Table Of Contents for O3177

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2.2) Genchem- Case Narrative 5

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6) Genchem Data 23

7) Shipping Document 36

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7.2) Lab Certificate 38

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

Cover Page

Order ID : O3177

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O3177-01	FSND-MW-EVAL-4S-06122023
O3177-02	FSND-MW-EVAL-4S-06122023
O3177-03	FSND-MW-EVAL-4D-06122023
O3177-04	FSND-MW-EVAL-4D-06122023
O3177-05	FSND-MW-EVAL-3S-06122023
O3177-06	FSND-MW-EVAL-3S-06122023
O3177-07	FSND-MW-EVAL-3D-06122023
O3177-08	FSND-MW-EVAL-3D-06122023
O3177-09	FSND-MW-EVAL-1S-06122023
O3177-10	FSND-MW-EVAL-1S-06122023

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 9:37 am, Jun 27, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O3177
Test Name: Dissolved Metals Group5,Metals Group3

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/13/2023.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved Metals Group5, 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 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.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
Sample O3177-01, O3177-03, O3177-05, O3177-07, O3177-09 were analyze as Total Metal and Sample O3177-02, O3177-04, O3177-06, O3177-08, O3177-10 were analyze as Dissolve Metal.

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 9:37 am, Jun 27, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O3177
Test Name: Alkalinity,TOC,Anions Group1

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/13/2023.

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

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-EVAL-4S-06122023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-4D-06122023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-3S-06122023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-3D-06122023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-1S-06122023 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 (FSND-MW-EVAL-1S-06122023MS) analysis met criteria for all samples except for Chloride due to matrix interferences.

The Matrix Spike Duplicate (FSND-MW-EVAL-1S-06122023MSD) analysis met criteria for all samples except for Chloride due to matrix interferences.

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 9:37 am, Jun 27, 2023

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 **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: O3177

	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:** 06/27/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 9:38 am, Jun 27, 2023

Date:

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

Hit Summary Sheet
SW-846

SDG No.: O3177 **Order ID:** O3177

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-EVAL-4S-06122023									
O3177-01	FSND-MW-EVAL-4S-06122023	Water	Iron	154		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-4D-06122023									
O3177-03	FSND-MW-EVAL-4D-06122023	Water	Iron	243		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-4D-06122023									
O3177-04	FSND-MW-EVAL-4D-06122023	Water	Iron	69.4		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-3S-06122023									
O3177-05	FSND-MW-EVAL-3S-06122023	Water	Iron	84.9		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-3D-06122023									
O3177-07	FSND-MW-EVAL-3D-06122023	Water	Iron	135		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-3D-06122023									
O3177-08	FSND-MW-EVAL-3D-06122023	Water	Iron	22.4	J	18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-1S-06122023									
O3177-09	FSND-MW-EVAL-1S-06122023	Water	Iron	125		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-1S-06122023									
O3177-10	FSND-MW-EVAL-1S-06122023	Water	Iron	40.6	J	18.5	40.0	50.0	ug/L

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	154		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 18:42	SW6010	SW3010

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

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 18:46	SW6010	SW3010

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

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-03	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	243		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 18:50	SW6010	SW3010

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

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-04	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	69.4		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 18:54	SW6010	SW3010

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

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-05	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	84.9		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 18:58	SW6010	SW3010

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-06	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 19:02	SW6010	SW3010

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

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-07	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	135		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 19:06	SW6010	SW3010

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
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OR = Over Range
N =Spiked sample recovery not within control limits

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-08	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	22.4	J	1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 19:10	SW6010	SW3010

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
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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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-09	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	125		1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 19:14	SW6010	SW3010

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
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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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-10	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.6	J	1	18.5	40.0	50.0	ug/L	06/15/23 12:30	06/15/23 19:18	SW6010	SW3010

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
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N =Spiked sample recovery not within control limits

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LAB CHRONICLE

OrderID:	O3177	**OrderDate:**	6/13/2023 10:56:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	D11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3177-01	**FSND-MW-EVAL-4S-06122023**	**Water**			**06/12/23**			**06/13/23**
			Metals Group3	6010D		06/15/23	06/15/23	
O3177-02	**FSND-MW-EVAL-4S-06122023**	**Water**			**06/12/23**			**06/13/23**
			Dissolved Metals Group5	6010D		06/15/23	06/15/23	
O3177-03	**FSND-MW-EVAL-4D-06122023**	**Water**			**06/12/23**			**06/13/23**
			Metals Group3	6010D		06/15/23	06/15/23	
O3177-04	**FSND-MW-EVAL-4D-06122023**	**Water**			**06/12/23**			**06/13/23**
			Dissolved Metals Group5	6010D		06/15/23	06/15/23	
O3177-05	**FSND-MW-EVAL-3S-06122023**	**Water**			**06/12/23**			**06/13/23**
			Metals Group3	6010D		06/15/23	06/15/23	
O3177-06	**FSND-MW-EVAL-3S-06122023**	**Water**			**06/12/23**			**06/13/23**
			Dissolved Metals Group5	6010D		06/15/23	06/15/23	
O3177-07	**FSND-MW-EVAL-3D-06122023**	**Water**			**06/12/23**			**06/13/23**
			Metals Group3	6010D		06/15/23	06/15/23	
O3177-08	**FSND-MW-EVAL-3D-06122023**	**Water**			**06/12/23**			**06/13/23**
			Dissolved Metals Group5	6010D		06/15/23	06/15/23	
O3177-09	**FSND-MW-EVAL-1S-06122023**	**Water**			**06/12/23**			**06/13/23**
			Metals Group3	6010D		06/15/23	06/15/23	

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LAB CHRONICLE

O3177-10	**FSND-MW-EVAL-1S-06122023**	**Water**			**06/12/23**		**06/13/23**
			Dissolved Metals Group5	6010D		06/15/23	06/15/23

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:	06/12/23 10:45
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-01	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		06/23/23 13:37	SM 2320 B-11
Chloride	60.1	OR	1	0.11	0.30	0.60	mg/L		06/13/23 17:29	9056A
Nitrate	1.60		1	0.084	0.25	0.50	mg/L		06/13/23 17:29	9056A
Sulfate	22.2		1	0.55	1.50	3.00	mg/L		06/13/23 17:29	9056A
TOC	1.70		1	0.37	0.50	1.00	mg/L		06/22/23 12:39	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

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:	06/12/23 10:45
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023DL	SDG No.:	O3177
Lab Sample ID:	O3177-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	46.8	D	20	2.20	6.00	12.0	mg/L		06/14/23 13:30	9056A

Comments:

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time
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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 12:25
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	178		1	1.00	1.00	2.00	mg/L		06/23/23 13:46	SM 2320 B-11
Chloride	40.4	OR	1	0.11	0.30	0.60	mg/L		06/13/23 17:59	9056A
Nitrate	0.25	U	1	0.084	0.25	0.50	mg/L		06/13/23 17:59	9056A
Sulfate	14.6		1	0.55	1.50	3.00	mg/L		06/13/23 17:59	9056A
TOC	2.30		1	0.37	0.50	1.00	mg/L		06/22/23 13:57	9060A

Comments:

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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N =Spiked sample recovery not within control limits

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:	06/12/23 12:25
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023DL	SDG No.:	O3177
Lab Sample ID:	O3177-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	32.6	D	10	1.10	3.00	6.00	mg/L		06/14/23 14:00	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
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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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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 13:55
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	161		1	1.00	1.00	2.00	mg/L		06/23/23 13:49	SM 2320 B-11
Chloride	71.0	OR	1	0.11	0.30	0.60	mg/L		06/13/23 18:29	9056A
Nitrate	0.50		1	0.084	0.25	0.50	mg/L		06/13/23 18:29	9056A
Sulfate	21.4		1	0.55	1.50	3.00	mg/L		06/13/23 18:29	9056A
TOC	2.00		1	0.37	0.50	1.00	mg/L		06/22/23 14:23	9060A

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 13:55
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023DL	SDG No.:	O3177
Lab Sample ID:	O3177-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	53.1	D	20	2.20	6.00	12.0	mg/L		06/14/23 14:30	9056A

Comments:

U = Not Detected
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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
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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 11:25
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	133		1	1.00	1.00	2.00	mg/L		06/23/23 13:53	SM 2320 B-11
Chloride	57.8	OR	1	0.11	0.30	0.60	mg/L		06/13/23 18:58	9056A
Nitrate	0.25	U	1	0.084	0.25	0.50	mg/L		06/13/23 18:58	9056A
Sulfate	17.0		1	0.55	1.50	3.00	mg/L		06/13/23 18:58	9056A
TOC	2.40		1	0.37	0.50	1.00	mg/L		06/22/23 16:13	9060A

Comments:

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
H = Sample Analysis Out Of Hold Time

J = Estimated Value
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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 11:25
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023DL	SDG No.:	O3177
Lab Sample ID:	O3177-07DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	44.6	D	20	2.20	6.00	12.0	mg/L		06/14/23 14:59	9056A

Comments:

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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 15:45
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3177
Lab Sample ID:	O3177-09	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	142		1	1.00	1.00	2.00	mg/L		06/23/23 13:57	SM 2320 B-11
Chloride	45.9	OR	1	0.11	0.30	0.60	mg/L		06/13/23 19:28	9056A
Nitrate	1.20		1	0.084	0.25	0.50	mg/L		06/13/23 19:28	9056A
Sulfate	18.8		1	0.55	1.50	3.00	mg/L		06/13/23 19:28	9056A
TOC	1.30		1	0.37	0.50	1.00	mg/L		06/22/23 18:14	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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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23 15:45
Project:	Scotia, NY - Annual Testing	Date Received:	06/13/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023DL	SDG No.:	O3177
Lab Sample ID:	O3177-09DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	36.7	D	10	1.10	3.00	6.00	mg/L		06/14/23 15:29	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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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O3177	**OrderDate:**	6/13/2023 10:56:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	D11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3177-01	**FSND-MW-EVAL-4S-06122023**	**WATER**			**06/12/23 10:45**			**06/13/23**
			Alkalinity	SM2320 B			06/23/23 13:37	
			Anions Group1	9056A			06/13/23 17:29	
			TOC	9060A			06/22/23 12:39	
O3177-01DL	**FSND-MW-EVAL-4S-06122023DL**	**WATER**			**06/12/23 10:45**			**06/13/23**
			Anions Group1	9056A			06/14/23 13:30	
O3177-03	**FSND-MW-EVAL-4D-06122023**	**WATER**			**06/12/23 12:25**			**06/13/23**
			Alkalinity	SM2320 B			06/23/23 13:46	
			Anions Group1	9056A			06/13/23 17:59	
			TOC	9060A			06/22/23 13:57	
O3177-03DL	**FSND-MW-EVAL-4D-06122023DL**	**WATER**			**06/12/23 12:25**			**06/13/23**
			Anions Group1	9056A			06/14/23 14:00	
O3177-05	**FSND-MW-EVAL-3S-06122023**	**WATER**			**06/12/23 13:55**			**06/13/23**
			Alkalinity	SM2320 B			06/23/23 13:49	
			Anions Group1	9056A			06/13/23 18:29	

LAB CHRONICLE

			TOC	9060A		06/22/23 14:23	
O3177-05DL	**FSND-MW-EVAL-3S-0 6122023DL**	**WATER**			**06/12/23 13:55**		**06/13/23**
			Anions Group1	9056A		06/14/23 14:30	
O3177-07	**FSND-MW-EVAL-3D-0 6122023**	**WATER**			**06/12/23 11:25**		**06/13/23**
			Alkalinity	SM2320 B		06/23/23 13:53	
			Anions Group1	9056A		06/13/23 18:58	
			TOC	9060A		06/22/23 16:13	
O3177-07DL	**FSND-MW-EVAL-3D-0 6122023DL**	**WATER**			**06/12/23 11:25**		**06/13/23**
			Anions Group1	9056A		06/14/23 14:59	
O3177-09	**FSND-MW-EVAL-1S-0 6122023**	**WATER**			**06/12/23 15:45**		**06/13/23**
			Alkalinity	SM2320 B		06/23/23 13:57	
			Anions Group1	9056A		06/13/23 19:28	
			TOC	9060A		06/22/23 18:14	
O3177-09DL	**FSND-MW-EVAL-1S-0 6122023DL**	**WATER**			**06/12/23 15:45**		**06/13/23**
			Anions Group1	9056A		06/14/23 15:29	

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. 03177
QUOTE NO.
COC Number 2039480

7
7.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 269 West Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanda Kolin
PHONE: — FAX: —

CLIENT PROJECT INFORMATION

PROJECT NAME: Former Scotia Navy Dept
PROJECT NO.: 16053010 LOCATION: Scotia, NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaest.com
PHONE: — FAX:

CLIENT BILLING INFORMATION

BILL TO: Mdina@eaest PO#:
ADDRESS: 16053010/6029/0006
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 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 NYS DEC

ANALYSIS

1	2	3	4	5	6	7	8	9
Alkalinity	Anions	Iron	Diss Metals *	TOC				

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 (B)	4	5 (C)	6	7	8	9	COMMENTS
1.	FSND-MW-EUAL-45-06122023	GW		X	6/12/23	1045	6	X	X	X	X	X					
2.	FSND-MW-EUAL-40-06122023					1225	6	X	X	X	X	X					
3.	FSND-MW-EUAL-35-06122023					1355	6	X	X	X	X	X					
4.	FSND-MW-EUAL-30-06122023					1125	6	X	X	X	X	X					
5.	FSND-MW-EUAL-15-06122023					1545	6	X	X	X	X	X					
6.																	
7.																	
8.																	
9.																	
10.																	

← 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

	DATE/TIME	RECEIVED BY:
1. RELINQUISHED BY SAMPLER:	6/12/231930	1.
2. RELINQUISHED BY SAMPLER:	6/13/23 9:5	2.
3. RELINQUISHED BY SAMPLER:	DATE/TIME:	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.3°C
Comments: * Diss Metals sample was collected unfiltered, in a 250 mL unpreserved bottle, please filter in Lab

Please use ID from chain, no Room on Labels for prefix

Page ___ of ___

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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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

ANALYTICAL RESULTS SUMMARY

GENERAL CHEMISTRY
METALS

PROJECT NAME : SCOTIA, NY - ANNUAL TESTING

EA ENGINEERING SCIENCE & TECHNOLOGY

269 W. Jefferson Street

Syracuse, NY - 13202

Phone No: 315-431-4610

ORDER ID : O3230

ATTENTION : Jim Hayward

Laboratory Certification ID # 20012

Table Of Contents for O3230

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7) Shipping Document 35

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7.2) Lab Certificate 37

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Cover Page

Order ID : O3230

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O3230-01	FSND-MW-6-06132023
O3230-02	FSND-MW-6-06132023
O3230-03	FSND-MW-EVAL-01D-06132023
O3230-04	FSND-MW-EVIAL-01D-06132023
O3230-05	FSND-MW-22R-06132023
O3230-06	FSND-MW-22R-06132023
O3230-07	FSND-MW-EVAL-02S-06132023
O3230-08	FSND-MW-EVAL-02S-06132023
O3230-09	FSND-MW-EVAL-02D-06132023
O3230-10	FSND-MW-EVAL-02D-06132023

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

Date: 7/3/2023

By Nimisha Pandya QA/QC Supervisor at 11:01 am, Jul 07, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH
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CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O3230
Test Name: Dissolved Metals Group5,Metals Group3

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/14/2023.

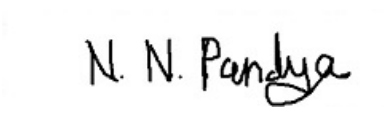
B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved Metals Group5, Metals Group3 and TOC. This data package contains results for Dissolved Metals Group5,Metals Group3.

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 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.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
Sample O3230-01, O3230-03, O3230-05, O3230-07, O3230-09 analyzes as Total Metal and Sample O3230-02, O3230-04, O3230-06, O3230-08, O3230-10 analyzes as Dissolved Metal.

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 

APPROVED
By Nimisha Pandya QA/QC Supervisor at 11:02 am, Jul 07, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O3230
Test Name: Alkalinity,TOC,Anions Group1

A. Number of Samples and Date of Receipt:
10 Water samples were received on 06/14/2023.

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

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-6-06132023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-01D-06132023 was diluted due to high concentrations for Chloride & Sample FSND-MW-22R-06132023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-02S-06132023 was diluted due to high concentrations for Chloride & Sample FSND-MW-EVAL-02D-06132023 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 (FSND-MW-EVAL-02D-06132023MS) analysis met criteria for all samples except for Chloride due to matrix interference.
The Matrix Spike Duplicate (FSND-MW-EVAL-02D-06132023MSD) analysis met criteria for all samples except for Chloride due to matrix interference.
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 11:02 am, Jul 07, 2023

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 **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: O3230

	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:** 07/03/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 11:02 am, Jul 07, 2023

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

Hit Summary Sheet
SW-846

SDG No.: O3230 **Order ID:** O3230

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-6-06132023									
O3230-01	FSND-MW-6-06132023	Water	Iron	125		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-6-06132023									
O3230-02	FSND-MW-6-06132023	Water	Iron	43.9	J	18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-01D-06132023									
O3230-03	FSND-MW-EVAL-01D-0613202	Water	Iron	633		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-22R-06132023									
O3230-05	FSND-MW-22R-06132023	Water	Iron	3140		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-02S-06132023									
O3230-07	FSND-MW-EVAL-02S-06132023	Water	Iron	981		18.5	40.0	50.0	ug/L
Client ID : FSND-MW-EVAL-02D-06132023									
O3230-09	FSND-MW-EVAL-02D-06132023	Water	Iron	191		18.5	40.0	50.0	ug/L

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	125		1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/30/23 17:47	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	43.9	J	1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:15	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-01D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-03	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	633		1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:19	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVIAL-01D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-04	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:23	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-05	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	3140		1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:27	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-06	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:31	SW6010	SW3010

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

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B = Analyte Found in Associated Method Blank
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OR = Over Range
N =Spiked sample recovery not within control limits

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-07	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	981		1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:35	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-08	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:47	SW6010	SW3010

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
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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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-09	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	191		1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:51	SW6010	SW3010

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

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-10	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	40.0	U	1	18.5	40.0	50.0	ug/L	06/16/23 12:30	06/17/23 02:55	SW6010	SW3010

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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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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OR = Over Range
N =Spiked sample recovery not within control limits

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LAB CHRONICLE

OrderID:	O3230	**OrderDate:**	6/14/2023 11:34:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	G11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3230-01	**FSND-MW-6-06132023**	**Water**			**06/13/23**			**06/14/23**
			Metals Group3	6010D		06/16/23	06/30/23	
O3230-02	**FSND-MW-6-06132023**	**Water**			**06/13/23**			**06/14/23**
			Dissolved Metals Group5	6010D		06/16/23	06/17/23	
O3230-03	**FSND-MW-EVAL-01D-06132023**	**Water**			**06/13/23**			**06/14/23**
			Metals Group3	6010D		06/16/23	06/17/23	
O3230-04	**FSND-MW-EVIAL-01D-06132023**	**Water**			**06/13/23**			**06/14/23**
			Dissolved Metals Group5	6010D		06/16/23	06/17/23	
O3230-05	**FSND-MW-22R-06132023**	**Water**			**06/13/23**			**06/14/23**
			Metals Group3	6010D		06/16/23	06/17/23	
O3230-06	**FSND-MW-22R-06132023**	**Water**			**06/13/23**			**06/14/23**
			Dissolved Metals Group5	6010D		06/16/23	06/17/23	
O3230-07	**FSND-MW-EVAL-02S-06132023**	**Water**			**06/13/23**			**06/14/23**
			Metals Group3	6010D		06/16/23	06/17/23	
O3230-08	**FSND-MW-EVAL-02S-06132023**	**Water**			**06/13/23**			**06/14/23**
			Dissolved Metals Group5	6010D		06/16/23	06/17/23	
O3230-09	**FSND-MW-EVAL-02D-06132023**	**Water**			**06/13/23**			**06/14/23**
			Metals Group3	6010D		06/16/23	06/17/23	

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LAB CHRONICLE

O3230-10	**FSND-MW-EVAL-02D-06132023**	**Water**			**06/13/23**		**06/14/23**
			Dissolved Metals Group5	6010D		06/16/23	06/17/23

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:	06/13/23 08:20
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	241		1	1.00	1.00	2.00	mg/L		06/23/23 14:03	SM 2320 B-11
Chloride	62.7	OR	1	0.11	0.30	0.60	mg/L		06/14/23 17:57	9056A
Nitrate	1.50		1	0.084	0.25	0.50	mg/L		06/14/23 17:57	9056A
Sulfate	10.3		1	0.55	1.50	3.00	mg/L		06/14/23 17:57	9056A
TOC	1.10		1	0.37	0.50	1.00	mg/L		06/22/23 18:38	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
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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

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:	06/13/23 08:20
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023DL	SDG No.:	O3230
Lab Sample ID:	O3230-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	46.1	D	20	2.20	6.00	12.0	mg/L		06/15/23 12:35	9056A

Comments:

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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:	06/13/23 08:50
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-01D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-03	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		06/23/23 14:08	SM 2320 B-11
Chloride	47.9	OR	1	0.11	0.30	0.60	mg/L		06/14/23 18:27	9056A
Nitrate	0.25	U	1	0.084	0.25	0.50	mg/L		06/14/23 18:27	9056A
Sulfate	17.4		1	0.55	1.50	3.00	mg/L		06/14/23 18:27	9056A
TOC	1.80		1	0.37	0.50	1.00	mg/L		06/22/23 19:02	9060A

Comments:

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N =Spiked sample recovery not within control limits

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:	06/13/23 08:50
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-01D-06132023DL	SDG No.:	O3230
Lab Sample ID:	O3230-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	36.2	D	10	1.10	3.00	6.00	mg/L		06/15/23 13:35	9056A

Comments:

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N =Spiked sample recovery not within control limits

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:	06/13/23 10:05
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	208		1	1.00	1.00	2.00	mg/L		06/23/23 14:12	SM 2320 B-11
Chloride	54.0	OR	1	0.11	0.30	0.60	mg/L		06/14/23 18:57	9056A
Nitrate	0.62		1	0.084	0.25	0.50	mg/L		06/14/23 18:57	9056A
Sulfate	15.1		1	0.55	1.50	3.00	mg/L		06/14/23 18:57	9056A
TOC	1.40		1	0.37	0.50	1.00	mg/L		06/22/23 19:27	9060A

Comments:

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LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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OR = Over Range
N =Spiked sample recovery not within control limits

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:	06/13/23 10:05
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023DL	SDG No.:	O3230
Lab Sample ID:	O3230-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	41.9	D	10	1.10	3.00	6.00	mg/L		06/15/23 14:04	9056A

Comments:

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LOD = Limit of Detection
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J = Estimated Value
B = Analyte Found in Associated Method Blank
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N =Spiked sample recovery not within control limits

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:	06/13/23 13:15
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	275		1	1.00	1.00	2.00	mg/L		06/23/23 14:16	SM 2320 B-11
Chloride	130	OR	1	0.11	0.30	0.60	mg/L		06/14/23 19:26	9056A
Nitrate	0.19	J	1	0.084	0.25	0.50	mg/L		06/14/23 19:26	9056A
Sulfate	27.2		1	0.55	1.50	3.00	mg/L		06/14/23 19:26	9056A
TOC	2.20		1	0.37	0.50	1.00	mg/L		06/22/23 19:52	9060A

Comments:

U = Not Detected
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LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
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N =Spiked sample recovery not within control limits

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:	06/13/23 13:15
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023DL	SDG No.:	O3230
Lab Sample ID:	O3230-07DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	92.4	D	20	2.20	6.00	12.0	mg/L		06/15/23 14:34	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
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N =Spiked sample recovery not within control limits

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:	06/13/23 11:00
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02D-06132023	SDG No.:	O3230
Lab Sample ID:	O3230-09	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	160		1	1.00	1.00	2.00	mg/L		06/23/23 14:20	SM 2320 B-11
Chloride	75.6	OR	1	0.11	0.30	0.60	mg/L		06/14/23 19:56	9056A
Nitrate	0.19	J	1	0.084	0.25	0.50	mg/L		06/14/23 19:56	9056A
Sulfate	13.3		1	0.55	1.50	3.00	mg/L		06/14/23 19:56	9056A
TOC	1.50		1	0.37	0.50	1.00	mg/L		06/22/23 20:17	9060A

Comments:

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D = Dilution
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J = Estimated Value
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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:	06/13/23 11:00
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02D-06132023DL	SDG No.:	O3230
Lab Sample ID:	O3230-09DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	54.3	D	20	2.20	6.00	12.0	mg/L		06/15/23 15:04	9056A

Comments:

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LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
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J = Estimated Value
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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O3230	**OrderDate:**	6/14/2023 11:34:00 AM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	G11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3230-01	**FSND-MW-6-06132023**	**WATER**			**06/13/23 08:20**			**06/14/23**
			Alkalinity	SM2320 B			06/23/23 14:03	
			Anions Group1	9056A			06/14/23 17:57	
			TOC	9060A			06/22/23 18:38	
O3230-01DL	**FSND-MW-6-06132023DL**	**WATER**			**06/13/23 08:20**			**06/14/23**
			Anions Group1	9056A			06/15/23 12:35	
O3230-03	**FSND-MW-EVAL-01D-06132023**	**WATER**			**06/13/23 08:50**			**06/14/23**
			Alkalinity	SM2320 B			06/23/23 14:08	
			Anions Group1	9056A			06/14/23 18:27	
			TOC	9060A			06/22/23 19:02	
O3230-03DL	**FSND-MW-EVAL-01D-06132023DL**	**WATER**			**06/13/23 08:50**			**06/14/23**
			Anions Group1	9056A			06/15/23 13:35	
O3230-05	**FSND-MW-22R-06132023**	**WATER**			**06/13/23 10:05**			**06/14/23**
			Alkalinity	SM2320 B			06/23/23 14:12	
			Anions Group1	9056A			06/14/23 18:57	

LAB CHRONICLE

			TOC	9060A		06/22/23 19:27	
O3230-05DL	**FSND-MW-22R-06132023DL**	**WATER**			**06/13/23 10:05**		**06/14/23**
			Anions Group1	9056A		06/15/23 14:04	
O3230-07	**FSND-MW-EVAL-02S-06132023**	**WATER**			**06/13/23 13:15**		**06/14/23**
			Alkalinity	SM2320 B		06/23/23 14:16	
			Anions Group1	9056A		06/14/23 19:26	
			TOC	9060A		06/22/23 19:52	
O3230-07DL	**FSND-MW-EVAL-02S-06132023DL**	**WATER**			**06/13/23 13:15**		**06/14/23**
			Anions Group1	9056A		06/15/23 14:34	
O3230-09	**FSND-MW-EVAL-02D-06132023**	**WATER**			**06/13/23 11:00**		**06/14/23**
			Alkalinity	SM2320 B		06/23/23 14:20	
			Anions Group1	9056A		06/14/23 19:56	
			TOC	9060A		06/22/23 20:17	
O3230-09DL	**FSND-MW-EVAL-02D-06132023DL**	**WATER**			**06/13/23 11:00**		**06/14/23**
			Anions Group1	9056A		06/15/23 15:04	

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. 03230
COC Number 2036398

7
7.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 204 west Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanda Kohn
PHONE: — FAX: —

CLIENT PROJECT INFORMATION

PROJECT NAME: Former Scotia New/Dept
PROJECT NO.: 160530104 LOCATION: Scotia NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaestcom
PHONE: — FAX: —

CLIENT BILLING INFORMATION

BILL TO: mdina@eaestcom PO#: V
ADDRESS: 160530104/0029/0006
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 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 NYSDEC

ANALYSIS

1	2	3	4	5	6	7	8	9
Alkalinity	Anions	Iron	Diss Metals *	TOC				

PRESERVATIVES

1	2	3	4	5	6	7	8	9
		B		C				

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-MW-6-06132023	GW		X	6/13/23	0920		X	X	X	X	X				
2.	FSND-MW-EUAL-01D-06132023					0850		X	X	X	X	X				
3.	FSND-MW-22R-06132023					1005		X	X	X	X	X				
4.	~~FSND-MW-EUAL-06132023~~															
5.	~~FSND-MW-EUAL-06132023~~															
6.	FSND-MW-EUAL-02S-06132023					1315		X	X	X	X	X				
7.	FSND-MW-EUAL-02D-06132023	↓		↓	↓	1100		X	X	X	X	X				
8.																
9.																
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

	DATE/TIME:	RECEIVED BY:
1. RELINQUISHED BY SAMPLER:	6/13/23 1700	1.
2. RELINQUISHED BY SAMPLER:	6/14/23 10:30	2.
3. RELINQUISHED BY SAMPLER:		3.

Conditions of bottles or coolers at receipt: ☑ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C 4.1

Comments: * Diss Cmpd metals collected unfiltered, in unpreserved 250ml, please filter in Lab

Please use ID from Chain, No common Label for prefix

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

2/6/2023

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	T104704488-23-16

CHEMTECH

ANALYTICAL RESULTS SUMMARY

VOLATILE ORGANICS
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 : O3231

ATTENTION : Jim Hayward

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

Laboratory Certification ID # 20012

Table Of Contents for O3231

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2) Case Narrative 4

2.1) VOC-TCLVOA-10- Case Narrative 4

2.2) Gases- Case Narrative 7

3) Qualifier Page 9

4) QA Checklist 10

5) VOC-TCLVOA-10 Data 11

6) Gases Data 74

7) Shipping Document 92

7.1) CHAIN OF CUSTODY 93

7.2) Lab Certificate 95

7.3) Internal COC 96

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Cover Page

Order ID : O3231

Project ID : Scotia, NY - Annual Testing

Client : EA Engineering Science & Technology

Lab Sample Number	Client Sample Number
O3231-01	FSND-MW-EVAL-4S-06122(
O3231-02	FSND-MW-EVAL-4S-06122(
O3231-03	FSND-MW-EVAL-4S-06122(
O3231-04	FSND-MW-EVAL-1D-06132(
O3231-05	FSND-MW-22R-06132023
O3231-06	FSND-MW-EVAL-02S-06132
O3231-07	FSND-MW-EVAL-2D-06132(
O3231-08	FSND-MW-18-06132023
O3231-09	FSND-MW-EVAL-3S-06122(
O3231-10	FSND-MW-EVAL-1S-06122(
O3231-11	FSND-MW-EVAL-3D-06122(
O3231-12	FSND-MW-6-06132023
O3231-13	FSND-MW-8-06132023
O3231-14	FSND-DUP-1-06122023
O3231-15	FSND-DUP-2-06132023
O3231-16	FSND-EQB-1-06122023
O3231-17	FSND-EQB-2-06132023
O3231-18	TB
O3231-19	FSND-MW-EVAL-4D-06122(

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 10:18 am, Jun 28, 2023

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 # O3231
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
19 Water samples were received on 06/14/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Gases and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_N were done using GC column RXI-624SIL MS 30m 0.25mm 1.4 um. Cat#13868.The 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.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The MS {O3231-02MS} with File ID: VN078244.D recoveries met the requirements for all compounds except for Trichloroethene[136%],due to matrix interference.

The MSD {O3231-03MSD} with File ID: VN078245.D recoveries met the acceptable requirements except for Trichloroethene[136%],due to matrix interference.

The sample # FSND-MW-EVAL-4S-06122023MS and FSND-MW-EVAL-4S-06122023MSD is failing for Trichloroethene and the original sample(FSND-MW-EVAL-4S-06122023) is reported with M flag for this compound.

The RPD met criteria .

The Blank Spike for {VN0616WBS01} with File ID: VN078251.D met requirements for all samples except for 1,2,4-Trichlorobenzene[64%] failing low but only dilution run analyzed under this Blank Spike therefore no corrective action taken,

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The Blank Spike for {VN0620WBS01} with File ID: VN078300.D met requirements for all samples except for Methylcyclohexane[71%] failing marginally low while 1,2,4-Trichlorobenzene[63%], failing low, associated sample #12 Initially analyzed in seq VN061923 where surrogate failing as a corrective action sample reanalyzed but Blank Spike failing low for 1,2,4-Trichlorobenzene However no positive hit in associated sample for failing analyte and also CCAL passing therefore second run reported as final and Initial Run provided as supporting data in Miscellaneous Section.

The Blank analysis did not indicate the presence of lab contamination.

The %RSD is greater than 15% in the Initial Calibration method (82N060623W.M) for Chloromethane, 1,1,2,2-Tetrachloroethane these compounds are passing on Linear Regression.

The Continuous Calibration File ID VN078192.D met the requirements except for Acetone failing high but no positive hit in associated samples therefore no corrective action taken.

The Continuous Calibration File ID VN078248.D met the requirements except for Carbon Disulfide and Dichlorodifluoromethane failing low but only dilution sample analyzed under this CCAL therefore no corrective action taken

The Continuous Calibration File ID VN078297.D met the requirements except for Methylcyclohexane failing biased low also no positive hit in associated samples therefore no corrective action taken.

The Tuning criteria met requirements.

Samples FSND-MW-EVAL-1D-06132023, FSND-MW-EVAL-3D-06122023 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.

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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 10:19 am, Jun 28, 2023

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

CASE NARRATIVE

EA Engineering Science & Technology
Project Name: Scotia, NY - Annual Testing
Project # N/A
Chemtech Project # O3231
Test Name: Gases

A. Number of Samples and Date of Receipt:
19 Water samples were received on 06/14/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Gases and VOC-TCLVOA-10. This data package contains results for Gases.

C. Analytical Techniques:
The analyses were performed on instrument FID_A. The column is RT-U Plot 30m X 0.32mm.The 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 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 Initial Calibration met the requirements.
The Continuous Calibration met the requirements.

Samples FSND-MW-EVAL-1D-06132023, FSND-MW-EVAL-02S-06132023 and FSND-MW-EVAL-4D-06122023 were diluted due to high concentrations.

E. Additional Comments:

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

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

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 10:19 am, Jun 28, 2023

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: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (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 #: O3231

	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:** 06/28/2023

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

APPROVED
By Nimisha Pandya QA/QC Supervisor at 10:19 am, Jun 28, 2023

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

Hit Summary Sheet
SW-846

SDG No.: O3231

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	LOD	RDL	Units
Client ID:	**FSND-MW-EVAL-4S-06122023**									
O3231-01	FSND-MW-EVAL-4	Water	Acetone		1.70	J	1.20	3.80	5.00	ug/L
O3231-01	FSND-MW-EVAL-4	Water	Trichloroethene		71.9	M	0.26	0.75	1.00	ug/L
			Total Voc :		73.6					
			Total Concentration:		73.6					
Client ID:	**FSND-MW-EVAL-1D-06132023**									
O3231-04	FSND-MW-EVAL-	Water	1,1-Dichloroethene		1.10		0.21	0.75	1.00	ug/L
O3231-04	FSND-MW-EVAL-	Water	trans-1,2-Dichloroethene		0.41	J	0.17	0.50	1.00	ug/L
O3231-04	FSND-MW-EVAL-	Water	cis-1,2-Dichloroethene		2.40		0.20	0.75	1.00	ug/L
O3231-04	FSND-MW-EVAL-	Water	Trichloroethene		250	E	0.26	0.75	1.00	ug/L
			Total Voc :		254					
O3231-04	FSND-MW-EVAL-	Water	Propene	*	6.10	J	0		0	ug/L
			Total Tics :		6.10					
			Total Concentration:		260					
Client ID:	**FSND-MW-EVAL-1D-06132023DL**									
O3231-04DL	FSND-MW-EVAL-	Water	Trichloroethene		240	D	1.30	3.80	5.00	ug/L
			Total Voc :		240					
			Total Concentration:		240					
Client ID:	**FSND-MW-22R-06132023**									
O3231-05	FSND-MW-22R-06	Water	Trichloroethene		72.0		0.26	0.75	1.00	ug/L
O3231-05	FSND-MW-22R-06	Water	Tetrachloroethene		2.90		0.17	0.50	1.00	ug/L
			Total Voc :		74.9					
			Total Concentration:		74.9					
Client ID:	**FSND-MW-EVAL-02S-06132023**									
O3231-06	FSND-MW-EVAL-(	Water	Carbon Tetrachloride		0.51	J	0.13	0.50	1.00	ug/L
O3231-06	FSND-MW-EVAL-(	Water	cis-1,2-Dichloroethene		1.70		0.20	0.75	1.00	ug/L
O3231-06	FSND-MW-EVAL-(	Water	Chloroform		0.45	J	0.14	0.50	1.00	ug/L
O3231-06	FSND-MW-EVAL-(	Water	1,1,1-Trichloroethane		2.70		0.14	0.50	1.00	ug/L
O3231-06	FSND-MW-EVAL-(	Water	Trichloroethene		35.4		0.26	0.75	1.00	ug/L
O3231-06	FSND-MW-EVAL-(	Water	Tetrachloroethene		16.3		0.17	0.50	1.00	ug/L
			Total Voc :		57.1					
			Total Concentration:		57.1					
Client ID:	**FSND-MW-EVAL-2D-06132023**									
O3231-07	FSND-MW-EVAL-2	Water	Carbon Tetrachloride		0.51	J	0.13	0.50	1.00	ug/L
O3231-07	FSND-MW-EVAL-2	Water	Trichloroethene		1.10		0.26	0.75	1.00	ug/L
			Total Voc :		1.61					
			Total Concentration:		1.61					
Client ID:	**FSND-MW-18-06132023**									
O3231-08	FSND-MW-18-061	Water	1,1,1-Trichloroethane		1.10		0.14	0.50	1.00	ug/L
O3231-08	FSND-MW-18-061	Water	Trichloroethene		42.8		0.26	0.75	1.00	ug/L
O3231-08	FSND-MW-18-061	Water	Tetrachloroethene		1.00		0.17	0.50	1.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: O3231

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
			Total Voc :	44.9					
			Total Concentration:	44.9					
Client ID:	**FSND-MW-EVAL-3S-06122023**								
O3231-09	FSND-MW-EVAL-3	Water	Trichloroethene	67.5		0.26	0.75	1.00	ug/L
			Total Voc :	67.5					
			Total Concentration:	67.5					
Client ID:	**FSND-MW-EVAL-1S-06122023**								
O3231-10	FSND-MW-EVAL-1	Water	Methyl Acetate	0.87	J	0.36	0.75	1.00	ug/L
O3231-10	FSND-MW-EVAL-1	Water	Trichloroethene	89.0		0.26	0.75	1.00	ug/L
O3231-10	FSND-MW-EVAL-1	Water	Tetrachloroethene	0.37	J	0.17	0.50	1.00	ug/L
			Total Voc :	90.2					
			Total Concentration:	90.2					
Client ID:	**FSND-MW-EVAL-3D-06122023**								
O3231-11	FSND-MW-EVAL-3	Water	Trichloroethene	150	E	0.26	0.75	1.00	ug/L
			Total Voc :	150					
			Total Concentration:	150					
Client ID:	**FSND-MW-EVAL-3D-06122023DL**								
O3231-11DL	FSND-MW-EVAL-3	Water	Trichloroethene	130	D	1.30	3.80	5.00	ug/L
			Total Voc :	130					
			Total Concentration:	130					
Client ID:	**FSND-MW-6-06132023**								
O3231-12	FSND-MW-6-0613	Water	Acetone	2.70	J	1.20	3.80	5.00	ug/L
O3231-12	FSND-MW-6-0613	Water	Trichloroethene	19.9		0.26	0.75	1.00	ug/L
			Total Voc :	22.6					
			Total Concentration:	22.6					
Client ID:	**FSND-MW-8-06132023**								
O3231-13	FSND-MW-8-0613	Water	Carbon Tetrachloride	0.55	J	0.13	0.50	1.00	ug/L
O3231-13	FSND-MW-8-0613	Water	Chloroform	0.43	J	0.14	0.50	1.00	ug/L
			Total Voc :	0.98					
			Total Concentration:	0.98					
Client ID:	**FSND-DUP-1-06122023**								
O3231-14	FSND-DUP-1-0612	Water	Trichloroethene	91.2		0.26	0.75	1.00	ug/L
			Total Voc :	91.2					
			Total Concentration:	91.2					
Client ID:	**FSND-DUP-2-06132023**								
O3231-15	FSND-DUP-2-0613	Water	Carbon Tetrachloride	0.65	J	0.13	0.50	1.00	ug/L
O3231-15	FSND-DUP-2-0613	Water	Chloroform	0.42	J	0.14	0.50	1.00	ug/L
			Total Voc :	1.07					
			Total Concentration:	1.07					
Client ID:	**FSND-EQB-1-06122023**								
O3231-16	FSND-EQB-1-0612	Water	Chloroform	1.90		0.14	0.50	1.00	ug/L
			Total Voc :	1.90					

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

Hit Summary Sheet
SW-846

SDG No.: O3231

Client: EA Engineering Science & Technology

Sample ID	Client ID	Matrix	Parameter		Concentration		C	MDL	LOD	RDL	Units
O3231-16	FSND-EQB-1-0612	Water	Tetrahydrofuran	*	0.94		J	0.85		5.00	ug/L
			Total Tics :			0.94					
			Total Concentration:			2.84					
Client ID:	**FSND-EQB-2-06132023**										
O3231-17	FSND-EQB-2-0613	Water	Acetone		6.70			1.20	3.80	5.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	Chloroform		25.1			0.14	0.50	1.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	Benzene		0.59		J	0.12	0.50	1.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	Bromodichloromethane		1.30			0.15	0.50	1.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	Toluene		0.29		J	0.14	0.50	1.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	Ethyl Benzene		0.29		J	0.13	0.50	1.00	ug/L
O3231-17	FSND-EQB-2-0613	Water	m/p-Xylenes		0.86		J	0.31	1.00	2.00	ug/L
			Total Voc :			35.1					
O3231-17	FSND-EQB-2-0613	Water	Tetrahydrofuran	*	13.2		J	0.85		5.00	ug/L
			Total Tics :			13.2					
			Total Concentration:			48.3					
Client ID:	**FSND-MW-EVAL-4D-06122023**										
O3231-19	FSND-MW-EVAL-4	Water	Trichloroethene		26.9			0.26	0.75	1.00	ug/L
			Total Voc :			26.9					
			Total Concentration:			26.9					

SAMPLE DATA

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078240.D	1		06/15/23 19:58	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	71.9	M	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078240.D	1		06/15/23 19:58	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.0		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.2		80 - 119		108%	SPK: 50
2037-26-5	Toluene-d8	48.9		89 - 112		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.9		85 - 114		94%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	405000	8.23				
540-36-3	1,4-Difluorobenzene	759000	9.112				
3114-55-4	Chlorobenzene-d5	676000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	201000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078240.D	1		06/15/23 19:58	VN061523

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078217.D	1		06/14/23 19:45	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	1.10		0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.41	J	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	2.40		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	250	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078217.D	1		06/14/23 19:45	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.8		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		80 - 119		110%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		85 - 114		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	436000	8.235				
540-36-3	1,4-Difluorobenzene	822000	9.106				
3114-55-4	Chlorobenzene-d5	720000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	226000	13.8				
TENTATIVE IDENTIFIED COMPOUNDS							
000115-07-1	Propene	6.10	J			2.09	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-04	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078217.D	1		06/14/23 19:45	VN061423

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023DL	SDG No.:	O3231
Lab Sample ID:	O3231-04DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078225.D	5		06/15/23 13:56	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.50	UD	0.70	2.50	5.00	ug/L
74-87-3	Chloromethane	2.50	UD	1.30	2.50	5.00	ug/L
75-01-4	Vinyl Chloride	3.80	UD	1.30	3.80	5.00	ug/L
74-83-9	Bromomethane	18.8	UD	7.80	18.8	25.0	ug/L
75-00-3	Chloroethane	3.80	UD	1.40	3.80	5.00	ug/L
75-69-4	Trichlorofluoromethane	2.50	UD	0.65	2.50	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.50	UD	1.10	2.50	5.00	ug/L
75-35-4	1,1-Dichloroethene	3.80	UD	1.10	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	1.40	3.80	5.00	ug/L
1634-04-4	Methyl tert-butyl Ether	2.50	UD	0.70	2.50	5.00	ug/L
79-20-9	Methyl Acetate	3.80	UD	1.80	3.80	5.00	ug/L
75-09-2	Methylene Chloride	2.50	UD	2.50	2.50	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	2.50	UD	0.85	2.50	5.00	ug/L
75-34-3	1,1-Dichloroethane	2.50	UD	0.80	2.50	5.00	ug/L
110-82-7	Cyclohexane	12.5	UD	8.00	12.5	25.0	ug/L
78-93-3	2-Butanone	12.5	UD	6.10	12.5	25.0	ug/L
56-23-5	Carbon Tetrachloride	2.50	UD	0.65	2.50	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	3.80	UD	1.00	3.80	5.00	ug/L
74-97-5	Bromochloromethane	2.50	UD	0.70	2.50	5.00	ug/L
67-66-3	Chloroform	2.50	UD	0.70	2.50	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.50	UD	0.70	2.50	5.00	ug/L
108-87-2	Methylcyclohexane	2.50	UD	0.80	2.50	5.00	ug/L
71-43-2	Benzene	2.50	UD	0.60	2.50	5.00	ug/L
107-06-2	1,2-Dichloroethane	2.50	UD	0.80	2.50	5.00	ug/L
79-01-6	Trichloroethene	240	D	1.30	3.80	5.00	ug/L
78-87-5	1,2-Dichloropropane	2.50	UD	0.75	2.50	5.00	ug/L
75-27-4	Bromodichloromethane	2.50	UD	0.75	2.50	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	UD	3.70	12.5	25.0	ug/L
108-88-3	Toluene	2.50	UD	0.70	2.50	5.00	ug/L
10061-02-6	t-1,3-Dichloropropene	2.50	UD	0.85	2.50	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.50	UD	0.75	2.50	5.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023DL	SDG No.:	O3231
Lab Sample ID:	O3231-04DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078225.D	5		06/15/23 13:56	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.50	UD	0.65	2.50	5.00	ug/L
591-78-6	2-Hexanone	12.5	UD	4.90	12.5	25.0	ug/L
124-48-1	Dibromochloromethane	2.50	UD	0.75	2.50	5.00	ug/L
106-93-4	1,2-Dibromoethane	2.50	UD	0.65	2.50	5.00	ug/L
127-18-4	Tetrachloroethene	2.50	UD	0.85	2.50	5.00	ug/L
108-90-7	Chlorobenzene	2.50	UD	0.60	2.50	5.00	ug/L
100-41-4	Ethyl Benzene	2.50	UD	0.65	2.50	5.00	ug/L
179601-23-1	m/p-Xylenes	5.00	UD	1.60	5.00	10.0	ug/L
95-47-6	o-Xylene	2.50	UD	0.75	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	0.75	2.50	5.00	ug/L
98-82-8	Isopropylbenzene	2.50	UD	0.65	2.50	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.50	UD	0.75	2.50	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	2.50	UD	1.20	2.50	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	2.50	UD	1.20	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	2.20	3.80	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.50	UD	2.20	2.50	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	3.80	UD	2.80	3.80	5.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.7		81 - 118		105%	SPK: 50
1868-53-7	Dibromofluoromethane	53.6		80 - 119		107%	SPK: 50
2037-26-5	Toluene-d8	48.9		89 - 112		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.7		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	435000	8.235				
540-36-3	1,4-Difluorobenzene	795000	9.112				
3114-55-4	Chlorobenzene-d5	690000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	212000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1D-06132023DL	SDG No.:	O3231
Lab Sample ID:	O3231-04DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078225.D	5		06/15/23 13:56	VN061523

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078212.D	1		06/14/23 17:45	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	72.0		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078212.D	1		06/14/23 17:45	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	2.90		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	53.2		81 - 118		106%	SPK: 50
1868-53-7	Dibromofluoromethane	54.0		80 - 119		108%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.9		85 - 114		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	457000	8.235				
540-36-3	1,4-Difluorobenzene	861000	9.106				
3114-55-4	Chlorobenzene-d5	761000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	243000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-05	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078212.D	1		06/14/23 17:45	VN061423

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078213.D	1		06/14/23 18:09	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.51	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	1.70		0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.45	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.70		0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	35.4		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078213.D	1		06/14/23 18:09	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	16.3		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	53.3		81 - 118		107%	SPK: 50
1868-53-7	Dibromofluoromethane	53.5		80 - 119		107%	SPK: 50
2037-26-5	Toluene-d8	47.6		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.7		85 - 114		97%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	454000	8.23				
540-36-3	1,4-Difluorobenzene	855000	9.106				
3114-55-4	Chlorobenzene-d5	740000	11.876				
3855-82-1	1,4-Dichlorobenzene-d4	238000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-06	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078213.D	1		06/14/23 18:09	VN061423

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-2D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078214.D	1		06/14/23 18:33	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.51	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	1.10		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-2D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078214.D	1		06/14/23 18:33	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.2		81 - 118		108%	SPK: 50
1868-53-7	Dibromofluoromethane	54.7		80 - 119		109%	SPK: 50
2037-26-5	Toluene-d8	48.4		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.0		85 - 114		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	445000	8.235				
540-36-3	1,4-Difluorobenzene	825000	9.112				
3114-55-4	Chlorobenzene-d5	733000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	235000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-2D-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-07	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078214.D	1		06/14/23 18:33	VN061423

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-18-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078215.D	1		06/14/23 18:57	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	1.10		0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	42.8		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-18-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078215.D	1		06/14/23 18:57	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	1.00		0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.1		81 - 118		108%	SPK: 50
1868-53-7	Dibromofluoromethane	54.1		80 - 119		108%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.1		85 - 114		94%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	452000	8.236				
540-36-3	1,4-Difluorobenzene	845000	9.112				
3114-55-4	Chlorobenzene-d5	733000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	228000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-18-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-08	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078215.D	1		06/14/23 18:57	VN061423

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078216.D	1		06/14/23 19:21	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	67.5		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078216.D	1		06/14/23 19:21	VN061423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	53.6		81 - 118		107%	SPK: 50
1868-53-7	Dibromofluoromethane	53.2		80 - 119		106%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.7		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	439000	8.235				
540-36-3	1,4-Difluorobenzene	822000	9.112				
3114-55-4	Chlorobenzene-d5	719000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	227000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-09	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078216.D	1		06/14/23 19:21	VN061423

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078241.D	1		06/15/23 20:22	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.87	J	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	89.0		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078241.D	1		06/15/23 20:22	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.37	J	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.1		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	53.8		80 - 119		108%	SPK: 50
2037-26-5	Toluene-d8	49.0		89 - 112		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.4		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	417000	8.23				
540-36-3	1,4-Difluorobenzene	783000	9.112				
3114-55-4	Chlorobenzene-d5	699000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	215000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-10	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078241.D	1		06/15/23 20:22	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078242.D	1		06/15/23 20:46	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	150	E	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078242.D	1		06/15/23 20:46	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.0		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.4		80 - 119		109%	SPK: 50
2037-26-5	Toluene-d8	48.7		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.1		85 - 114		92%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	421000	8.235				
540-36-3	1,4-Difluorobenzene	793000	9.112				
3114-55-4	Chlorobenzene-d5	699000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	223000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-11	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078242.D	1		06/15/23 20:46	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023DL	SDG No.:	O3231
Lab Sample ID:	O3231-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078255.D	5		06/16/23 13:14	VN061623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	2.50	UD	0.70	2.50	5.00	ug/L
74-87-3	Chloromethane	2.50	UD	1.30	2.50	5.00	ug/L
75-01-4	Vinyl Chloride	3.80	UD	1.30	3.80	5.00	ug/L
74-83-9	Bromomethane	18.8	UD	7.80	18.8	25.0	ug/L
75-00-3	Chloroethane	3.80	UD	1.40	3.80	5.00	ug/L
75-69-4	Trichlorofluoromethane	2.50	UD	0.65	2.50	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.50	UD	1.10	2.50	5.00	ug/L
75-35-4	1,1-Dichloroethene	3.80	UD	1.10	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	1.40	3.80	5.00	ug/L
1634-04-4	Methyl tert-butyl Ether	2.50	UD	0.70	2.50	5.00	ug/L
79-20-9	Methyl Acetate	3.80	UD	1.80	3.80	5.00	ug/L
75-09-2	Methylene Chloride	2.50	UD	2.50	2.50	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	2.50	UD	0.85	2.50	5.00	ug/L
75-34-3	1,1-Dichloroethane	2.50	UD	0.80	2.50	5.00	ug/L
110-82-7	Cyclohexane	12.5	UD	8.00	12.5	25.0	ug/L
78-93-3	2-Butanone	12.5	UD	6.10	12.5	25.0	ug/L
56-23-5	Carbon Tetrachloride	2.50	UD	0.65	2.50	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	3.80	UD	1.00	3.80	5.00	ug/L
74-97-5	Bromochloromethane	2.50	UD	0.70	2.50	5.00	ug/L
67-66-3	Chloroform	2.50	UD	0.70	2.50	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	2.50	UD	0.70	2.50	5.00	ug/L
108-87-2	Methylcyclohexane	2.50	UD	0.80	2.50	5.00	ug/L
71-43-2	Benzene	2.50	UD	0.60	2.50	5.00	ug/L
107-06-2	1,2-Dichloroethane	2.50	UD	0.80	2.50	5.00	ug/L
79-01-6	Trichloroethene	130	D	1.30	3.80	5.00	ug/L
78-87-5	1,2-Dichloropropane	2.50	UD	0.75	2.50	5.00	ug/L
75-27-4	Bromodichloromethane	2.50	UD	0.75	2.50	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	UD	3.70	12.5	25.0	ug/L
108-88-3	Toluene	2.50	UD	0.70	2.50	5.00	ug/L
10061-02-6	t-1,3-Dichloropropene	2.50	UD	0.85	2.50	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.50	UD	0.75	2.50	5.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023DL	SDG No.:	O3231
Lab Sample ID:	O3231-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078255.D	5		06/16/23 13:14	VN061623

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.50	UD	0.65	2.50	5.00	ug/L
591-78-6	2-Hexanone	12.5	UD	4.90	12.5	25.0	ug/L
124-48-1	Dibromochloromethane	2.50	UD	0.75	2.50	5.00	ug/L
106-93-4	1,2-Dibromoethane	2.50	UD	0.65	2.50	5.00	ug/L
127-18-4	Tetrachloroethene	2.50	UD	0.85	2.50	5.00	ug/L
108-90-7	Chlorobenzene	2.50	UD	0.60	2.50	5.00	ug/L
100-41-4	Ethyl Benzene	2.50	UD	0.65	2.50	5.00	ug/L
179601-23-1	m/p-Xylenes	5.00	UD	1.60	5.00	10.0	ug/L
95-47-6	o-Xylene	2.50	UD	0.75	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	0.75	2.50	5.00	ug/L
98-82-8	Isopropylbenzene	2.50	UD	0.65	2.50	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.50	UD	0.75	2.50	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	2.50	UD	1.20	2.50	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	2.50	UD	1.20	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	2.20	3.80	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.50	UDQ	2.20	2.50	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	3.80	UD	2.80	3.80	5.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	53.3		81 - 118		107%	SPK: 50
1868-53-7	Dibromofluoromethane	54.7		80 - 119		109%	SPK: 50
2037-26-5	Toluene-d8	48.2		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.5		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	457000	8.23				
540-36-3	1,4-Difluorobenzene	838000	9.106				
3114-55-4	Chlorobenzene-d5	734000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	229000	13.8				

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-3D-06122023DL	SDG No.:	O3231
Lab Sample ID:	O3231-11DL	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078255.D	5		06/16/23 13:14	VN061623

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078302.D	1		06/20/23 12:12	VN062023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	2.70	J	1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	UQ	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	19.9		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078302.D	1		06/20/23 12:12	VN062023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	UQ	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.8		81 - 118		106%	SPK: 50
1868-53-7	Dibromofluoromethane	56.2		80 - 119		112%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.4		85 - 114		97%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	453000	8.236				
540-36-3	1,4-Difluorobenzene	829000	9.106				
3114-55-4	Chlorobenzene-d5	733000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	226000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-12	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078302.D	1		06/20/23 12:12	VN062023

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-8-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078233.D	1		06/15/23 17:09	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.55	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.43	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-8-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078233.D	1		06/15/23 17:09	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.7		81 - 118		109%	SPK: 50
1868-53-7	Dibromofluoromethane	53.4		80 - 119		107%	SPK: 50
2037-26-5	Toluene-d8	48.3		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.5		85 - 114		95%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	417000	8.235				
540-36-3	1,4-Difluorobenzene	771000	9.106				
3114-55-4	Chlorobenzene-d5	677000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	210000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-8-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-13	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078233.D	1		06/15/23 17:09	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078234.D	1		06/15/23 17:33	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	91.2		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078234.D	1		06/15/23 17:33	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.8		81 - 118		112%	SPK: 50
1868-53-7	Dibromofluoromethane	54.2		80 - 119		108%	SPK: 50
2037-26-5	Toluene-d8	49.4		89 - 112		99%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.5		85 - 114		97%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	403000	8.235				
540-36-3	1,4-Difluorobenzene	753000	9.112				
3114-55-4	Chlorobenzene-d5	682000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	212000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-14	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078234.D	1		06/15/23 17:33	VN061523

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078235.D	1		06/15/23 17:57	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.65	J	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.42	J	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078235.D	1		06/15/23 17:57	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.9		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.6		80 - 119		109%	SPK: 50
2037-26-5	Toluene-d8	47.8		89 - 112		96%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.8		85 - 114		94%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	419000	8.235				
540-36-3	1,4-Difluorobenzene	787000	9.106				
3114-55-4	Chlorobenzene-d5	689000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	210000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-DUP-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-15	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078235.D	1		06/15/23 17:57	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078236.D	1		06/15/23 18:21	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	1.90		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078236.D	1		06/15/23 18:21	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.1		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.8		80 - 119		110%	SPK: 50
2037-26-5	Toluene-d8	47.7		89 - 112		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.0		85 - 114		92%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	418000	8.235				
540-36-3	1,4-Difluorobenzene	786000	9.112				
3114-55-4	Chlorobenzene-d5	679000	11.87				
3855-82-1	1,4-Dichlorobenzene-d4	206000	13.8				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	0.94	J			7.86	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-1-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-16	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078236.D	1		06/15/23 18:21	VN061523

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:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078237.D	1		06/15/23 18:45	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	0.75	1.00	ug/L
67-64-1	Acetone	6.70		1.20	3.80	5.00	ug/L
75-15-0	Carbon Disulfide	0.75	U	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	25.1		0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.59	J	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	1.30		0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.29	J	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078237.D	1		06/15/23 18:45	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.29	J	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	0.86	J	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	55.0		81 - 118		110%	SPK: 50
1868-53-7	Dibromofluoromethane	56.0		80 - 119		112%	SPK: 50
2037-26-5	Toluene-d8	48.5		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.4		85 - 114		99%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	421000	8.236				
540-36-3	1,4-Difluorobenzene	776000	9.112				
3114-55-4	Chlorobenzene-d5	696000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	222000	13.8				
TENTATIVE IDENTIFIED COMPOUNDS							
109-99-9	Tetrahydrofuran	13.2	J			7.85	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-EQB-2-06132023	SDG No.:	O3231
Lab Sample ID:	O3231-17	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078237.D	1		06/15/23 18:45	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	TB	SDG No.:	O3231
Lab Sample ID:	O3231-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078238.D	1		06/15/23 19:10	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	0.75	U	0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	TB	SDG No.:	O3231
Lab Sample ID:	O3231-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078238.D	1		06/15/23 19:10	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.2		81 - 118		108%	SPK: 50
1868-53-7	Dibromofluoromethane	54.9		80 - 119		110%	SPK: 50
2037-26-5	Toluene-d8	48.5		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		85 - 114		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	426000	8.236				
540-36-3	1,4-Difluorobenzene	790000	9.106				
3114-55-4	Chlorobenzene-d5	702000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	217000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	TB	SDG No.:	O3231
Lab Sample ID:	O3231-18	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078238.D	1		06/15/23 19:10	VN061523

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:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-19	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078239.D	1		06/15/23 19:34	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.50	U	0.14	0.50	1.00	ug/L
74-87-3	Chloromethane	0.50	U	0.25	0.50	1.00	ug/L
75-01-4	Vinyl Chloride	0.75	U	0.25	0.75	1.00	ug/L
74-83-9	Bromomethane	3.80	U	1.60	3.80	5.00	ug/L
75-00-3	Chloroethane	0.75	U	0.28	0.75	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.50	U	0.13	0.50	1.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	0.21	0.50	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.75	U	0.21	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	0.27	0.75	1.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.50	U	0.14	0.50	1.00	ug/L
79-20-9	Methyl Acetate	0.75	U	0.36	0.75	1.00	ug/L
75-09-2	Methylene Chloride	0.50	U	0.50	0.50	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.50	U	0.17	0.50	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
110-82-7	Cyclohexane	2.50	U	1.60	2.50	5.00	ug/L
78-93-3	2-Butanone	2.50	U	1.20	2.50	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.50	U	0.13	0.50	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.20	0.75	1.00	ug/L
74-97-5	Bromochloromethane	0.50	U	0.14	0.50	1.00	ug/L
67-66-3	Chloroform	0.50	U	0.14	0.50	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.50	U	0.14	0.50	1.00	ug/L
108-87-2	Methylcyclohexane	0.50	U	0.16	0.50	1.00	ug/L
71-43-2	Benzene	0.50	U	0.12	0.50	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.16	0.50	1.00	ug/L
79-01-6	Trichloroethene	26.9		0.26	0.75	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.50	U	0.15	0.50	1.00	ug/L
75-27-4	Bromodichloromethane	0.50	U	0.15	0.50	1.00	ug/L
108-10-1	4-Methyl-2-Pentanone	2.50	U	0.74	2.50	5.00	ug/L
108-88-3	Toluene	0.50	U	0.14	0.50	1.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.50	U	0.17	0.50	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.50	U	0.15	0.50	1.00	ug/L

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-19	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078239.D	1		06/15/23 19:34	VN061523

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.50	U	0.13	0.50	1.00	ug/L
591-78-6	2-Hexanone	2.50	U	0.98	2.50	5.00	ug/L
124-48-1	Dibromochloromethane	0.50	U	0.15	0.50	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.50	U	0.13	0.50	1.00	ug/L
127-18-4	Tetrachloroethene	0.50	U	0.17	0.50	1.00	ug/L
108-90-7	Chlorobenzene	0.50	U	0.12	0.50	1.00	ug/L
100-41-4	Ethyl Benzene	0.50	U	0.13	0.50	1.00	ug/L
179601-23-1	m/p-Xylenes	1.00	U	0.31	1.00	2.00	ug/L
95-47-6	o-Xylene	0.50	U	0.15	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	0.15	0.50	1.00	ug/L
98-82-8	Isopropylbenzene	0.50	U	0.13	0.50	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.50	U	0.23	0.50	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.50	U	0.24	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	0.43	0.75	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.43	0.50	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.75	U	0.55	0.75	1.00	ug/L
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	54.0		81 - 118		108%	SPK: 50
1868-53-7	Dibromofluoromethane	55.1		80 - 119		110%	SPK: 50
2037-26-5	Toluene-d8	48.5		89 - 112		97%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.7		85 - 114		93%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	417000	8.235				
540-36-3	1,4-Difluorobenzene	776000	9.106				
3114-55-4	Chlorobenzene-d5	678000	11.871				
3855-82-1	1,4-Dichlorobenzene-d4	204000	13.8				

Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3231
Lab Sample ID:	O3231-19	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN078239.D	1		06/15/23 19:34	VN061523

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:	O3231	**OrderDate:**	6/14/2023 12:09:00 PM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	G11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3231-01	**FSND-MW-EVAL-4S-06122023**	**Water**			**06/12/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/15/23	
O3231-04	**FSND-MW-EVAL-1D-06132023**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-04DL	**FSND-MW-EVAL-1D-06132023DL**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/15/23	
O3231-05	**FSND-MW-22R-06132023**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-06	**FSND-MW-EVAL-02S-06132023**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-07	**FSND-MW-EVAL-2D-06132023**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-08	**FSND-MW-18-06132023**	**Water**			**06/13/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-09	**FSND-MW-EVAL-3S-06122023**	**Water**			**06/12/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/14/23	
O3231-10	**FSND-MW-EVAL-1S-06122023**	**Water**			**06/12/23**			**06/14/23**
			VOC-TCLVOA-10	8260-Low			06/15/23	

LAB CHRONICLE

O3231-11	**FSND-MW-EVAL-3D-06122023**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-11DL	**FSND-MW-EVAL-3D-06122023DL**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/16/23	
O3231-12	**FSND-MW-6-06132023**	**Water**		**06/13/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/20/23	
O3231-13	**FSND-MW-8-06132023**	**Water**		**06/13/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-14	**FSND-DUP-1-06122023**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-15	**FSND-DUP-2-06132023**	**Water**		**06/13/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-16	**FSND-EQB-1-06122023**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-17	**FSND-EQB-2-06132023**	**Water**		**06/13/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-18	**TB**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	
O3231-19	**FSND-MW-EVAL-4D-06122023**	**Water**		**06/12/23**		**06/14/23**
		VOC-TCLVOA-10	8260-Low		06/15/23	

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Hit Summary Sheet
SW-846

SDG No.: O3231 **Order ID:** O3231

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-EVAL-4S-06122023								
O3231-01	FSND-MW-EVAL-4S Water	Methane	1.60	J	0.51	0.94	4.70	ug/L
		Total Concentration:	**1.600**					
Client ID : FSND-MW-EVAL-1D-06132023								
O3231-04	FSND-MW-EVAL-1D Water	Ethane	1.30	J	0.66	1.92	9.60	ug/L
O3231-04	FSND-MW-EVAL-1D Water	Methane	359	E	0.51	0.94	4.70	ug/L
		Total Concentration:	**360.300**					
Client ID : FSND-MW-EVAL-1D-06132023D								
O3231-04DL	FSND-MW-EVAL-1D Water	Methane	385	D	5.10	9.40	47.0	ug/L
		Total Concentration:	**385.000**					
Client ID : FSND-MW-22R-06132023								
O3231-05	FSND-MW-22R-0613 Water	Methane	0.59	J	0.51	0.94	4.70	ug/L
		Total Concentration:	**0.590**					
Client ID : FSND-MW-EVAL-02S-06132023								
O3231-06	FSND-MW-EVAL-02S Water	Methane	315	E	0.51	0.94	4.70	ug/L
		Total Concentration:	**315.000**					
Client ID : FSND-MW-EVAL-02S-06132023D								
O3231-06DL	FSND-MW-EVAL-02S Water	Methane	324	D	5.10	9.40	47.0	ug/L
		Total Concentration:	**324.000**					
Client ID : FSND-MW-EVAL-2D-06132023								
O3231-07	FSND-MW-EVAL-2D Water	Methane	4.80		0.51	0.94	4.70	ug/L
		Total Concentration:	**4.800**					
Client ID : FSND-MW-EVAL-3S-06122023								
O3231-09	FSND-MW-EVAL-3S Water	Ethylene	4.50	J	0.92	2.64	13.2	ug/L
O3231-09	FSND-MW-EVAL-3S Water	Methane	2.40	J	0.51	0.94	4.70	ug/L
		Total Concentration:	**6.900**					
Client ID : FSND-MW-EVAL-1S-06122023								
O3231-10	FSND-MW-EVAL-1S Water	Ethylene	6.90	J	0.92	2.64	13.2	ug/L
		Total Concentration:	**6.900**					
Client ID : FSND-MW-EVAL-3D-06122023								
O3231-11	FSND-MW-EVAL-3D Water	Methane	6.50		0.51	0.94	4.70	ug/L

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Hit Summary Sheet
SW-846

SDG No.: O3231 **Order ID:** O3231

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

Sample ID	Client ID	Parameter	Concentration	C	MDL	LOD	RDL	Units
		Total Concentration:	**6.500**					
Client ID :	**FSND-MW-6-06132023**							
O3231-12	FSND-MW-6-061320 Water	Ethylene	4.90	J	0.92	2.64	13.2	ug/L
		Total Concentration:	**4.900**					
Client ID :	**FSND-MW-EVAL-4D-06122023**							
O3231-19	FSND-MW-EVAL-4D Water	Methane	167	E	0.51	0.94	4.70	ug/L
		Total Concentration:	**167.000**					
Client ID :	**FSND-MW-EVAL-4D-06122023D**							
O3231-19DL	FSND-MW-EVAL-4D Water	Methane	168	D	2.55	4.70	23.5	ug/L
		Total Concentration:	**168.000**					

SAMPLE DATA

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-4S-06122023	SDG No.:	O3231	
Lab Sample ID:	O3231-01	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003914.D	1	06/15/23 10:06

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	1.60	J	0.51	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:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-1D-06132023	SDG No.:	O3231	
Lab Sample ID:	O3231-04	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003915.D	1	06/15/23 10:10

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.30	J	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	359	E	0.51	0.94	4.70	ug/L

Comments:

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-1D-06132023DL	SDG No.:	O3231	
Lab Sample ID:	O3231-04DL	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003916.D	10	06/15/23 10:31

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	19.2	UD	6.60	19.2	96.0	ug/L
74-85-1	Ethylene	26.4	UD	9.20	26.4	132	ug/L
74-82-8	Methane	385	D	5.10	9.40	47.0	ug/L

Comments:

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MDL = Method Detection Limit
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M = MS/MSD acceptance criteria did not meet requirements

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B = Analyte Found in Associated Method Blank
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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:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-22R-06132023	SDG No.:	O3231	
Lab Sample ID:	O3231-05	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003917.D	1	06/15/23 10:36

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	0.59	J	0.51	0.94	4.70	ug/L

Comments:

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Report of Analysis

Client:	EA Engineering Science & Technology	Date Collected:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-02S-06132023	SDG No.:	O3231	
Lab Sample ID:	O3231-06	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003918.D	1	06/15/23 10:40

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	315	E	0.51	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

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:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-02S-06132023DL	SDG No.:	O3231	
Lab Sample ID:	O3231-06DL	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003919.D	10	06/15/23 10:49

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	19.2	UD	6.60	19.2	96.0	ug/L
74-85-1	Ethylene	26.4	UD	9.20	26.4	132	ug/L
74-82-8	Methane	324	D	5.10	9.40	47.0	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

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:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-2D-06132023	SDG No.:	O3231	
Lab Sample ID:	O3231-07	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003920.D	1	06/15/23 11:04

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	4.80		0.51	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:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-3S-06122023	SDG No.:	O3231	
Lab Sample ID:	O3231-09	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003922.D	1	06/15/23 11:29

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	4.50	J	0.92	2.64	13.2	ug/L
74-82-8	Methane	2.40	J	0.51	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

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:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-1S-06122023	SDG No.:	O3231	
Lab Sample ID:	O3231-10	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003923.D	1	06/15/23 11:33

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	6.90	J	0.92	2.64	13.2	ug/L
74-82-8	Methane	0.94	U	0.51	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:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-3D-06122023	SDG No.:	O3231	
Lab Sample ID:	O3231-11	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003924.D	1	06/15/23 11:41

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	6.50		0.51	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:	06/13/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-6-06132023	SDG No.:	O3231	
Lab Sample ID:	O3231-12	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003925.D	1	06/15/23 11:46

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	4.90	J	0.92	2.64	13.2	ug/L
74-82-8	Methane	0.94	U	0.51	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:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-4D-06122023	SDG No.:	O3231	
Lab Sample ID:	O3231-19	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003926.D	1	06/15/23 11:50

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	1.92	U	0.66	1.92	9.60	ug/L
74-85-1	Ethylene	2.64	U	0.92	2.64	13.2	ug/L
74-82-8	Methane	167	E	0.51	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

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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:	06/12/23	
Project:	Scotia, NY - Annual Testing	Date Received:	06/14/23	
Client Sample ID:	FSND-MW-EVAL-4D-06122023DL	SDG No.:	O3231	
Lab Sample ID:	O3231-19DL	Matrix:	Water	
Analytical Method:	RSK175	% Solid:	0	Decanted:
Water Phase Vol :	36 mL	Test:	Gases	
Gas Phase Vol :	4 mL			

File ID/Qc Batch:	Dilution:	Date Analyzed
FA003927.D	5	06/15/23 12:04

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
74-84-0	Ethane	9.60	UD	3.30	9.60	48.0	ug/L
74-85-1	Ethylene	13.2	UD	4.60	13.2	66.0	ug/L
74-82-8	Methane	168	D	2.55	4.70	23.5	ug/L

Comments:

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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

CHEMTECH

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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O3231	**OrderDate:**	6/14/2023 12:09:00 PM
Client:	EA Engineering Science & Technology	**Project:**	Scotia, NY - Annual Testing
Contact:	Jim Hayward	**Location:**	G11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O3231-01	**FSND-MW-EVAL-4S-06122023**	**Water**			**06/12/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-04	**FSND-MW-EVAL-1D-06132023**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-04DL	**FSND-MW-EVAL-1D-06132023DL**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-05	**FSND-MW-22R-06132023**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-06	**FSND-MW-EVAL-02S-06132023**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-06DL	**FSND-MW-EVAL-02S-06132023DL**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-07	**FSND-MW-EVAL-2D-06132023**	**Water**			**06/13/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-09	**FSND-MW-EVAL-3S-06122023**	**Water**			**06/12/23**			**06/14/23**
			Gases	RSK-175			06/15/23	
O3231-10	**FSND-MW-EVAL-1S-06122023**	**Water**			**06/12/23**			**06/14/23**
			Gases	RSK-175			06/15/23	

CHEMTECH

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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

O3231-11	**FSND-MW-EVAL-3D-06122023**	**Water**			**06/12/23**		**06/14/23**
			Gases	RSK-175		06/15/23	
O3231-12	**FSND-MW-6-06132023**	**Water**			**06/13/23**		**06/14/23**
			Gases	RSK-175		06/15/23	
O3231-19	**FSND-MW-EVAL-4D-06122023**	**Water**			**06/12/23**		**06/14/23**
			Gases	RSK-175		06/15/23	
O3231-19DL	**FSND-MW-EVAL-4D-06122023DL**	**Water**			**06/12/23**		**06/14/23**
			Gases	RSK-175		06/15/23	

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. O3231
COC Number 2039248

7
7.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 269 West Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanday Kahn
PHONE: — FAX: —

CLIENT PROJECT INFORMATION

PROJECT NAME: Scotia Navy Depot
PROJECT NO.: 160530104 LOCATION: Scotia NY
PROJECT MANAGER: Tim Hayward
e-mail: Thayward@eaest.com
PHONE: — FAX: —

CLIENT BILLING INFORMATION

BILL TO: Mdina@eaest.com PO#:
ADDRESS: 160530104/0029/0006
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 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 NYSDEC

ANALYSIS

1 VOC 2 Diss Gases 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	C								← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER
1.	FSND-MW-EVAL-45-06122023	GW		x	6/11/23	1045	5	x	x								MS MSD (VOC)
2.	FSND-MW-EVAL-10-06152023	GW		x	6/13/23	0850	4	x	x								
3.	FSND-MW-22R-06132023	GW		x	6/13/23	1005	4	x	x								
4.	FSND-MW-EVAL-025-06132023	GW		x	6/13/23	1345	4	x	x								
5.	FSND-MW-EVAL-20-06132023	GW		x	6/13/23	1100	4	x	x								
6.	FSND-MW-18-06132023	GW		x	6/13/23	1355	2	x									
7.	FSND-MW-EVAL-40-06122023	GW		x	6/12/23	1225	4	x	x								
8.	FSND-MW-EVAL-35-06122023	GW		x	6/12/23	1355	4	x	x								
9.	FSND-MW-EVAL-15-06122023	GW		x	6/12/23	1545	4	x	x								
10.	FSND-MW-EVAL-30-06122023	GW		x	6/12/23	1125	4	x	x								

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	1800 6/13/23	1.
2.	10:30 6/14/23	2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 4.3 °C
Comments: Please use ID on chain, in Room or label for prefix

Page ____ of ____
CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling
Shipment Complete ☐ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO. 03231
COC Number 2039481

7
7.1

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY:
ADDRESS: SAME AS
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME:
PROJECT NO.: PACE LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION
BILL TO: N/A 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

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (A)	PRESERVATIVES 2 (C)	3	4	5	6	7	8	9	COMMENTS
								1 VOC	2 Diss GW	3	4	5	6	7	8	9	← Specify Preservatives
1.	FSND-MW-6-06132023	GW		x	6/13/23	0820	4	x	x								A-HCl D-NaOH
2.	FSND-MW-8-06132023	GW		x	6/13/23	1215	2	x									B-HN03 E-ICE
3.	FSND-DUP-1-06122023	GW		x	6/12/23	—	2	x									C-H2SO4 F-OTHER
4.	FSND-DUP-2-06132023	GW		x	6/13/23	—	2	x									
5.	FSND-EQB-1-06122023	W		x	6/12/23	1730	2	x									
6.	FSND EQB-2-06132023	W		x	6/13/23	1600	2	x									
7.	TB	W		x	6/12/23	—	2	x									
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.	1800 6/12/23	1.
2.	6/14/23 10:30	2.
3.		3.

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 4.3 °C
Comments:

Page ____ of ____
CLIENT: ❑ Hand Delivered ❑ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling
Shipment Complete ❑ YES ❑ NO

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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 : O3231 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 6/14/2023 12:09:00 PM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 6/14/2023 10:30:00 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
O3231-01	FSND-MW-EVAL-~~4S~~-06122023	Water	06/12/2023	10:45					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-02	O3231-01MS	Water	06/12/2023	10:45					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-03	O3231-01MSD	Water	06/12/2023	10:45					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-04	FSND-MW-EVAL-1D-06132023	Water	06/13/2023	08:50					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-05	FSND-MW-22R-06132023	Water	06/13/2023	10:05					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-06	FSND-MW-EVAL-02S-06132023 FSND-MW-EVAL-~~0~~2S-06132023	Water	06/13/2023	13:15					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-07	FSND-MW-EVAL-2D-06132023	Water	06/13/2023	11:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-08	FSND-MW-18-06132023	Water	06/13/2023	13:55					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-09	FSND-MW-EVAL-3S-06122023	Water	06/12/2023	13:55					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O3231 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 6/14/2023 12:09:00 PM
Project Name : Scotia. NY - Annual Testing
Receive DateTime : 6/14/2023 10:30:00 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
O3231-10	FSND-MW-EVAL-1S-06122023	Water	06/12/2023	15:45					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-11	FSND-MW-EVAL-3D-06122023	Water	06/12/2023	11:25					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-12	FSND-MW-6-06132023	Water	06/13/2023	08:20					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-13	FSND-MW-8-06132023	Water	06/13/2023	12:15					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-14	FSND-DUP-1-06122023	Water	06/12/2023	00:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-15	FSND-DUP-2-06132023	Water	06/13/2023	00:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-16	FSND-EQB-1-06122023	Water	06/12/2023	17:30					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-17	FSND-EQB-2-06132023	Water	06/13/2023	16:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O3231 EAEN05
Client Name : EA Engineering Science &
Client Contact : Jim Hayward
Invoice Name : EA Engineering Science &
Invoice Contact : Jim Hayward

Order Date : 6/14/2023 12:09:00 PM
Project Name : Scotia, NY - Annual Testing
Receive DateTime : 6/14/2023 10:30:00 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
O3231-18	TB	Water	06/13/2023 06/12/2023	00:00	VOC-TCLVOA-10		8260-Low		10 Bus. Days
O3231-19	FSND-MW-EVAL~~40~~ 4D 06122023	Water	06/12/2023	12:25	VOC-TCLVOA-10		8260-Low		10 Bus. Days

* SB 6-15-23

Relinquished By : [signature]
Date / Time : 6/14/23 13:37

Received By : [signature]
Date / Time : 6-14-23 13:37

Storage Area : VOA Refridgerator Room

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: James C. Hayward
EA Engineering, Science, and Technology, Inc.
269 W. Jefferson Street
Syracuse, NY 13202

Phone: 315-565-6555

Fax:

Identifier: 041UF **Date Rec:** 06/14/2023 **Report Date:** 08/02/2023

Client Project #: 160530104 **Client Project Name:** Scotia Navy Depot - PRB

Purchase Order #: 25300

Test results provided for: CSIA

Reviewed By:

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **EA Engineering, Science, and Technology, In**
Project: Scotia Navy Depot - PRB

MI Project Number: **041UF**
Date Received: 06/14/2023

Sample Information

Client Sample ID:	**FSND-MW-6-06132023**	**FSND-MW-EVAL-04D-06122023**	**FSND-MW-33-06132023**	**FSND-MW-22R-06132023**	**FSND-MW-31-06132023**
Sample Date:	06/13/2023	06/12/2023	06/13/2023	06/13/2023	06/13/2023
Analyst/Reviewer:	SK/SR	SK/SR	SK/SR	SK/SR	SK/SR

Carbon	**Units**					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**NA**	**NA**	**ND**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-24.1**	**-19.4**	**-23.2**	**-26.5**	**-27.4**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**NA**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **EA Engineering, Science, and Technology, In**
Project: Scotia Navy Depot - PRB

MI Project Number: **041UF**
Date Received: 06/14/2023

Sample Information

Client Sample ID:		**FSND-MW-32-06122023**	**FSND-MW-30-06132023**	**FSND-MW-EVAL-04S-061220223**	**FSND-MW-EVAL-03S-06122023**	**FSND-MW-EVAL-03D-06122023**
Sample Date:		06/12/2023	06/13/2023	06/12/2023	06/12/2023	06/12/2023
Analyst/Reviewer:		SK/SR	SK/SR	SK/SR	SK/SR	SK/SR
Carbon	**Units**					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**ND**	**ND**	**NA**	**NA**	**NA**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-21.3**	**ND**	**-22.2**	**-23.7**	**-22.2**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**NA**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Quality Assurance/Quality Control Data

Samples Received **6/14/2023**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control (‰ Std. Dev.)*	Blank
$^{13}C/^{12}C$ TCE (‰)	06/14/2023	08/02/2023	0 °C	0.1	Pass
$^{13}C/^{12}C$ cis-DCE (‰)	06/14/2023	08/02/2023	0 °C	0.1	Pass

* $\delta^{13}C$ positive control values are within +- 0.5‰ of true value.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Identifier: 041UF **Date Rec:** 06/14/2023 **Report Date:** 08/02/2023

Client Project #: 160530104 **Client Project Name:** Scotia Navy Depot - PRB

Purchase Order #: 25300

Comments: Compounds expected to be below the CSIA limit of detection after required sample dilutions were not analyzed (NA). Compounds expected to be above the detection limit that were not detected are notated as ”ND”.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA VALIDATION REPORT

Scotia Annual Sampling

May 2023 Sampling

SDGs: O2643, O2751 and O2860

CHEMTECH

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science, and Technology, Inc.

Rev 1 Report Released 08/29/2023

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

ENVIRONMENTAL DATA SERVICES, LTD.

EXECUTIVE NARRATIVE

Sample Delivery Group: O2643
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 5/3/2023-5/4/2023
Number of Samples: 10
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-IDW-S-05042023	O2643-01	solid	S2BVM
FSND-EQB-02-05042023	O2643-02	equipment blank	S2BVM
FSND-IDW-AQ-05042023	O2643-03	solid	S2BVM
FSND-PRO-06-79-05042023	O2643-04	water	S2BVM
FSND-EQB-01-05032023	O2643-05	equipment blank	S2BVM
FSND-PRO-07-90-05032023	O2643-06	water	S2BVM
FSND-PRO-06-99-05042023	O2643-09	water	S2BVM
FSND-PRO-07-99-05032023	O2643-10	water	S2BVM
FSND-DUP-01-05032023	O2643-11	water	S2BVM
TB	O2643-12	trip 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 %RSDs for methylene chloride and bromoform were outside of acceptable limits for one ICAL associated with the samples listed below. The results reported for the impacted analytes in the associated samples have been qualified "UJ" on this basis.

TB	*FSND-EQB-02-05042023*
FSND-PRO-07-90-05032023	*FSND-EQB-01-05032023*
FSND-PRO-06-99-05042023	

The %D value for acetone was outside of acceptance limits in one continuing calibration associated with samples FSND-PRO-07-90-05032023 and FSND-PRO-06-99-05042023. The results reported for acetone in the associated samples have been qualified "J" or "UJ" on this basis.

The %D values for trans-1,3-dichloropropene and bromoform were outside acceptance limit in one continuing calibration associated with the samples listed below (SDG). The results reported for the impacted analytes in the associated samples have been qualified "UJ" on this basis.

TB	*FSND-EQB-02-05042023*
FSND-PRO-07-90-05032023	*FSND-EQB-01-05032023*
FSND-PRO-06-99-05042023	

The %D value for chloromethane was outside of acceptance limits in one continuing calibration associated with samples FSND-PRO-07-99-05032023 and FSND-DUP-01-05032023. The results reported for acetone in the associated samples 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-EQB-02-05042023 and FSND-EQB-01-05032023 were submitted as equipment blanks in association with the samples in this SDG. Acetone and toluene 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.

C) Trip blank contamination:

Sample TB-20230503 was submitted as a trip blank in association with this SDG. No problems were found for this criterion.

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-PRO-07-90-05032023 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable with the following exception. The observed MS and MSD recoveries for trichloroethene were lower than the lowest acceptable limit. The result reported for trichloroethene in the parent sample has been qualified, "J-" on this basis.

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-PRO-07-99-05032023 and FSND-DUP-01-05032023 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated with the exception of 2-hexanone. The results reported for 2-hexanone in the field duplicate pair have been qualified "J" and "UJ" on this basis.

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.

Several samples were analyzed at dilutions due to high concentrations of target compounds. Quantitation limits are elevated in these cases.

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: O2751
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 5/5/2023-5/10/2023
Number of Samples: 16
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-PRO-01-70-05052023	O2751-01	water	S2BVM
FSND-PRO-01-89-05062023	O2751-02	water	S2BVM
FSND-PRO-01-99-05062023	O2751-03	water	S2BVM
FSND-PRO-03-71-05072023	O2751-04	water	S2BVM
FSND-PRO-03-89-05072023	O2751-05	water	S2BVM
FSND-PRO-02-71-05082023	O2751-06	water	S2BVM
FSND-PRO-02-81-05082023	O2751-07	water	S2BVM
FSND-PRO-04-71-05092023	O2751-08	water	S2BVM
FSND-PRO-04-81-05092023	O2751-09	water	S2BVM
FSND-DUP-02-05062023	O2751-10	water	S2BVM
FSND-EQB-03-05052023	O2751-11	equipment blank	S2BVM
FSND-EQB-04-05062023	O2751-12	equipment blank	S2BVM
FSND-EQB-05-05072023	O2751-13	equipment blank	S2BVM
FSND-EQB-06-05082023	O2751-14	equipment blank	S2BVM
FSND-EQB-07-05092023	O2751-15	equipment blank	S2BVM
FSND-TB-01-05102023	O2751-16	trip 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 the samples listed below. The results reported for the impacted analyte have been qualified "J" or "UJ" on this basis.

FSND-PRO-01-70-05052023	*FSND-PRO-04-81-05092023*
FSND-PRO-01-89-05062023	*FSND-DUP-02-05062023*
FSND-PRO-01-99-05062023	*FSND-EQB-03-05052023*
FSND-PRO-03-71-05072023	*FSND-EQB-04-05062023*
FSND-PRO-03-89-05072023	*FSND-EQB-05-05072023*
FSND-PRO-02-71-05082023	*FSND-EQB-06-05082023*
FSND-PRO-02-81-05082023	*FSND-EQB-07-05092023*
FSND-PRO-04-71-05092023	

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:

Sample FSND-EQB-03-05052023 was submitted as an equipment blank in association with the samples collected on 5/5/2023 in this SDG. Acetone, toluene, and trichloroethylene were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Sample FSND-EQB-04-05062023 was submitted as an equipment blank in association with the samples collected on 5/6/2023 in this SDG. Acetone, toluene, and trichloroethylene were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Sample FSND-EQB-05-05072023 was submitted as an equipment blank in association with the samples collected on 5/7/2023 in this SDG. Acetone was positively identified. Positive sample results for the impacted analyte in the associated samples have been evaluated and qualified per validation guidance.

Sample FSND-EQB-06-05082023 was submitted as an equipment blank in association with the samples collected on 5/8/2023 in this SDG. Acetone and trichloroethylene were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Sample FSND-EQB-07-05092023 was submitted as an equipment blank in association with the samples collected on 5/8/2023 in this SDG. Acetone was positively identified. Positive sample results for the impacted analyte in the associated samples have been evaluated and qualified per validation guidance.

C) Trip blank contamination:

Sample FSND-TB-01-05102023 was submitted as a trip blank in association with this SDG. No problems were found for this criterion.

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%.

No samples were 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-PRO-01-99-05062023 and FSND-DUP-02-05062023 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.

Several samples were analyzed at dilutions due to high concentrations of target compounds. Quantitation limits are elevated in these cases.

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	NA		
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: O2860
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 5/11/2023, 5/12/2023, 5/15/2023-5/18/2023
Number of Samples: 16
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-PRO-08-71-05112023	O2860-01	water	S2BVM
FSND-PRO-08-81-05112023	O2860-02	water	S2BVM
FSND-PRO-10-131-05152023	O2860-05	water	S2BVM
FSND-PRO-10-151-05152023	O2860-06	water	S2BVM
FSND-PRO-09-73-05162023	O2860-07	water	S2BVM
FSND-PRO-09-101-05162023	O2860-08	water	S2BVM
FSND-PRO-05-91-0512023	O2860-09	water	S2BVM
FSND-PRO-05-101-0512023	O2860-10	water	S2BVM
FSND-DUP-03-05162023	O2860-11	water	S2BVM
FSND-TB-03-05182023	O2860-12	water	S2BVM
FSND-EQB-08-05112023	O2860-13	equipment blank	S2BVM
FSND-EQB-09-05122023	O2860-14	equipment blank	S2BVM
FSND-EQB-10-05152023	O2860-15	equipment blank	S2BVM
FSND-EQB-11-05162023	O2860-16	equipment blank	S2BVM
FSND-EQB-12-05172023	O2860-17	equipment blank	S2BVM
FSND-EQB-13-05182023	O2860-18	trip 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.

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:

Sample FSND-EQB-08-05112023 was submitted as an equipment blank in association with the samples collected on 5/11/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Trichloroethylene	*Bromodichloromethane*

Sample FSND-EQB-09-05122023 was submitted as an equipment blank in association with the samples collected on 5/12/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Dibromochloromethane	*Bromodichloromethane*
Toluene	

Sample FSND-EQB-10-05152023 was submitted as an equipment blank in association with the samples collected on 5/15/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Bromodichloromethane	*Dibromochloromethane*

Sample FSND-EQB-11-05162023 was submitted as an equipment blank in association with the samples collected on 5/16/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Bromodichloromethane	*Toluene*

Sample FSND-EQB-12-05172023 was submitted as an equipment blank in association with the samples collected on 5/17/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Bromodichloromethane	*Toluene*

Sample FSND-EQB-13-05182023 was submitted as an equipment blank in association with the samples collected on 5/18/2023 in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Chloroform*
Bromodichloromethane	*Toluene*

C) Trip blank contamination:

Sample FSND-TB-03-05182023 was submitted as a trip blank in association with all samples in this SDG. The analytes listed below were positively identified. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

Acetone	*Benzene*	*Toluene*
Ethylbenzene	*o-xylene*	*M,p-xylene*

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 observed surrogate recoveries for samples FSND-PRO-10-131-05152023, FSND-PRO-10-151-05152023, and FSND-DUP-03-05162023 listed below were lower than the lowest acceptable limits. The positive and non-detected results reported for all analytes in the impacted samples have been qualified "J-" or "UJ" as appropriate on this basis unless conflicting bias was noted for other quality control criteria.

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-PRO-08-81-05112023 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable.

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-PRO-09-73-05162023 and FSND-DUP-03-05162023 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.

Several samples were analyzed at dilutions due to high concentrations of target compounds. Quantitation limits are elevated in these cases.

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-PRO-07-99-05032023	FSND-DUP-01-05032023	RPD		
1,1,1-Trichloroethane (TCA)			#DIV/0!	1	
1,1,2,2-Tetrachloroethane			#DIV/0!	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane			#DIV/0!	1	
1,1,2-Trichloroethane			#DIV/0!	1	
1,1-Dichloroethane			#DIV/0!	1	
1,1-Dichloroethene	0.37	0.36	2.7	1	
1,2,3-Trichlorobenzene			#DIV/0!	1	
1,2,4-Trichlorobenzene			#DIV/0!	1	
1,2-Dibromo-3-Chloropropane			#DIV/0!	1	
1,2-Dibromoethane (Ethylene Dibromide)			#DIV/0!	1	
1,2-Dichlorobenzene			#DIV/0!	1	
1,2-Dichloroethane			#DIV/0!	1	
1,2-Dichloropropane			#DIV/0!	1	
1,3-Dichlorobenzene			#DIV/0!	1	
1,4-Dichlorobenzene			#DIV/0!	1	
2-Hexanone	93		200.0	5	FLAG J/UJ
Acetone	13.8	3.8	113.6	5	ok
Benzene			#DIV/0!	1	
Bromochloromethane			#DIV/0!	1	
Bromodichloromethane			#DIV/0!	1	
Bromoform			#DIV/0!	1	
Bromomethane			#DIV/0!	5	
Carbon Disulfide	4.2	3.5	18.2	1	
Carbon Tetrachloride			#DIV/0!	1	
Chlorobenzene			#DIV/0!	1	
Chloroethane			#DIV/0!	1	
Chloroform	0.34	0.28	19.4	1	
Chloromethane (Methyl Chloride)			#DIV/0!	1	
Cis-1,2-Dichloroethylene			#DIV/0!	1	
Cis-1,3-Dichloropropene			#DIV/0!	1	
Cyclohexane			#DIV/0!	5	
Dibromochloromethane			#DIV/0!	1	
Dichlorodifluoromethane			#DIV/0!	1	
Ethylbenzene			#DIV/0!	1	
Isopropylbenzene (Cumene)			#DIV/0!	1	
m,p-Xylene			#DIV/0!	2	
Methyl Acetate			#DIV/0!	1	
Methyl Ethyl Ketone (2-Butanone)	7.6	0	200.0	5	ok
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)			#DIV/0!	5	
Methylcyclohexane			#DIV/0!	1	
Methylene Chloride			#DIV/0!	1	
O-Xylene (1,2-Dimethylbenzene)			#DIV/0!	1	
Styrene			#DIV/0!	1	
Tert-Butyl Methyl Ether			#DIV/0!	1	
Tetrachloroethylene (PCE)			#DIV/0!	1	
Toluene			#DIV/0!	1	
Trans-1,2-Dichloroethene	0.25		200.0	1	ok
Trans-1,3-Dichloropropene			#DIV/0!	1	
Trichlorofluoromethane			#DIV/0!	1	
Vinyl Chloride			#DIV/0!	1	
Trichloroethylene (TCE) Dilution	420	460	9.1	10	

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample		LOQ	Flag
	FSND-PRO-01-99-05062023	FSND-DUP-02-05062023	RPD		
1,1,1-Trichloroethane (TCA)			#DIV/0!	1	
1,1,2,2-Tetrachloroethane			#DIV/0!	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane			#DIV/0!	1	
1,1,2-Trichloroethane			#DIV/0!	1	
1,1-Dichloroethane			#DIV/0!	1	
1,1-Dichloroethene	1.8	1.2	40.0	1	ok
1,2,3-Trichlorobenzene			#DIV/0!	1	
1,2,4-Trichlorobenzene			#DIV/0!	1	
1,2-Dibromo-3-Chloropropane			#DIV/0!	1	
1,2-Dibromoethane (Ethylene Dibromide)			#DIV/0!	1	
1,2-Dichlorobenzene			#DIV/0!	1	
1,2-Dichloroethane			#DIV/0!	1	
1,2-Dichloropropane			#DIV/0!	1	
1,3-Dichlorobenzene			#DIV/0!	1	
1,4-Dichlorobenzene			#DIV/0!	1	
2-Hexanone			#DIV/0!	5	
Acetone	4.4	3.4	25.6	5	
Benzene			#DIV/0!	1	
Bromochloromethane			#DIV/0!	1	
Bromodichloromethane			#DIV/0!	1	
Bromoform			#DIV/0!	1	
Bromomethane			#DIV/0!	5	
Carbon Disulfide			#DIV/0!	1	
Carbon Tetrachloride			#DIV/0!	1	
Chlorobenzene			#DIV/0!	1	
Chloroethane			#DIV/0!	1	
Chloroform			#DIV/0!	1	
Chloromethane (Methyl Chloride)			#DIV/0!	1	
Cis-1,2-Dichloroethylene			#DIV/0!	1	
Cis-1,3-Dichloropropene			#DIV/0!	1	
Cyclohexane			#DIV/0!	5	
Dibromochloromethane			#DIV/0!	1	
Dichlorodifluoromethane			#DIV/0!	1	
Ethylbenzene			#DIV/0!	1	
Isopropylbenzene (Cumene)			#DIV/0!	1	
m,p-Xylene			#DIV/0!	2	
Methyl Acetate			#DIV/0!	1	
Methyl Ethyl Ketone (2-Butanone)			#DIV/0!	5	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)			#DIV/0!	5	
Methylcyclohexane			#DIV/0!	1	
Methylene Chloride			#DIV/0!	1	
O-Xylene (1,2-Dimethylbenzene)			#DIV/0!	1	
Styrene			#DIV/0!	1	
Tert-Butyl Methyl Ether			#DIV/0!	1	
Tetrachloroethylene (PCE)			#DIV/0!	1	
Toluene			#DIV/0!	1	
Trans-1,2-Dichloroethene			#DIV/0!	1	
Trans-1,3-Dichloropropene			#DIV/0!	1	
Trichloroethylene (TCE)	0.59	0.98	49.7	1	ok
Trichlorofluoromethane			#DIV/0!	1	
Vinyl Chloride			#DIV/0!	1	

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample		LOQ	Flag
	FSND-PRO-09-73-05162023	FSND-DUP-03-05162023	RPD		
1,1,1-Trichloroethane (TCA)			#DIV/0!	1	
1,1,2,2-Tetrachloroethane			#DIV/0!	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane			#DIV/0!	1	
1,1,2-Trichloroethane			#DIV/0!	1	
1,1-Dichloroethane			#DIV/0!	1	
1,1-Dichloroethene			#DIV/0!	1	
1,2,3-Trichlorobenzene			#DIV/0!	1	
1,2,4-Trichlorobenzene			#DIV/0!	1	
1,2-Dibromo-3-Chloropropane			#DIV/0!	1	
1,2-Dibromoethane (Ethylene Dibromide)			#DIV/0!	1	
1,2-Dichlorobenzene			#DIV/0!	1	
1,2-Dichloroethane			#DIV/0!	1	
1,2-Dichloropropane			#DIV/0!	1	
1,3-Dichlorobenzene			#DIV/0!	1	
1,4-Dichlorobenzene			#DIV/0!	1	
2-Hexanone			#DIV/0!	5	
Acetone	3.2	2.2	37.0	5	ok
Benzene			#DIV/0!	1	
Bromochloromethane			#DIV/0!	1	
Bromodichloromethane			#DIV/0!	1	
Bromoform			#DIV/0!	1	
Bromomethane			#DIV/0!	5	
Carbon Disulfide		0.34	200.0	1	ok
Carbon Tetrachloride			#DIV/0!	1	
Chlorobenzene			#DIV/0!	1	
Chloroethane			#DIV/0!	1	
Chloroform	0.25		200.0	1	ok
Chloromethane (Methyl Chloride)	0.46		200.0	1	ok
Cis-1,2-Dichloroethylene			#DIV/0!	1	
Cis-1,3-Dichloropropene			#DIV/0!	1	
Cyclohexane			#DIV/0!	5	
Dibromochloromethane			#DIV/0!	1	
Dichlorodifluoromethane			#DIV/0!	1	
Ethylbenzene			#DIV/0!	1	
Isopropylbenzene (Cumene)			#DIV/0!	1	
m,p-Xylene			#DIV/0!	2	
Methyl Acetate			#DIV/0!	1	
Methyl Ethyl Ketone (2-Butanone)			#DIV/0!	5	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)			#DIV/0!	5	
Methylcyclohexane			#DIV/0!	1	
Methylene Chloride			#DIV/0!	1	
O-Xylene (1,2-Dimethylbenzene)			#DIV/0!	1	
Styrene			#DIV/0!	1	
Tert-Butyl Methyl Ether			#DIV/0!	1	
Tetrachloroethylene (PCE)			#DIV/0!	1	
Toluene			#DIV/0!	1	
Trans-1,2-Dichloroethene			#DIV/0!	1	
Trans-1,3-Dichloropropene			#DIV/0!	1	
Trichloroethylene (TCE)	120	130	8.0	1	
Trichlorofluoromethane			#DIV/0!	1	
Vinyl Chloride			#DIV/0!	1	

Data Validation Worksheet

EDS internal checklist for:

Standard Operating Procedure Number: 11-B
March 2015
Revision 1: April 2021

CLIENT: EA

PROJECT: Scotia, NY Annual Testing

SDG: O2643

Validated by: DM 8/16/23

Reviewed by: **DLW**

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: 5/4/23, 5/3/3
Analyzed: 5/11/23, 5/8/23, 5/5/23, 5/15/23, 5/16/23 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

BFB VX035269.D 25 Apr 2023 08:57
BFB VX035524.D 05 May 2023 08:45
BFB VX035550.D 08 May 2023 09:24
BFB VX035599.D 11 May 2023 10:10
BFB VX035651.D 15 May 2023 08:47
BFB VX035678.D 16 May 2023 09:10
BFB BFB VX035524.D 05 May 2023 08:45
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: 4/25/23
    Methylene chloride %RSD 19.8 out
    Bromoform %RSD 17.7 out
    All ND flag UJ

CCV: VSTDCCC050 VX035525.D
    Acetone %D 20.61
    Sample 3 (not reported for acetone), 6, 9
    FLAG J/UJ
CCV: VSTDCCC050 VX035549.D all ok

CCV: VSTDCCC050 VX035551.D
    Trans-1,3-dichloropropene %D 22.27
    Bromoform %D 22.52
    Samples 6DL, 9DL, 12, 2, 5
    ALL ND FLAG UJ
CCV: VSTDCCC050 VX035575.D all ok

ICAL: 5/11/23 all ok
VSTDICV050 VX035607.D all ok
Sample 4
VSTDCCC050 VX035624.D all ok

VSTDCCC050 VX035652.D
    Chloromethane %D -20.99
    Samples 10, 11, 1 (chloromethane not reported for sample 1)
    ND flag UJ
VSTDCCC050 VX035677.D all ok

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
VX0505WBL01 all ND

VX0508WBL01 all ND

VX0511WBL01 all ND

VX0515WBL01 all ND

VX0516WBL01 all ND

Trip Blanks
TB-20230503 all ND

Equipment Blanks

FSND-EQB-02-05042023-20230504

Acetone 2.3J sample 4 >LOD less than 5x blank flag J+

Sample 9 <LOD flag U

Toluene 0.29J sample 4 <LOD flag U

Assoc samples collected 5/4/23

FSND-EQB-01-05032023-20230503

Acetone 2.3J sample 11 flag U

Toluene 0.3J 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".

All ok

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 VX0505WBS01 all ok
LCS VX0508WBS01 all ok
LCS VX0511WBS01 all ok
LCS VX0515WBS01 all ok
LCS VX0516WBS01 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-PRO-07-90-05032023				
Methyl acetate	144↑	ok	ok	inconclusive no Q
Trichloroethene (TCE)	40↓	↓	out	flag J-
4-methyl-2-pentanone	132↑	ok	ok	inconclusive no Q
1,2-dibromo-3-chloropropane	129↑	ok	ok	inconclusive no Q
Acetone	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, "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-PRO-07-99-05032023 FSND-DUP-01-05032023

2-HEXANONE FLAG J/UJ

EDS internal checklist for:

Standard Operating Procedure Number: 11-B
March 2015
Revision 1: April 2021

CLIENT: EA

PROJECT: Scotia, NY Annual Testing

SDG: O2751

Validated by: DM 8/17/23

Reviewed by: DLW

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: 5/5/23, thru 5/10/23
Analyzed: 5/15/23, 5/16/23, 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

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: 5/11/23 all ok
VSTDCCC050 VX035652.D
    Chloromethane %D -20.99
    Samples 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
        FLAG J/UJ
VSTDCCC050 VX035677.D all ok

VSTDCCC050 VX035679.D all ok
Samples 6DL, 16
VSTDCCC050 VX035702.D all ok

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

VX0515WBL01 all ND

VX0516WBL01 all ND

Trip Blanks

FSND-TB-01-05102023-20230510 all ND

Equipment Blanks

FSND-EQB-03-05052023-20230505

Acetone	2.4J flag sample 1 J+
Toluene	0.25J ND no Q
Trichloroethylene (TCE)	0.52J >5x no Q

Assoc samples on 5/5

FSND-EQB-04-05062023-20230506

Acetone	2.1J flag J+ and U
Toluene	0.23J all ND no Q
Trichloroethylene (TCE)	0.46J flag U

Assoc samples on 5/6

FSND-EQB-05-05072023-20230507

Acetone	2.2J flag sample 5 J+

Assoc samples on 5/7

FSND-EQB-06-05082023-20230508

Acetone	3.1J flag U
Trichloroethylene (TCE)	0.27J >5x no Q

Assoc samples on 5/8

FSND-EQB-07-05092023-20230509

Acetone	2.4J flag U

Assoc sample on 5/9

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".

All ok

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

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-PRO-01-99-05062023	FSND-DUP-02-05062023	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: O2860

Validated by: DM 8/18/23

Reviewed by: **DLW**

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: 5/11/23, 5/12/23, 5/15/23, 5/16/23, 5/17/23, 5/18/23,
Analyzed: 5/19/23 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

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: 5/11/23 all ok
VSTDCCC050 VX035752.D all ok
Samples 1, 6, 5, 13, 7, 8, 9, 10, 12, 6, 14, 15, 17
VSTDCCC050 VX035772.D all ok

VSTDCCC050 VX035774.D all ok
Samples 5DL, 9DL, 12, 14, 16, 18, 6RE, 10, 11, 2
VSTDCCC050 VX035801.D all ok

VSTDCCC050 VX035825.D all ok
Sample 11
VSTDCCC050 VX035850.D all ok

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

VX0519WBL01 all ND

VX0522WBL01 all ND

VX0524WBL01 all ND

Trip Blanks

FSND-TB-03-05182023-20230518

Acetone	3.2J
Benzene	0.28J
Toluene	1.4
Ethylbenzene	0.26J
O-Xylene (1,2-Dimethylbenzene)	0.56J
m,p-Xylene	1.1J

assoc all simples FLAG U/J+

Equipment Blanks

FSND-EQB-08-05112023-20230511

Acetone	2.6J
Chloroform	40.1
Trichloroethylene (TCE)	0.57J
Bromodichloromethane	1.5

Assoc all collected 5/11/2023 flag <LOD U

FSND-EQB-09-05122023-20230512

Acetone	2.5J USED TRIP BLANK VALUE
Toluene	0.29J ND NO Q
Chloroform	43.9 ND NO Q
Bromodichloromethane	1.8 ND NO Q
Dibromochloromethane	0.2J ND NO Q

Assoc all collected 5/12/23

FSND-EQB-10-05152023-20230515

Acetone	2.1J USED TRIP BLANK VALUE
Chloroform	37.6 ND NO Q
Bromodichloromethane	1.4 ND NO Q
Dibromochloromethane	0.21J ND NO Q

Assoc all collected 5/15/2023

FSND-EQB-11-05162023-20230516

Acetone	2.7J ND NO Q
Toluene	0.21J ND NO Q
Chloroform	44.3 FLAG U
Bromodichloromethane	1.6 ND NO Q

Assoc all collected 5/16/23

FSND-EQB-12-05172023-20320517

Acetone	2.4J
Toluene	0.22J
Chloroform	40.2
Bromodichloromethane	1.4

FSND-EQB-13-05182023-20230518

Acetone	2.3J
Toluene	0.21J
Chloroform	42.9
Bromodichloromethane	1.6

Assoc with trip blank sample 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".

Sample 5 ↓
Sample 6 ↓
Sample 6RE ↓
Sample 11 ↓
FLAG ALL 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

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-PRO-08-81-05112023	all ok		

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-PRO-09-73-05162023 and FSND-DUP-03-05162023 all ok

ENVIRONMENTAL DATA SERVICES, LTD.

DATA VALIDATION REPORT

Scotia Annual Sampling

June 2023 Sampling

SDG: O3177, O3230 and O3231

CHEMTECH

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science, and Technology, Inc.

Report Released 09/13/2023

5 Brilliant Avenue, Pittsburgh, PA 15215
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ENVIRONMENTAL DATA SERVICES, LTD.

EXECUTIVE NARRATIVE

SDG: O3177
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/12/2023
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-EVAL-4S-06122023 (total)	O3177-01	groundwater	S2BVM
FSND-MW-EVAL-4S-06122023 (dissolved)	O3177-02	groundwater	S2BVM
FSND-MW-EVAL-4D-06122023 (total)	O3177-03	groundwater	S2BVM
FSND-MW-EVAL-4D-06122023 (dissolved)	O3177-04	groundwater	S2BVM
FSND-MW-EVAL-3S-06122023 (total)	O3177-05	groundwater	S2BVM
FSND-MW-EVAL-3S-06122023 (dissolved)	O3177-06	groundwater	S2BVM
FSND-MW-EVAL-3D-06122023 (total)	O3177-07	groundwater	S2BVM
FSND-MW-EVAL-3D-06122023 (dissolved)	O3177-08	groundwater	S2BVM
FSND-MW-EVAL-1S-06122023 (total)	O3177-09	groundwater	S2BVM
FSND-MW-EVAL-1S-06122023 (dissolved)	O3177-10	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-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:

No sample was submitted as a field / equipment blank sample in association with this sample delivery group (SDG).

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.

No sample was submitted for MS/MSD pair evaluations in association with this SDG.

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.

No sample was analyzed as a serial dilution in association with this SDG.

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.

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

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	NA		
ICP Serial Dilution	NA		
Field Duplicate	NA		
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: O3177
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/12/2023
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-EVAL-4S-06122023	O3177-01	groundwater	S2BVM
FSND-MW-EVAL-4D-06122023	O3177-03	groundwater	S2BVM
FSND-MW-EVAL-3S-06122023	O3177-05	groundwater	S2BVM
FSND-MW-EVAL-3D-06122023	O3177-07	groundwater	S2BVM
FSND-MW-EVAL-1S-06122023	O3177-09	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 "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 anions by method 9056A 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 anions by method 9056A. 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 exceptions. TOC was positively identified in several calibration blanks associated with all samples in this sample delivery group (SDG). Positive sample results reported for the impacted analyte have been evaluated and no validation action was required on this basis.

B) Method Blank

All method blanks met validation criteria.

C) Equipment / Rinse Blank

No sample was submitted as a field / equipment blank sample in association with 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. 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-EVAL-3S-06122023 was submitted for MS/MSD pair evaluations for TOC in association with this SDG. Upon evaluation all accuracy and precision indicators were acceptable.

Sample FSND-MW-EVAL-1S-06122023 was submitted for MS/MSD pair evaluations for chloride, nitrate, and sulfate in association with this SDG. Upon evaluation all accuracy and precision indicators were acceptable.

Sample FSND-MW-EVAL-4S-06122023 was submitted for matrix duplicate pair evaluations for alkalinity in association with this SDG. Upon evaluation adequate laboratory precision was demonstrated.

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.

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

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	NA		
Matrix Duplicate	x		
Matrix Spike	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		
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	NA		
Matrix Duplicate	NA		
Matrix Spike	x		
Laboratory Control Sample	x		
Field Duplicate	NA		
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	NA		
Matrix Duplicate	NA		
Matrix Spike	x		
Laboratory Control Sample	x		
Field Duplicate	NA		
Other	x		

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

Table 2 Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
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

SDG: O33230
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/13/2023
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-6-06132023 (total)	O3230-01	groundwater	S2BVM
FSND-MW-6-06132023 (dissolved)	O3230-02	groundwater	S2BVM
FSND-MW-EVAL-01D-06132023 (total)	O3230-03	groundwater	S2BVM
FSND-MW-EVAL-01D-06132023 (dissolved)	O3230-04	groundwater	S2BVM
FSND-MW-22R-06132023 (total)	O3230-05	groundwater	S2BVM
FSND-MW-22R-06132023 (dissolved)	O3230-06	groundwater	S2BVM
FSND-MW-EVAL-02S-06132023 (total)	O3230-07	groundwater	S2BVM
FSND-MW-EVAL-02S-06132023(dissolved)	O3230-08	groundwater	S2BVM
FSND-MW-EVAL-02D-06132023 (total)	O3230-09	groundwater	S2BVM
FSND-MW-EVAL-02D-06132023 (dissolved)	O3230-10	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. Please note, the laboratory improperly recorded sample FSND-MW-EVAL-01D-06132023 (dissolved) as FSND-MW-EVIAL-01D-06132023 (dissolved). There was no impact on data quality and validation action was not taken 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-". 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:

No sample was submitted as a field / equipment blank sample in association with this sample delivery group (SDG).

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-6-06132023 (total) was submitted for MS/MSD and matrix duplicate pair evaluations in association with this SDG. Upon evaluation all accuracy and precision indicators were acceptable.

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-6-06132023 (total) was analyzed as a serial dilution in association with this SDG. 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.

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

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	NA		
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: O3230
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/13/2023
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-6-06132023	O3230-01	groundwater	S2BVM
FSND-MW-EVAL-01D-06132023	O3230-03	groundwater	S2BVM
FSND-MW-22R-06132023	O3230-05	groundwater	S2BVM
FSND-MW-EVAL-02S-06132023	O3230-07	groundwater	S2BVM
FSND-MW-EVAL-02D-06132023	O3230-09	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 "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 anions by method 9056A 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 anions by method 9056A. 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 exceptions. TOC was positively identified in several calibration blanks associated with all samples in this sample delivery group (SDG). Positive sample results reported for the impacted analyte have been evaluated and no validation action was required on this basis.

B) Method Blank

All method blanks met validation criteria.

C) Equipment / Rinse Blank

No sample was submitted as a field / equipment blank sample in association with 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. 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-EVAL-02D-06132023 was submitted for MS/MSD pair evaluations for chloride, nitrate, and sulfate. 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.

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

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	NA		
Matrix Duplicate	NA		
Matrix Spike	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		
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	NA		
Matrix Duplicate	NA		
Matrix Spike	x		
Laboratory Control Sample	x		
Field Duplicate	NA		
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	NA		
Matrix Duplicate	NA		
Matrix Spike	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		
Other	x		

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

Table 2 Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
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: O3231
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/12/2023 and 06/13/2023
Number of Samples: 10
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-EVAL-4S-06122023	O3231-01	groundwater	S2BVM
FSND-MW-EVAL-1D-06132023	O3231-04	groundwater	S2BVM
FSND-MW-22R-06132023	O3231-05	groundwater	S2BVM
FSND-MW-EVAL-02S-06132023	O3231-06	groundwater	S2BVM
FSND-MW-EVAL-2D-06132023	O3231-07	groundwater	S2BVM
FSND-MW-EVAL-3S-06122023	O3231-09	groundwater	S2BVM
FSND-MW-EVAL-1S-06122023	O3231-10	groundwater	S2BVM
FSND-MW-EVAL-3D-06122023	O3231-11	groundwater	S2BVM
FSND-MW-6-06132023	O3231-12	groundwater	S2BVM
FSND-MW-EVAL-4D-06122023	O3231-19	groundwater	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. Proper custody was documented. 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

No sample was submitted as an equipment blank in association with this sample delivery group (SDG).

C) Trip Blank

No sample was submitted as a trip blank in association with 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.

No sample was submitted for MS/MSD pair evaluation in association with this SDG.

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.

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

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	NA		
Trip Blank	NA		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Laboratory Control Samples	x		
Other Quality Control Data out of Specification	x		

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

Table 2 Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
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: O3231
Laboratory: CHEMTECH
Site: Scotia, NY Annual Testing
Sampling dates: 06/12/2023 and 06/13/2023
Number of Samples: 17
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-MW-EVAL-4S-06122023	O3231-01	groundwater	S2BVM
FSND-MW-EVAL-1D-06132023	O3231-04	groundwater	S2BVM
FSND-MW-22R-06132023	O3231-05	groundwater	S2BVM
FSND-MW-EVAL-02S-06132023	O3231-06	groundwater	S2BVM
FSND-MW-EVAL-2D-06132023	O3231-07	groundwater	S2BVM
FSND-MW-18-06132023	O3231-08	groundwater	S2BVM
FSND-MW-EVAL-3S-06122023	O3231-09	groundwater	S2BVM
FSND-MW-EVAL-1S-06122023	O3231-10	groundwater	S2BVM
FSND-MW-EVAL-3D-06122023	O3231-11	groundwater	S2BVM
FSND-MW-6-06132023	O3231-12	groundwater	S2BVM
FSND-MW-8-06132023	O3231-13	groundwater	S2BVM
FSND-DUP-1-06122023	O3231-14	groundwater	S2BVM
FSND-DUP-2-06132023	O3231-15	groundwater	S2BVM
FSND-EQB-1-06122023	O3231-16	equipment blank	S2BVM
FSND-EQB-2-06132023	O3231-17	equipment blank	S2BVM
TB-20230613	O3231-18	trip blank	S2BVM
FSND-MW-EVAL-4D-06122023	O3231-19	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 exception.

The observed %D for acetone in one CCV associated with the samples listed in the table below was outside the acceptable limit.

FSND-MW-EVAL-1D-06132023	*FSND-MW-EVAL-2D-06132023*
FSND-MW-22R-06132023	*FSND-MW-18-06132023*
FSND-MW-EVAL-02S-06132023	*FSND-MW-EVAL-3S-06122023*

The results reported for acetone in the associated samples 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:

Sample FSND-EQB-1-06122023 was submitted as an equipment blank in association with the samples in this sample delivery group (SDG) collected on 6/12/2023. Chloroform was positively identified. Positive sample results reported for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance as appropriate.

Sample FSND-EQB-2-06132023 was submitted as an equipment blank in association with the samples in this SDG collected on 6/13/2023. The analytes listed in the table below were positively identified. Positive sample results reported for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance as appropriate.

Acetone	*Chloroform*
Toluene	*Bromodichloromethane*
Benzene	*M,p-xylene*
Ethylbenzene	

C) Trip blank contamination:

Sample TB-20230613 was submitted as a trip blank in association with all samples in this SDG. No problems were found for this criterion.

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-EVAL-4S-06122023 was submitted for MS/MSD pair evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable with the following exception. The observed MS and MSD recoveries for trichloroethylene (TCE) were higher than the highest acceptance limit. The result reported for trichloroethylene (TCE) in the parent sample has been qualified "J+" on this basis.

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 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-EVAL-1S-06122023 and FSND-DUP-1-06122023 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

Samples FSND-MW-8-06132023 and FSND-DUP-2-06132023 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 with the following exception. The observed LCS recovery for methylcyclohexane associated with sample FSND-MW-6-06132023 was lower than the lowest acceptance limit. The result reported for methylcyclohexane in the associated sample has been qualified "UJ" on this basis.

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.

Several samples were analyzed at a dilution due to high concentrations of target compounds. Quantitation limits are elevated in these cases.

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
Detects Only

Parameters	Original Sample	Duplicate Sample	RPD	LOQ	Flag
	FSND-MW-EVAL-1S-06122023	FSND-DUP-1-06122023			
Bromochloromethane			#DIV/0!	1	
Methylcyclohexane			#DIV/0!	1	
1,2-Dibromo-3-Chloropropane			#DIV/0!	1	
1,2,3-Trichlorobenzene			#DIV/0!	1	
Methyl Acetate	0.87		200.0	1	ok < LOQ
Chloromethane (Methyl Chloride)			#DIV/0!	1	
Acetone			#DIV/0!	5	
Vinyl Chloride			#DIV/0!	1	
Chloroethane			#DIV/0!	1	
Methyl Ethyl Ketone (2-Butanone)			#DIV/0!	5	
Carbon Disulfide			#DIV/0!	1	
Benzene			#DIV/0!	1	
Cyclohexane			#DIV/0!	5	
Methylene Chloride			#DIV/0!	1	
Tert-Butyl Methyl Ether			#DIV/0!	1	
Toluene			#DIV/0!	1	
Bromomethane			#DIV/0!	5	
Trans-1,2-Dichloroethene			#DIV/0!	1	
Cis-1,2-Dichloroethylene			#DIV/0!	1	
1,1-Dichloroethene			#DIV/0!	1	
1,2-Dichloroethane			#DIV/0!	1	
1,1-Dichloroethane			#DIV/0!	1	
2-Hexanone			#DIV/0!	5	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)			#DIV/0!	5	
Styrene			#DIV/0!	1	
Ethylbenzene			#DIV/0!	1	
O-Xylene (1,2-Dimethylbenzene)			#DIV/0!	1	
m,p-Xylene			#DIV/0!	2	
Cis-1,3-Dichloropropene			#DIV/0!	1	
Trans-1,3-Dichloropropene			#DIV/0!	1	
Chlorobenzene			#DIV/0!	1	
1,2-Dichloropropane			#DIV/0!	1	
Chloroform			#DIV/0!	1	
Isopropylbenzene (Cumene)			#DIV/0!	1	
Dichlorodifluoromethane			#DIV/0!	1	
Trichloroethylene (TCE)	89	91.2	2.4	1	
1,1,2-Trichloroethane			#DIV/0!	1	
1,1,1-Trichloroethane (TCA)			#DIV/0!	1	
Trichlorofluoromethane			#DIV/0!	1	
1,2-Dichlorobenzene			#DIV/0!	1	
1,3-Dichlorobenzene			#DIV/0!	1	
1,4-Dichlorobenzene			#DIV/0!	1	
Carbon Tetrachloride			#DIV/0!	1	
Bromodichloromethane			#DIV/0!	1	
Tetrachloroethylene (PCE)	0.37		200.0	1	ok <LOQ
1,1,2,2-Tetrachloroethane			#DIV/0!	1	
1,2,4-Trichlorobenzene			#DIV/0!	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane			#DIV/0!	1	
1,2-Dibromoethane (Ethylene Dibromide)			#DIV/0!	1	
Dibromochloromethane			#DIV/0!	1	
Bromoform			#DIV/0!	1	

Parameters	Original Sample	Duplicate Sample	RPD	LOQ	Flag
	FSND-MW-8-06132023	FSND-DUP-2-06132023			
Bromochloromethane			#DIV/0!		
Methylcyclohexane			#DIV/0!		
Methyl Acetate			#DIV/0!		
1,2-Dibromo-3-Chloropropane			#DIV/0!		
1,2,3-Trichlorobenzene			#DIV/0!		
Chloromethane (Methyl Chloride)			#DIV/0!		
Acetone			#DIV/0!		
Vinyl Chloride			#DIV/0!		
Chloroethane			#DIV/0!		
Methyl Ethyl Ketone (2-Butanone)			#DIV/0!		
Carbon Disulfide			#DIV/0!		
Benzene			#DIV/0!		
Cyclohexane			#DIV/0!		
Methylene Chloride			#DIV/0!		
Tert-Butyl Methyl Ether			#DIV/0!		
Toluene			#DIV/0!		
Bromomethane			#DIV/0!		
Trans-1,2-Dichloroethene			#DIV/0!		
Cis-1,2-Dichloroethylene			#DIV/0!		
1,1-Dichloroethene			#DIV/0!		
1,2-Dichloroethane			#DIV/0!		
1,1-Dichloroethane			#DIV/0!		
2-Hexanone			#DIV/0!		
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)			#DIV/0!		
Styrene			#DIV/0!		
Ethylbenzene			#DIV/0!		
O-Xylene (1,2-Dimethylbenzene)			#DIV/0!		
m,p-Xylene			#DIV/0!		
Cis-1,3-Dichloropropene			#DIV/0!		
Trans-1,3-Dichloropropene			#DIV/0!		
Chlorobenzene			#DIV/0!		
1,2-Dichloropropane			#DIV/0!		
Chloroform			#DIV/0!		
Isopropylbenzene (Cumene)			#DIV/0!		
Dichlorodifluoromethane			#DIV/0!		
Trichloroethylene (TCE)			#DIV/0!		
1,1,2-Trichloroethane			#DIV/0!		
1,1,1-Trichloroethane (TCA)			#DIV/0!		
Trichlorofluoromethane			#DIV/0!		
1,2-Dichlorobenzene			#DIV/0!		
1,3-Dichlorobenzene			#DIV/0!		
1,4-Dichlorobenzene			#DIV/0!		
Carbon Tetrachloride	0.55	0.65	16.7		
Bromodichloromethane			#DIV/0!		
Tetrachloroethylene (PCE)			#DIV/0!		
1,1,2,2-Tetrachloroethane			#DIV/0!		
1,2,4-Trichlorobenzene			#DIV/0!		
1,1,2-Trichloro-1,2,2-Trifluoroethane			#DIV/0!		
1,2-Dibromoethane (Ethylene Dibromide)			#DIV/0!		
Dibromochloromethane			#DIV/0!		
Bromoform			#DIV/0!		

Data Validation Worksheet

Validated on: 9/8/2023

Validate by: GAP

Reviewed by: PMH

Reviewed on: 9/12/23

ICP Checklist 6010

DOD

Project: Scotia Annual Testing

SDG: O3177

Analytes: Total and Dissolved Iron

Matrix: Water

Temp. (0-6 degrees C) ok at 2.3 degC

Preservation Holding Time –

Date collected : 6/12/2023

pH < 2 yes

6 months HT yes

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:

Run Sequence: LB125985

ICV01 1 1256

ICB01 1 1302

LLCCV01 LLCCV01 1 1421

CCV05 CCV05 1 1830

CCB05 CCB05 1 1838

All samples

CCV06 CCV06 1 1926

CCB06 CCB06 1 1930 Fe

Blanks: (Remember never qualify a blank for a blank and always use highest blank value)

Method/Preparation Blank (ND or U)

PB153406BL ND

All OK

Field Blanks

none

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

All ok

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)

Laboratory Control Sample (LCS) USE QSM

Appendix C requirements met yes

Per module: if ↑ J+, if ↓ but >60% J-/UJ; if <60% J-/X

PB153406BS ok

Duplicates: 1 in 20

Yes/No NO

RPD < 20%.

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 NO

If yes, sample name: none

Metal	MS %R	MSD %R	RPD	PDS	FLAG

%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 NO

If yes, sample name: NA

%D < 10% (only if undiluted result is > 50x IDL) All OK

per module: required if MS/MSD out; IF >10% J

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:

None

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:	O3177
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
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: 6/12/2023

Analyzed: 6/23/2023 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. Not necessary for this method.

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
LB126155BLW		ND		none

Rinse Blank
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				

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
O3177-01	ok
FSND-MW-EVAL-4S-06122023	

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:
LB126155BSW	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:

none

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:	O3177
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
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: 6/12/2023

Analyzed: 6/13 and 6/14 (DL) 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, missing ICAL data could not evaluate

INST: IC-2

ICV 5/24	Cl, N, SO4 all ok
CCV1 6/13	ok
CCV2 6/13	ok
CCV3 6/14	ok
CCV4 6/14	ok
ICB 5/24	ND
CCB1 6/13	ND
CCB2 6/13	ND
CCB3 6/14	ND
CCB4 6/14	ND

Preparation blanks/ICB/CCB

Preparation blanks present for each prep batch not to exceed 20 samples? **ACTION:** If no list impacted samples.	☑ Yes	☐ No
Preparation blanks < Method Detection Limit? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
Preparation blanks < Negative Reporting Limit? **ACTION:** If yes, list impacted samples below.	☐ Yes	☑ No
ALL ICB and CCBs performed initially and every ten samples thereafter? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
All ICB and CCBs < Method Detection Limit? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
All ICB and CCBs < Negative Reporting Limit? **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
LB125949BLW	Chloride	ND	none	
	Sulfate	ND	none	
	Nitrate	ND	none	
LB125949BLW2	Chloride	ND	none	
	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
O3177-09	Nitrate	ok	ok	ok	
FSND-MW-EVAL-1S-06122023	Chloride	63%	62%	ok	ok 4X rule
	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:
LB125949BSW	Nitrate	ok		
	Chloride	ok		
	Sulfate	ok		
LB125949BSW2	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: see FD worksheet

Were all sample results lower than the highest calibration standard?
ACTION: If no, list impacted samples below.

☑ Yes ☐ No

Notes and validation action:
sample diluted due to high Cl concentration (over cal conc)
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:	O3177
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
Method:	9060A

Date Collected:	6/12/2023
Date of Analysis:	6/22/2023

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 ℃ ?

☑ Yes ☐ No

Preservation:

Sulfuric or hydrochloric acid pH of 2?

☑ Yes ☐ No

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”.

Notes and validation action:

Holding Time

Does the holding time exceed 28 days?

☐ Yes ☑ No

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.

Notes and validation action:

Calibration Verification

Are raw data and summary sheets present for both inital and continuing calibrations?

☑ Yes ☐ No

At least the number of standards requried by QAPP and a blank?

☑ Yes ☐ No

Correlation coeff > 0.995?

☑ Yes ☐ No

Are the %D values between lab limits?

☑ Yes ☐ No

Are the ICV/CCV %r within 80-120%?
ACTION: If criteria not met, qualify with bias per NFG

☑ Yes ☐ No

Notes and validation action:all ok

	%R	Associated samples
INST: TOC		
ICAL 4/4/2023	ok	
ICV1	ok	
ICB1	0.47 J mg/L	all, all results > QL, no Q
CCV1	ok	
CCB1	0.44 J mg/L	
CCV2	ok	
CCB2	0.43 J mg/L	
CCV3	ok	
CCB3	ND	

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			
LB126092BLW	ND	none	

Rinse Blank

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
O3177-05				
FSND-MW-EVAL-3S-06122023	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:
LB126092BSW	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:

none

Review Level ☐ Yes ☑ No

List samples reviewed and bold samples used for calculations:
level 2B

Validated on: 9/8/2023

Validate by: GAP

Reviewed by: PMH

Reviewed on: 9/12/2023

ICP Checklist 6010

DOD

Project: Scotia Annual Testing

SDG: O3230

Analytes: Total and Dissolved Iron

Matrix: Water

Temp. (0-6 degrees C) ok at 4.1 degC

Preservation Holding Time –

Date collected : 6/13/2023

pH < 2 yes

6 months HT yes

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:

Run Sequence: LB126002

ICV01 1 1333

ICB01 1 1336

LLCCV01 LLCCV01 1 1427

CCV13 CCV13 1 0152

CCB13 CCB13 1 0156

Samples 2,3,4,5,6,7

CCV14 CCV14 1 0239

CCB14 CCB14 1 0243

Samples 8,9,10

CCV15 CCV15 1 0303

CCB15 CCB15 1 0307

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:

Run Sequence: LB126289

ICV01 1 1336

LLICV01 LLICV01 1 1405

CCV03 CCV03 1 1720

CCB03 CCB03 1 1727

Sample 1

CCV04 CCV04 1 1810

CCB04 CCB04 1 1814

Blanks: (Remember never qualify a blank for a blank and always use highest blank value)

Method/Preparation Blank (ND or U)

PB153450BL ND

All OK

Field Blanks

none

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

All ok

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)

Laboratory Control Sample (LCS) USE QSM

Appendix C requirements met yes

Per module: if ↑ J+, if ↓ but >60% J-/UJ; if <60% J-/X

PB153450BS ok

Duplicates: 1 in 20

Yes/No Yes

O3230-01 FSND-MW-6-06132023 (total)

RPD < 20%.

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: O3230-01 FSND-MW-6-06132023 (total)

Metal	MS %R	MSD %R	RPD	PDS	FLAG

All ok

%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: O3230-01 FSND-MW-6-06132023 (total)

All ok

%D < 10% (only if undiluted result is > 50x IDL) All OK

per module: required if MS/MSD out; IF >10% J

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:

None

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:	O3230
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
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: 6/13/2023

Analyzed: 6/23/2023 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. Not required for this method.

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
LB126155BLW		ND		none

Rinse Blank
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				

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
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? 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:
LB126155BSW	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:

none

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:	O3230
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
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: 6/13/2023

Analyzed: 6/14 and 6/15 (DL)

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, missing ICAL could not evaluate

INST: IC-2

ICV 5/24	Cl, N, SO4 all ok
CCV1 6/14	ok
CCV2 6/14	ok
CCV3 6/15	ok
CCV4 6/15	ok
ICB 5/24	ND
CCB1 6/14	ND
CCB2 6/14	ND
CCB3 6/15	ND
CCB4 6/15	ND

Preparation blanks/ICB/CCB

Preparation blanks present for each prep batch not to exceed 20 samples? **ACTION:** If no list impacted samples.	☑ Yes	☐ No
Preparation blanks < Method Detection Limit? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
Preparation blanks < Negative Reporting Limit? **ACTION:** If yes, list impacted samples below.	☐ Yes	☑ No
ALL ICB and CCBs performed initially and every ten samples thereafter? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
All ICB and CCBs < Method Detection Limit? **ACTION:** If no, list impacted samples below.	☑ Yes	☐ No
All ICB and CCBs < Negative Reporting Limit? **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
LB125964BLW	Chloride	ND	none	
	Sulfate	ND	none	
	Nitrate	ND	none	
LB125964BLW2	Chloride	ND	none	
	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
O3230-09	Nitrate	ok	ok	ok	
FSND-MW-EVAL-02D-06132023	Chloride	7%	27%	ok	ok 4X rule
	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:
LB125964BSW	Nitrate	ok		
	Chloride	ok		
	Sulfate	ok		
LB125964BSW2	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: see FD worksheet

Were all sample results lower than the highest calibration standard?
ACTION: If no, list impacted samples below.

☑ Yes ☐ No

Notes and validation action:
sample diluted due to high Cl concentration (over cal conc)
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:	O3230
Data Validator:	GAP
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/12/2023
Method:	9060A

Date Collected:	6/13/2023
Date of Analysis:	6/22/2023

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 ℃ ?

☑ Yes ☐ No

Preservation:

Sulfuric or hydrochloric acid pH of 2?

☑ Yes ☐ No

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”.

Notes and validation action:

Holding Time

Does the holding time exceed 28 days?

☐ Yes ☑ No

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.

Notes and validation action:

Calibration Verification

Are raw data and summary sheets present for both inital and continuing calibrations?

☑ Yes ☐ No

At least the number of standards requried by QAPP and a blank?

☑ Yes ☐ No

Correlation coeff > 0.995?

☑ Yes ☐ No

Are the %D values between lab limits?

☑ Yes ☐ No

Are the ICV/CCV %r within 80-120%?

☑ Yes ☐ No

ACTION: If criteria not met, qualify with bias per NFG

Notes and validation action:all ok

	%R	Associated samples
INST: TOC		
ICAL 4/4/2023	ok	
ICV1	ok	
ICB1	0.47 J mg/L	all, all results >QL no Q
CCV1	ok	
CCB1	0.44 J mg/L	
CCV2	ok	
CCB2	0.43 J mg/L	
CCV3	ok	
CCB3	ND	

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			
LB126092BLW	ND	none	

Rinse Blank
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 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
none				

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:
LB126092BSW	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:

none

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:	O3231
Data Validator:	LL
Validation Date:	9/8/2023
Reviewer:	PMH
Review Date:	9/13/2023

Methane, ethane, ethene

100% Level 2B

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: 6/12-13/2023
Analyzed: 6/15/23 ok

Matrix Spike

Is a matrix spike/matrix spike duplicate summary present?
Were matrix spikes analyzed at the required frequency for each of the following matrixes:

☐ Yes ☑ No

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

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:
BSA0615G1 ok
BSA0615G2 ok RPD 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:
VBA0615G1 all ND

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? **ACTION**: Associated sample data for those analytes with % RSD > 20 will be qualified as estimated.	☑ Yes	☐ No
Are the % D values between the true and measured concentration values for the continuing calibrations + 20? **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.	☑ Yes	☐ No
Are miss-calculations or transcription errors found? **NOTE**: If yes, contact the laboratory.	☐ Yes	☐ No

Notes and validation action:

ICAL 6/15/23	ok
FA003910.D	ok
FA003921.D	ok
FA003928.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:

none

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: O3231

Validated by: DM 9/7/23

Reviewed by: PMH 9/13/2023

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: 6/12/23, 6/13/23
Analyzed: 6/14/23, 6/15/23, 6/16/23, 6/20/23 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_N

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_N

ICAL: 6/6/23 all ok
VSTDCCC050 VN078192.D 14 Jun 2023 09:19
    Acetone %D 21.35
Samples 5, 6, 7, 8, 9, 4 all ND flag UJ
STDCCC050 VN078218.D 14 Jun 2023 20:09

VSTDCCC050 VN078220.D 15 Jun 2023 11:33
Samples 13, 14, 15, 16, 17, 18, 19, 1, 10, 11
VSTDCCC050 VN078246.D 15 Jun 2023 22:22
All ok

VSTDCCC050 VN078248.D 16 Jun 2023 09:42
Sample 11DL
VSTDCCC050 VN078268.D 16 Jun 2023 18:29
Sample 12
VSTDCCC050 VN078313.D 20 Jun 2023 16:54
All ok

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 Module 1, 2, 3, and 4 Revised Table for Sample Qualification in the Prescence of Blank Contamination 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

VN0614WBL01

VN0615WBL01

VN0616WBL01

VN0619WBL01

VN0620WBL01

All ND

Trip Blanks

TB-20230613 all ND

Equipment Blanks

FSND-EQB-1-06122023-20230612 Assoc samples collected 6/12

Chloroform 1.9 all ND no Q

FSND-EQB-2-06132023-20230613 Assoc samples collected 6/13

Acetone 6.7 sample 12 <LOD flag U

Benzene 0.59 J all ND no Q

Toluene 0.29 J all ND no Q

Ethylbenzene 0.29 J all ND no Q

m,p-Xylene 0.86 J all ND no Q

Chloroform 25.1 samples 6, 13, 15 <LOD flag U

Bromodichloromethane 1.3 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".

All ok

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

All ok unless noted below

VN0616WBS01

1,2,4-trichlorobenzene 64↓
Assoc sample 11DL not reported no Q

VN0620WBS01

Methylcyclohexane 71↓ flag UJ
Assoc sample 12

MS/MSD (Form III)

- ✓ one per prep batch QSM 5.3 limits used
- ✓ 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) Per QAPP RPD ≤ 20%
- ✓ qualify parent sample only

List samples, results affected and qualifications below.

	MS	MSD	RPD	
FSND-MW-EVAL-4S-06122023				
Trichloroethene (Trichloroethylene (TCE))	136↑	136↑	ok	flag J+

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 worksheet.

FSND-MW-EVAL-1S-06122023 and FSND-DUP-1-06122023 ok

FSND-MW-8-06132023 and FSND-DUP-2-06132023 ok

ENVIRONMENTAL DATA SERVICES, LTD.

DATA VALIDATION REPORT

Scotia Annual Sampling

June 2023 Sampling

SDG: 041UF

Microbial Insights, Inc.

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science, and Technology, Inc.

Report Released 11/22/2023

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ENVIRONMENTAL DATA SERVICES, LTD.

EXECUTIVE NARRATIVE

Sample Delivery Group: 041UF
Laboratory: Microbial Insights, Inc.
Site: Scotia, NY Annual Testing
Sampling dates: 06/12/2023 and 06/13/2023
Number of Samples: 10
Test Method: MI SOP–CSIA
Analysis: Compound Specific Isotope Analysis (CSIA)

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-6-06132023	041UF-1	groundwater	S2BVM
FSND-MW-EVAL-04D-06122023	041UF-2	groundwater	S2BVM
FSND-MW-33-06132023	041UF-3	groundwater	S2BVM
FSND-MW-22R-06132023	041UF-4	groundwater	S2BVM
FSND-MW-31-06132023	041UF-5	groundwater	S2BVM
FSND-MW-32-06132023	041UF-6	groundwater	S2BVM
FSND-MW-30-06132023	041UF-7	groundwater	S2BVM
FSND-MW-EVAL-04S-06122023	041UF-8	groundwater	S2BVM
FSND-MW-EVAL-03S-06122023	041UF-9	groundwater	S2BVM
FSND-MW-EVAL-03D-06122023	041UF-10	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 with the following exceptions. The laboratory did not supply a sample identification cross reference table between client and laboratory identifications, although that information was provided in a separate Excel file. In addition, sample preparation (extraction/digestion/dilution) logs were not provided. However, the data validator has assessed no impact to data quality on this basis.

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 of 6 months with hydrochloric acid preservation 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". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

4. CALIBRATION:

Initial calibration comprised of multi-level calibration standards must have a coefficient of determination (r^2) greater than 0.95. Continuing calibrations are required with each sample batch analyzed and must have observed δ13C values within ± 0.5‰ of the true value, and δ37Cl values within ± 1.0‰ of the true value.

Calibration data was not provided in the laboratory data package and therefore could not be assessed.

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 Level of Quantitation (LOQ), or one tenth the concentration of associated samples, then all associated field samples are flagged per validation guidance.

No problems were found for this criterion.

Note, no sample was analyzed as a field or equipment blank in association with the data sets evaluated.

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 must have observed δ^{13} C positive control values are within +- 0.5‰ of true value. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. MATRIX DUPLICATE:

The matrix duplicate (MD) sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. MD evaluations should have observed δ13C values within ± 0.5‰ of the true value, and δ37Cl values within ± 1.0‰ of the true value. For an MD analysis that does not meet the technical criteria, the action was applied to all samples in the preparation batch.

No sample was analyzed as a MD (in triplicate) in association with the data sets evaluated.

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 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values greater than or equal to five times the LOQ. A control limit of two times the LOQ shall be used if either the sample or duplicate value is less than five times the LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the field sample and its duplicate.

No samples were submitted as a field duplicate pair collected and analyzed in association with these sample delivery groups (SDGs).

9. OTHER PROBLEMS:

No other problems were found.

Table 1 Major and Minor Findings

	Were acceptance criteria met?		
	Yes	No	
CSIA		**Major**	**Minor**
Holding Time	x		
Initial Calibration	NA		
Continuing Calibration	NA		
Method Blank	x		
Continuing Calibration Blank	NA		
Field Blank	NA		
Matrix Duplicate	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		

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
J	The analyte was positively identified, the quantitation is an estimation because of discrepancies in meeting certain analyte-specific quality control criteria and from a screening method.
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 not detected, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria and from a screening method.
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.

Data Validation Worksheet

SDG: 041UF

Validator: DLW

Date: 11/22/23

Laboratory: Microcial Insights

Project: Scotia Annual Sampling

Sample receipt and Custody:

All acceptable

Holding Time:

6 months preservation HCL

Collected 6/12 and 6/13 2023 preserved HCL

Prepared 6/14/23

Analyzed 8/2/23

No problems were found for this criterion.

Field Blanks:

None

Method Blank:

ND

Calibrations:

None provided therefore no review could be performed.

LCS:

No problems were found for this criterion.

Matrix Duplicates:

None

Field Duplicates:

None

Appendix F

Zero Valent Iron Mass Estimate

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CALCULATION WORKSHEET

CLIENT: USACE/GSA — CONTRACT NUMBER: D0073

SUBJECT: Former Scotia Navy Depot
ZVI Estimation

BY: TCR — CHECKED BY: DC — DATE: 11/15/2023

Assumptions

				Source
Given:	Fe Area =	19500	ft^2	*GeoSierra's January 2017 100% ZVI-PRB Final Report*
	Fe thickness =	0.25	ft	
	Lbs of Fe applied in lower wall =	487901	lbs	
Calculated:	Fe Volume =	4875	ft^3	
	Lbs of Fe per ft^3 =	100.08	lbs Fe/ft^3	*Assumed even distribution of ZVI Fe throughout volume of lower wall panel*

EXPECTED FE MASS IN ANGLE BORING

Given:	Radius of cylindrical boring =	0.25	ft	
	Length of boring interval =	0.25	ft	*Assumed 3 in thick ZVI wall that should contain Fe*
	Volume of boring =	0.05	ft^3	Source
	Bulk density of sandy soil =	94.9	lbs/ft^3	*LibreTexts Chemistry "Density of Rocks and Soils"* https://chem.libretexts.org/Ancillary_Materials/Exemplars_and_Case_Studies/Exemplars/Geology/Density_of_Rocks_and_Soils
Calculated:	Expected lbs of Fe in Angled Boring =	4.91	lbs Fe	
	Expected lbs of soil in Angled Boring =	4.7	lbs of Soil	

OBSERVED FE MASS IN ANGLE BORING

Given:	Mass of angle boring sample received by ReSolution Partners, LLC. =	7.72	lbs	*Sample received was weighed as approximately 3.5 kg sample*
	Percent mass separated as magnetic =	4.1	%	*Percent magnetic separated mass from highest interval to provide safety factor*
Calculated:	Calculated lbs of Fe in Angled Boring =	0.32	lbs Fe	

CALCULATION WORKSHEET

CLIENT: USACE/GSA — CONTRACT NUMBER: D0073

SUBJECT: Former Scotia Navy Depot
Passivation Study - TCE and ZVI Estimation

BY: TCR — CHECKED BY: JH — DATE: 1/16/2024

Assumptions

				Source
Given:	Average PCE reduction after 9 days =	3033.33	µg/L PCE	*ReSolution Partners LLC "Treatability Study Assessment July 2023"*
	Reactor bottle liquid volume =	0.10	L	
	Mass of magnetic material added =	0.01	g magnetic material	
	Molar mass PCE =	165.83	g PCE/mol PCE	
	Molar mass TCE =	131.40	g TCE/mol TCE	

Conversion from PCE to TCE and determination of TCE per mass of magnetic material

Calculated:	Average mass of PCE reduced =	303.33	µg PCE
	Moles of PCE =	1.83E-06	mol PCE
	Moles of TCE =	1.83E-06	mol TCE
	Mass of TCE reduced =	2.40E-04	g TCE
	Mass of TCE reduced per mass of magnetic material =	0.02	g TCE/g magnetic material (ZVI)

Expected amount of TCE reduced by injection ZVI

				Source
Given:	Mass of injected ZVI =	2299155.00	lbs ZVI	*GeoSierra's January 2017 100% ZVI-PRB Final Report*
	Conversion factor lbs to g =	453.59	g per lb	
	Mass of injected ZVI =	1042878315	g ZVI	
Calculated:	Maximum mass of TCE estimated to be reduced by injected ZVI =	25066030.39	g TCE	
		55261.18	lbs TCE	

Appendix G

ReSolution Partners, LLC. Final Report

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ReSolution Partners, LLC

Treatability Study Assessment of Potential Zero-Valent Iron Passivation

Prepared for EA Engineering, Science, and Technology, Inc. (EA)

27 July 2023

Zero-valent iron (ZVI) identified as Peerless 14-D was injected at a project site in New York as a permeable reactive barrier (PRB) to reduce concentrations of tetrachloroethene (PCE) in groundwater. EA requested an assessment to determine the amount of ZVI at one PRB location across three depth intervals, and if the ZVI has been passivated. ReSolution Partners (RP) assessed the weight of iron compared to the weight of soil in the samples received, and the reduction of PCE by the ZVI.

The following sections describe the methods used in this assessment and results.

Samples Received

EA provided the following soil samples on May 31, 2023 (three samples total): AB-84-85, AB-85-86, and AB-86-87. Each sample contained approximately 3.5 kg of PRB material.

ZVI Extraction

Soil was weighed as-received, and moisture content was measured (see the following results).

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Sample ID	AB-84-85	AB-85-86	AB-86-87
Dry fraction (g/g)	0.81	0.85	0.86
Moisture (%)	18.9	14.8	13.6

Each soil was homogenized by hand (gloved) in a plastic tub. The sample was spread out evenly in the bottom of the tub and quartered. One quarter was removed and thin spread in a large PTFE-lined tray and allowed to air-dry at ambient lab temperature (~23°C) overnight. The dried sample was quartered and quartered again. The resulting 1/64 aliquot was weighed then sieved on a 500 µm sieve, and sieved again on a 250 µm sieve and quantitatively collected in a pan. The sieved aliquot was transferred to a plastic separation box. A set of magnets was placed under the box and the box lightly shaken to capture the magnetic particles in the magnetic field. The non-magnetic fraction was transferred into a vessel. The magnets were removed and the magnetic fraction transferred to another vessel. Both the magnetic fraction and the non-magnetic fractions were passed through the separation process two additional times to further purify each fraction. The magnetic fraction was weighed and the fraction of the sample aliquot calculated, as follows.

Sample ID	AB-84-85	AB-85-86	AB-86-87
Dried aliquot wt (g)	20.0	26.7	20.2
Magnetic wt in aliquot (g)	0.81	0.59	0.61
Magnetic wt fraction in dry sample (g/g)	0.041	0.022	0.030
Magnetic wt fraction in dry sample (%)	4.1	2.2	3.0
Magnetic wt fraction in as-received sample (g/g)	0.033	0.019	0.026
Magnetic wt fraction in as-received sample (%) :	3.3	1.9	2.6

ZVI Passivation Reactors

Ten (10) mg of the magnetically-separated material from each of the three samples was combined with 100 mL of a PCE-spiked water in replicate 125 mL reaction bottles with Mininert caps to facilitate repeated headspace sampling. The PCE solution was prepared using reagent-grade PCE dissolved to saturation in deionized water for a target concentration of approximately 18,000 µg/L PCE. The bottles were shaken at the time of preparation and at 8 hours after preparation. The residual PCE concentrations were

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measured in headspace gas samples after 1, 3 and 9 days of reaction to determine differences in the degree of reduction among the ZVI samples.

Iron Mass	PCE Concentration	PCE Mass in Aliquot	Ratio of PCE Mass to ZVI Mass
10 mg	18,000 µg/L	1,800 µg	0.18

After the final reaction period, the water samples were analyzed for the following:

pH	pH measure by VWR Symphony Model SB80PI meter with Thermo Set 9107BNMD electrode. Three-point calibration against commercial standards is completed before use.
ORP	ORP measurement by Oakton pH 11 Series meter equipped with a Cole Parmer no. 05990-55 electrode. The electrode performance is checked against Zobell solution before use.
PCE	Headspace analyses of PCE and its potential daughter products (TCE, DCEs, CE, ethene and ethane) using GC-PID.

ZVI Passivation Results

The following table summarizes the results for the CVOC, pH and ORP analyses. Initial PCE-spiked water concentrations averaged 16,500 µg/L at the time of the reactor setup. The PCE concentration in the reactors with ZVI and PCE-spiked water averaged 13,200 µg/L after one day of reaction; a 20% reduction in PCE concentrations without the formation of daughter products. After days of reaction there was no evidence of decreasing concentrations over time (average of 13,100 µg/L and 13,500 µg/L at day 3 and 9, respectively). All samples had a relatively high ORP (+141 mV) and pH (8.88 SU). The results suggest that the ZVI in the magnetically separated material was "spent" after one day of reaction.

Sample ID	AB-84-85 Rep1	AB-84-85 Rep2	AB-85-86 Rep1	AB-85-86 Rep2	AB-86-87 Rep1	AB-86-87 Rep2
Day 1 CVOCs						
date : 13 Jun 2023						
VC (µg/L)	<25	<25	<25	<25	<25	<25
1,1-DCE (µg/L)	<5	<5	<5	<5	<5	<5
t-DCE (µg/L)	<5	<5	<5	<5	<5	<5
c-DCE (µg/L)	<5	<5	<5	<5	<5	<5

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ReSolution Partners, LLC

Sample ID	AB-84-85 Rep1	AB-84-85 Rep2	AB-85-86 Rep1	AB-85-86 Rep2	AB-86-87 Rep1	AB-86-87 Rep2
TCE (µg/L)	<5	<5	<5	<5	<5	<5
PCE (µg/L)	12,900	14,000	11,900	12,900	12,700	14,700
Total CVOCs	**12,900**	**14,000**	**11,900**	**12,900**	**12,700**	**14,700**
average	**13,450**		**12,400**		**13,700**	
Day 3 CVOCs						
date : 15 Jun 2023						
VC (µg/L)	<25	<25	<25	<25	<25	<25
1,1-DCE (µg/L)	<5	<5	<5	<5	<5	<5
t-DCE (µg/L)	<5	<5	<5	<5	<5	<5
c-DCE (µg/L)	<5	<5	<5	<5	<5	<5
TCE (µg/L)	<5	<5	<5	<5	<5	<5
PCE (µg/L)	13,000	13,000	13,000	13,300	13,200	13,100
Total CVOCs	**13,000**	**13,000**	**13,000**	**13,300**	**13,200**	**13,100**
average	**13,000**		**13,150**		**13,150**	
Day 9 CVOCs and ORP and pH						
date : 21 Jun 2023						
VC (µg/L)	<25	<25	<25	<25	<25	<25
1,1-DCE (µg/L)	<5	<5	<5	<5	<5	<5
t-DCE (µg/L)	<5	<5	<5	<5	<5	<5
c-DCE (µg/L)	<5	<5	<5	<5	<5	<5
TCE (µg/L)	<5	<5	<5	<5	<5	<5
PCE (µg/L)	13,400	13,700	13,100	13,900	13,400	13,300
Total CVOCs	**13,400**	**13,700**	**13,100**	**13,900**	**13,400**	**13,300**
average	**13,550**		**13,500**		**13,350**	
ORP (mV)	126	135	142	146	148	146
pH	8.97	9.06	8.87	8.75	8.76	8.85

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Additional ZVI Passivation Trials

Based on the ZVI passivation results, additional reactors were setup to evaluate a higher ZVI to PCE-spiked water ratio. The magnetic fraction of ZVI from each of the three soils were combined into one sample. Two (2) 40-mL amber glass VOA vials were prepared with 300 mg of the composited magnetically separated material with 30 mL of the PCE-spiked water, a 100-fold increase over the initial trials. Two (2) 40-mL additional VOA vials with no ZVI were prepared for duplicate controls. The PCE-spiked water concentration at the time of reactor setup was 16,900 µg/L.

Results of the reactors after 9 days of reaction follows.

Sample ID	Control Reactors		Composite ZVI Reactors	
	Rep 1	Rep 2	Rep 1	Rep 2
Day 9 CVOCs				
date : 12 Jul 2023				
VC (µg/L)	<25	<25	<25	<25
1,1-DCE (µg/L)	<5	<5	<5	<5
t-DCE (µg/L)	<5	<5	<5	<5
c-DCE (µg/L)	<5	<5	<5	<5
TCE (µg/L)	<5	<5	87.9	79.1
PCE (µg/L)	17,200	19,200	8,460	9,040
Total CVOCs	**17,200**	**19,200**	**8,548**	**9,119**
average	**18,200**		**8,834**	

The reactors with increased concentrations of ZVI reduced PCE concentrations by approximately 49-percent. This assessment confirmed that the ZVI extracted from the soil is capable of reducing PCE in water and the degree of reduction is a function of the mass of ZVI present. Physical properties of the extracted ZVI were further evaluated under a microscope.

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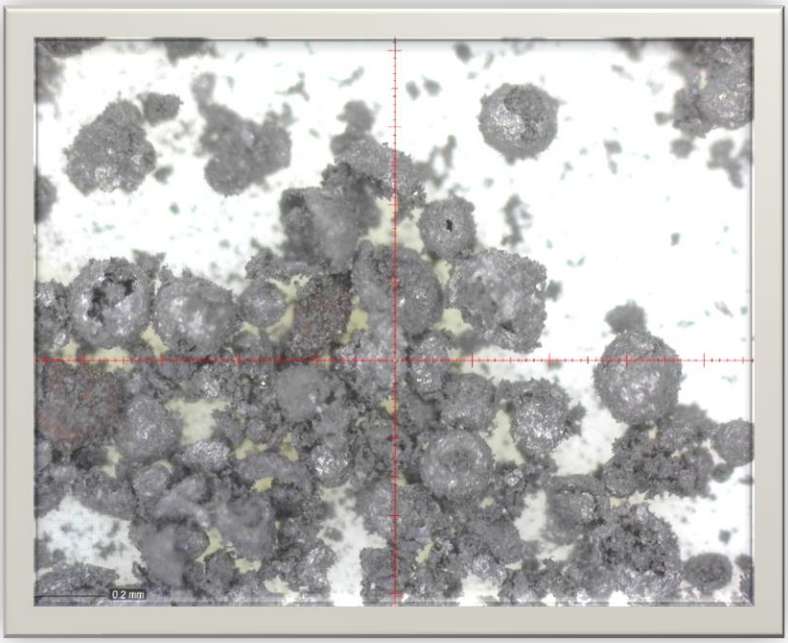
Microscopic Examination of Zero Valent Iron

Samples of ZVI were examined under a digital electronic microscope (Dino-Lite Edge, Torrance CA) equipped with a 100x polarized lens. A sample of unreacted Peerless 14-D ZVI was not available for comparison to the reacted samples produced by the study. Fresh, unreacted, Sagwell ZVI having particle sizes from +40 to -200 mesh was used to provide ZVI comparable to unreacted Peerless 14-D as follows:



The material is uniformly grey with no visual evidence of oxidation.

Samples of the Peerless 14-D ZVI produced by magnetic separation from the PRB samples were examined for comparison to the unreacted ZVI. The following images from sample AB-85-86 are typical of the PRB samples. In the first image, grey ZVI is present as are clear quartz and possible red feldspar grains. The ZVI particle or aggregates on the order of 0.1 μm in size in this view are mostly grey with minimal visual signs of oxidation. There is an aggregate just below and to the left of the image center that suggests oxidation to iron oxyhydroxide/oxide is cementing iron particles together.

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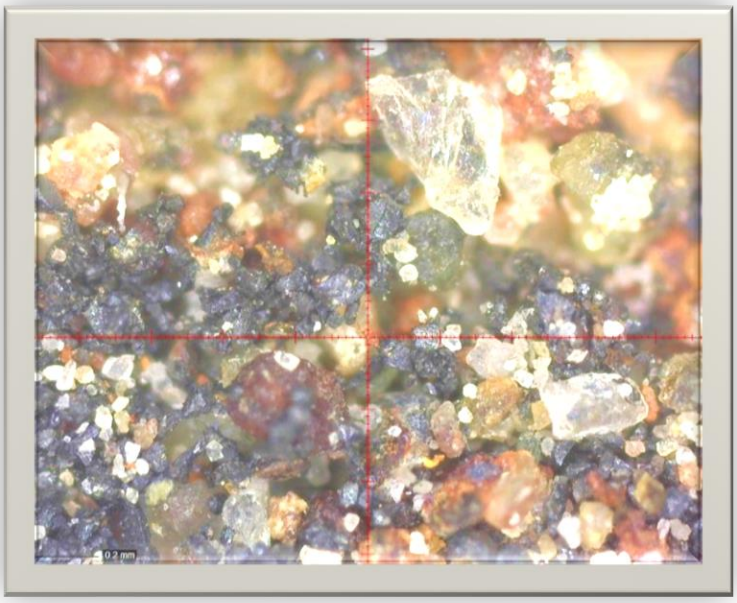
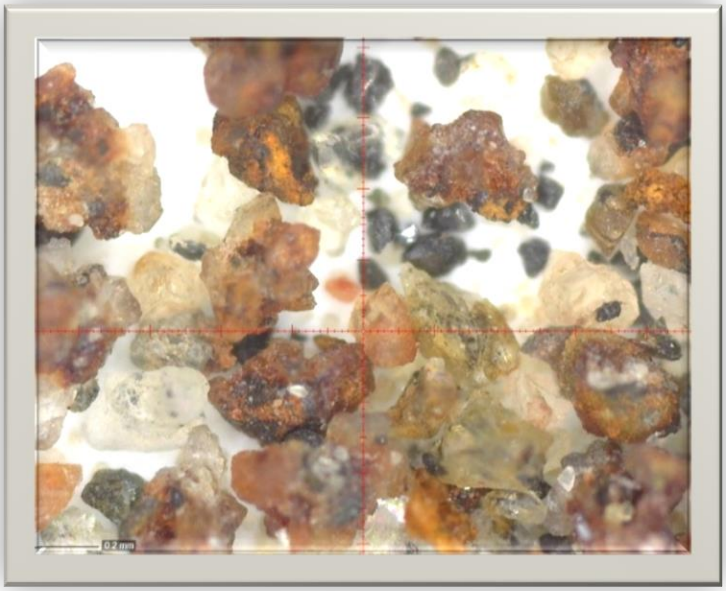


In the second image, much more of the ZVI appears to be present in the form of oxide-cemented aggregates.



The third image shows magnetically-separated Peerless 14-D ZVI following reaction with PCE solution. The ZVI was removed from reaction bottles using a pipette. This likely biased the grain size of recovered material toward smaller sizes as larger, heavier,

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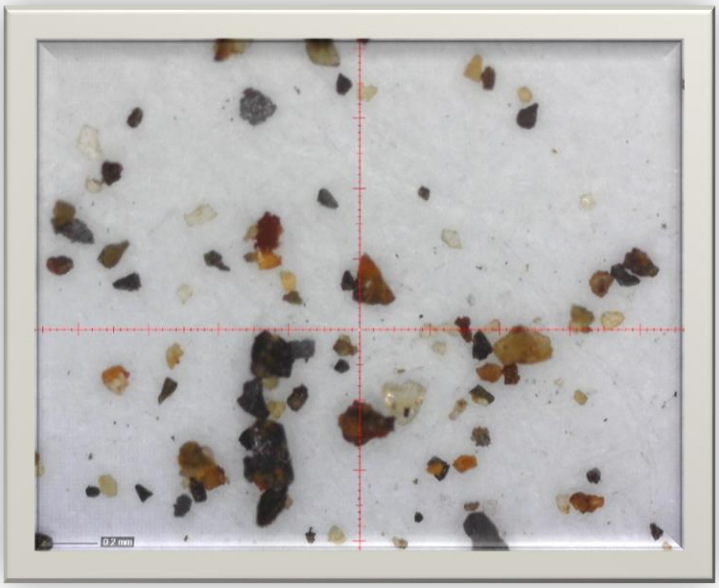
particles fell out of the pipette during recovery. Most of the iron particle appear to be grey and unoxidized, but small oxidized aggregates are still present.



The microscopic examination found that there is still unreacted or unoxidized ZVI present in the PRB samples. Exposure of the magnetically separated ZVI to the PCE solution did not completely oxidize the ZVI based on visual examination alone.

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Appendix H

FROG5000™ Field Screening Results

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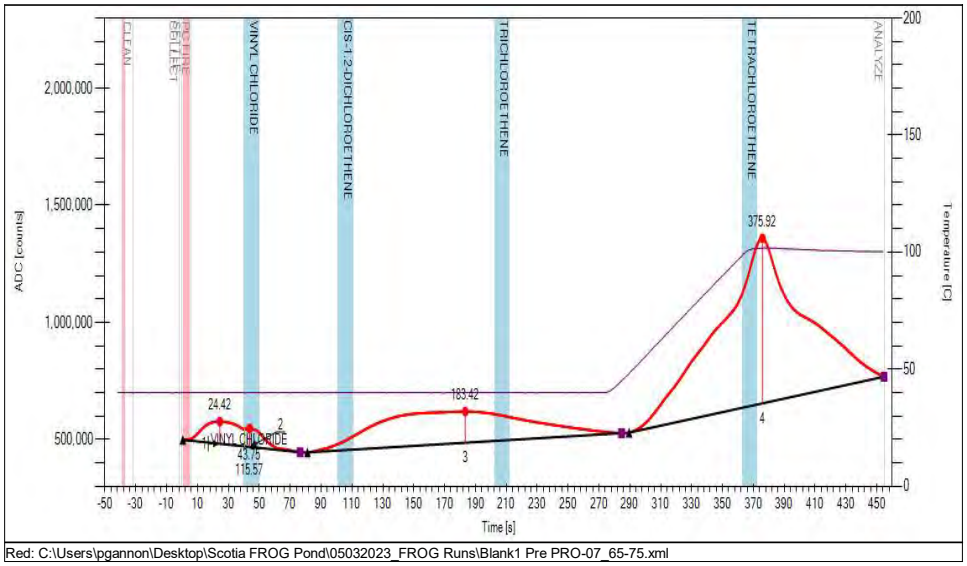
2023-05-03 07:44:58Z
FROG-0230:Ta=275,Tb=90,Tc=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,52%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		24.42	95108	2584506		
2	VINYL CHLORIDE	43.75	78562	1142605	115.57	115.57
3		183.42	133224	15983191		
4		375.92	704520	45150726		



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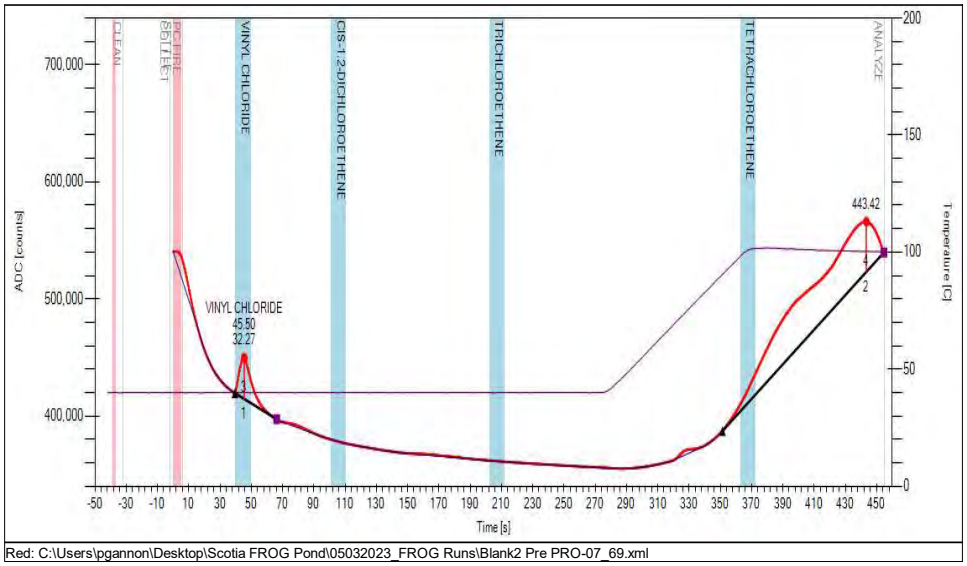
2023-05-03 07:57:43Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,53%
Dilution = 1.0

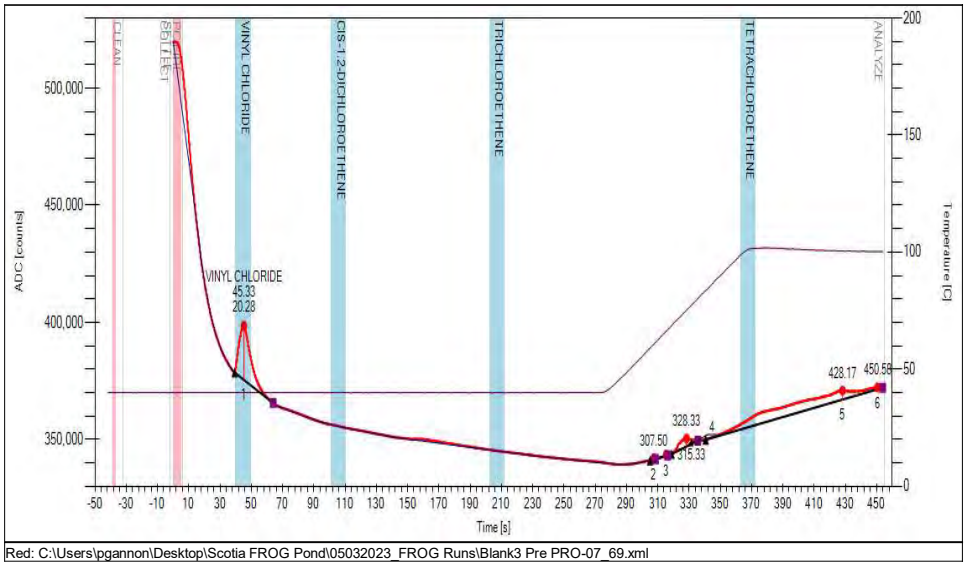
Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.5	35216	319007	32.27	32.27
2		443.42	42830	3070877		
3	VINYL CHLORIDE	45.5	35216	319007	32.27	32.27
4		443.42	42830	3070877		



Red: C:\Users\pgannon\Desktop\Scotia FROG Pond\05032023_FROG Runs\Blank2 Pre PRO-07_69.xml

2023-05-03 08:13:57Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,54%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.33	23102	200528	20.28	20.28
2		307.5	592	893		
3		315.33	575	816		
4		328.33	3432	31694		
5		428.17	3817	295700		
6		450.58	783	17138		



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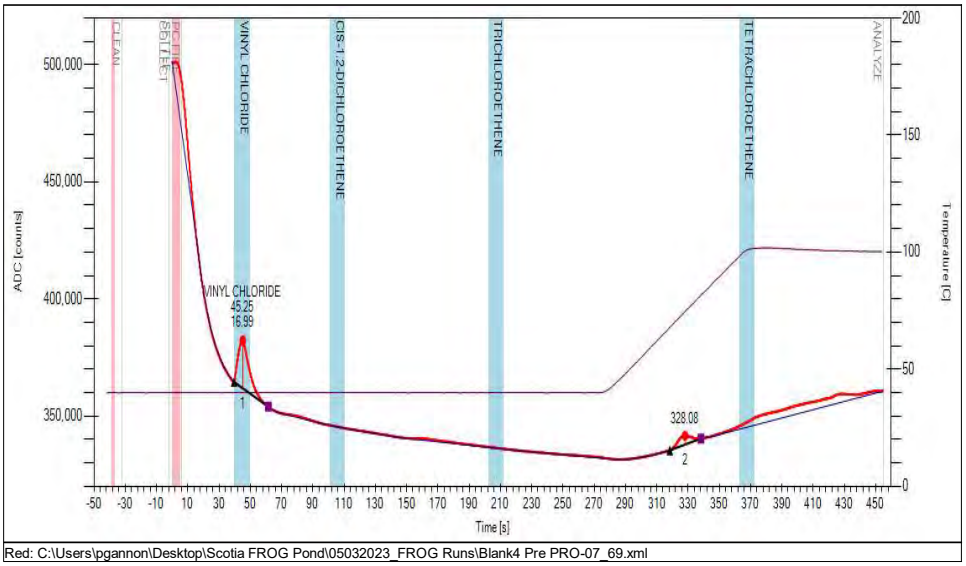
2023-05-03 08:28:38Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	20502	167938	16.99	16.99
2		328.08	3784	37408		



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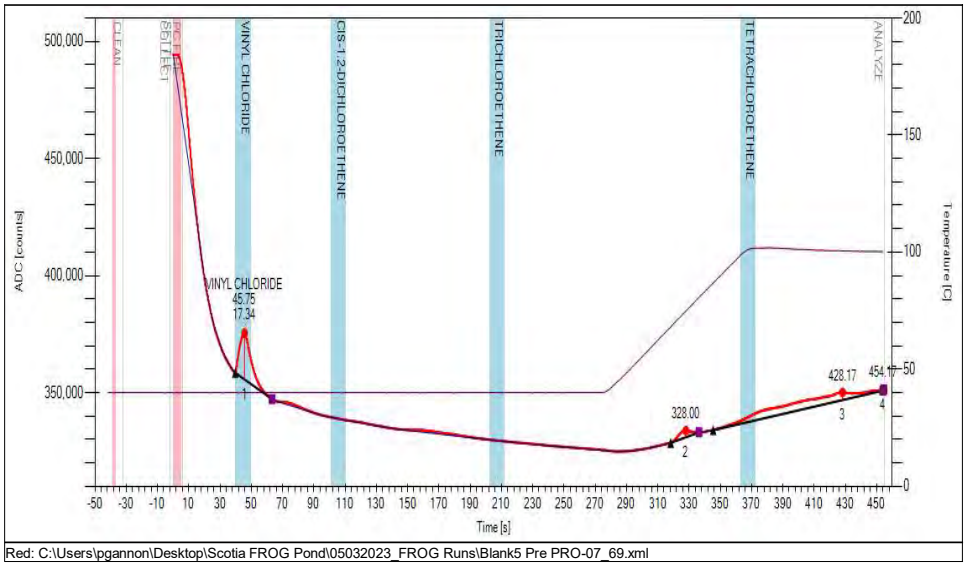
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.75	19803	171404	17.34	17.34
2		328	2839	26584		
3		428.17	3223	244360		
4		454.17	419	128		



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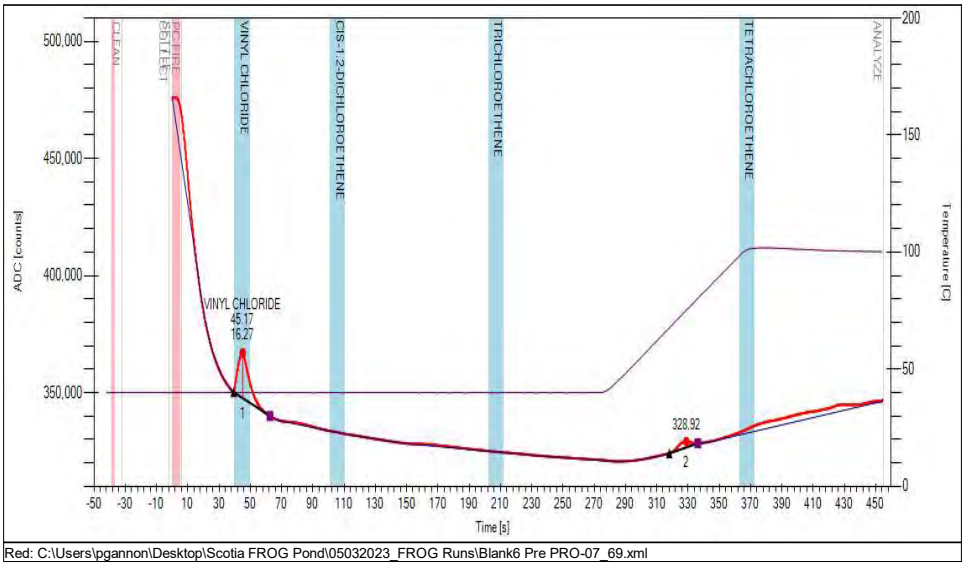
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,54%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	19299	160901	16.27	16.27
2		328.92	2425	23493		



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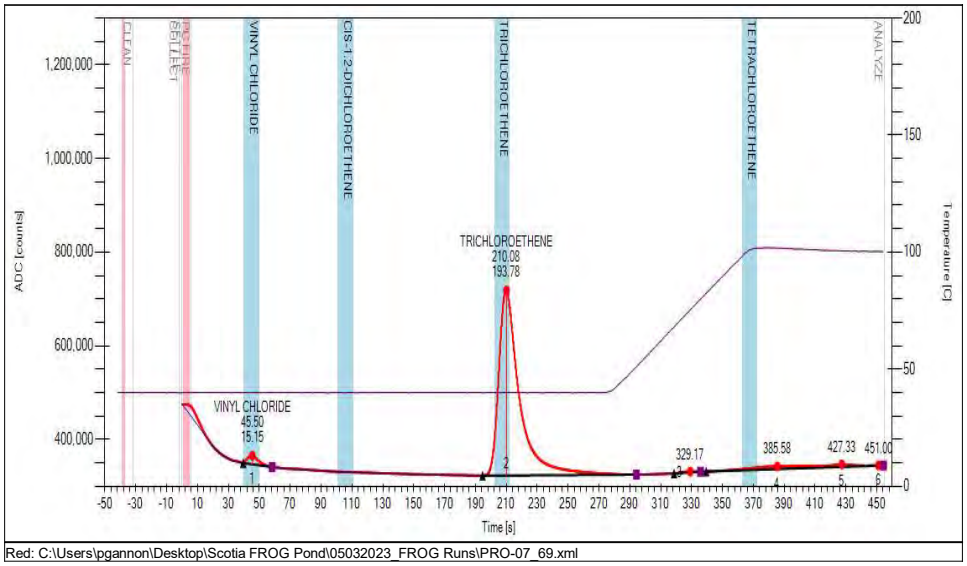
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.5	18329	149792	15.15	15.15
2	TRICHLOROETHENE	210.08	395134	6144282	193.78	193.78
3		329.17	1685	16743		
4		385.58	5812	136693		
5		427.33	5331	217065		
6		451	604	6952		



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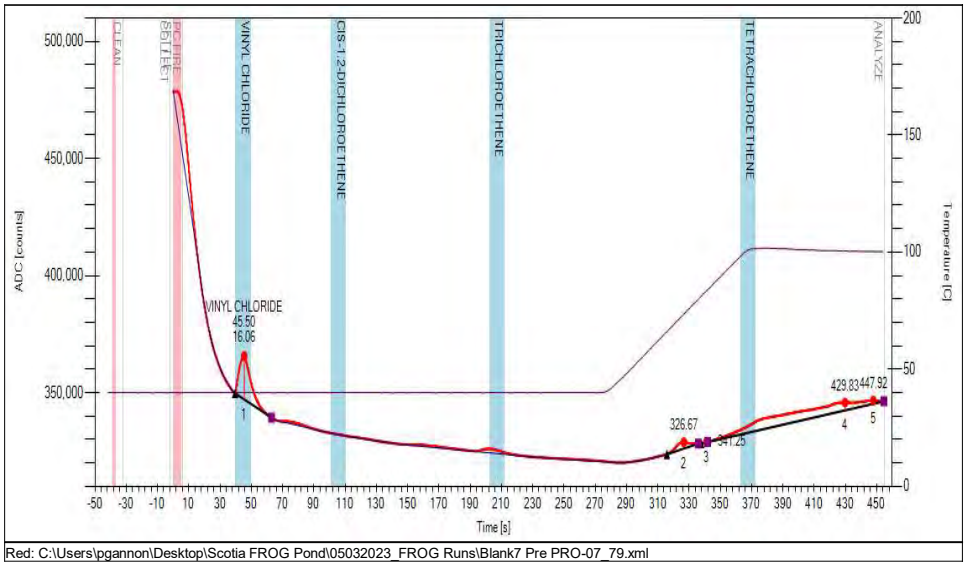
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.5	18514	158773	16.06	16.06
2		326.67	2699	27455		
3		341.25	344	561		
4		429.83	3331	280032		
5		447.92	1410	30426		



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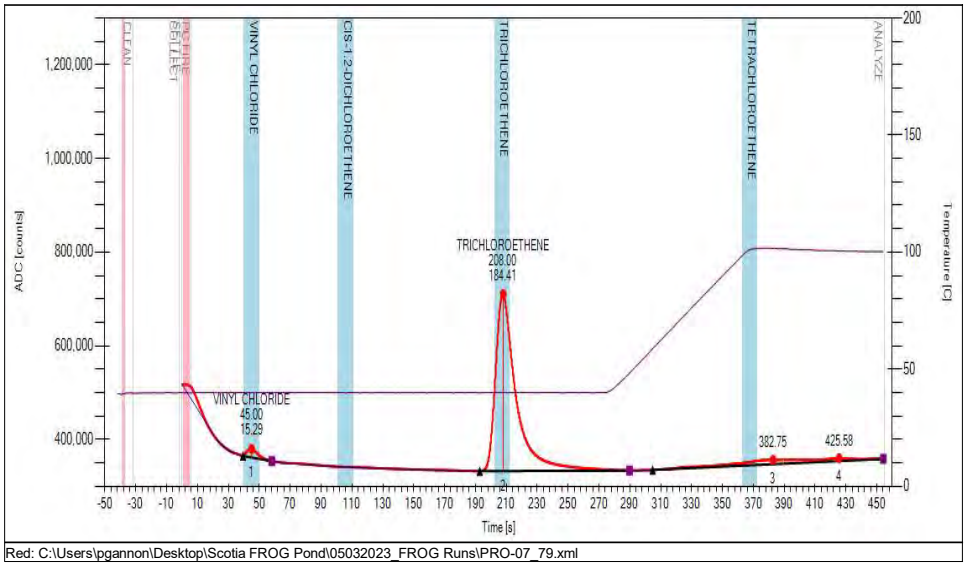
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	18313	151191	15.29	15.29
2	TRICHLOROETHENE	208	377690	5846988	184.41	184.41
3		382.75	9280	357219		
4		425.58	6306	293383		



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2023-05-03 10:28:03Z
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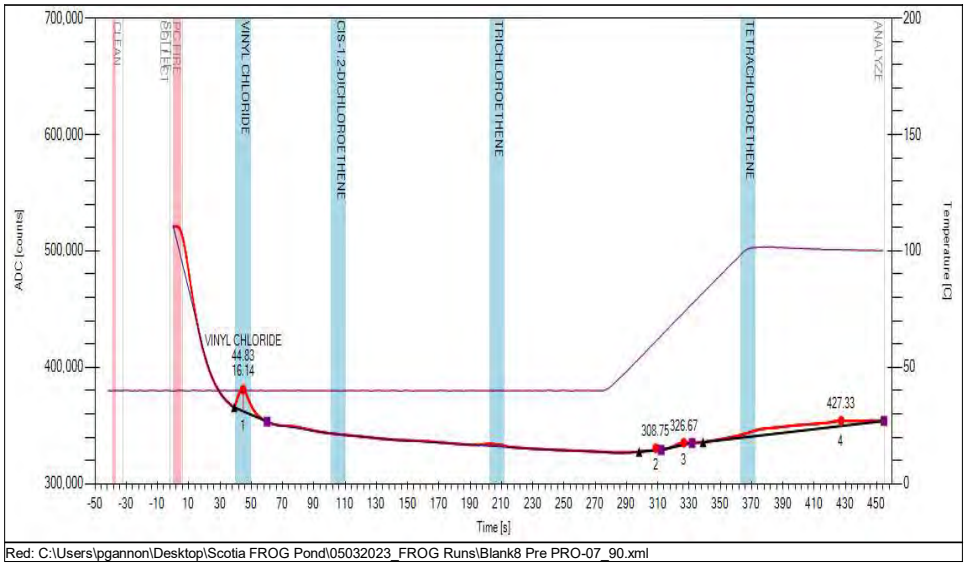
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.83	18624	159607	16.14	16.14
2		308.75	1889	7463		
3		326.67	1802	16113		
4		427.33	4551	386288		



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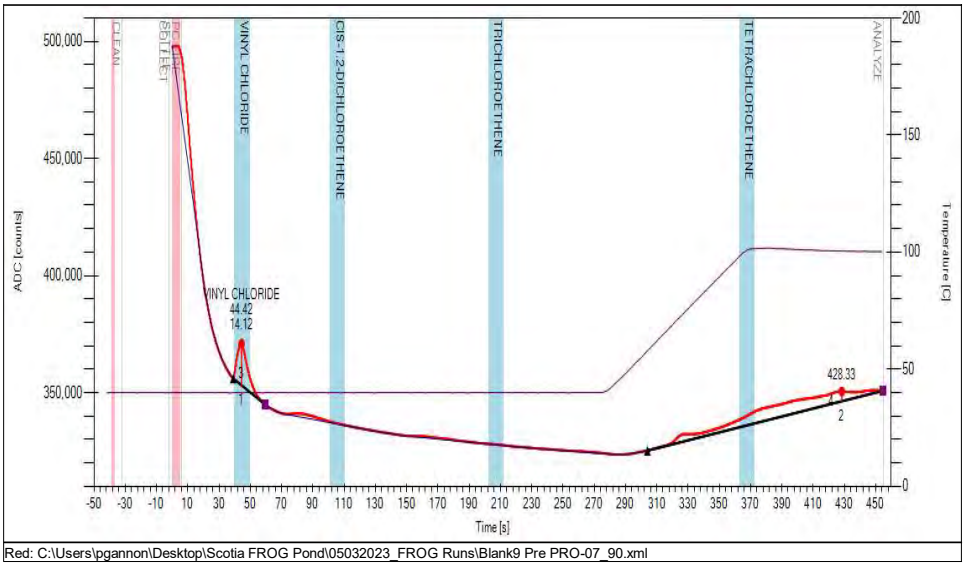
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.42	17753	139550	14.12	14.12
2		428.33	4169	461446		
3	VINYL CHLORIDE	44.42	17753	139550	14.12	14.12
4		428.33	4169	461446		



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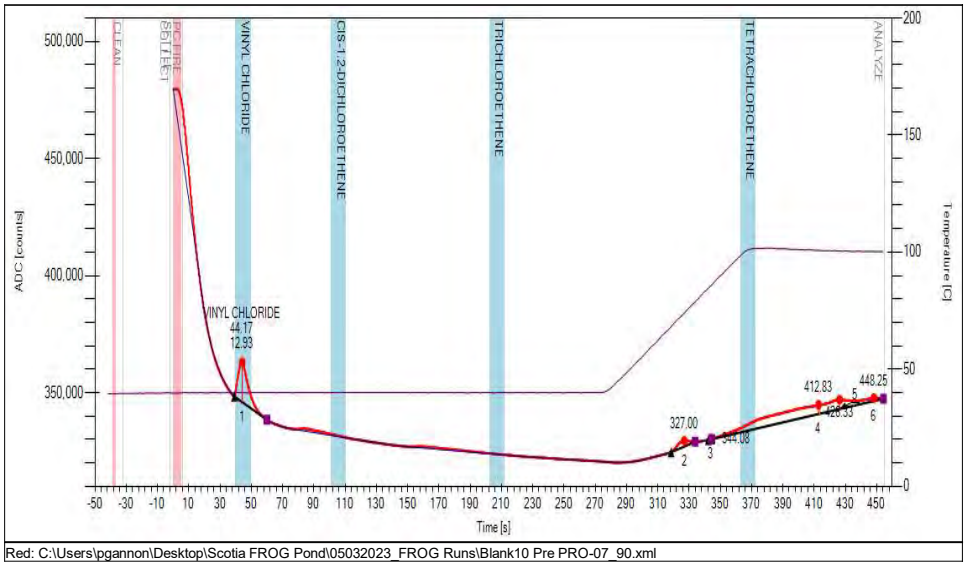
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.17	16985	127846	12.93	12.93
2		327	2470	21266		
3		344.08	314	230		
4		412.83	3939	199830		
5		426.33	4011	76214		
6		448.25	1241	23885		



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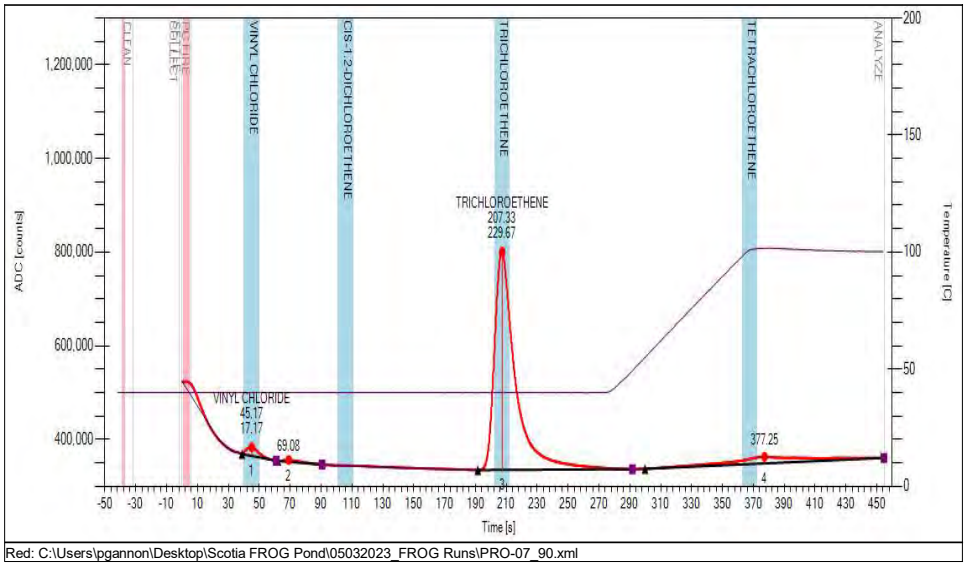
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	18356	169799	17.17	17.17
2		69.08	3642	49366		
3	TRICHLOROETHENE	207.33	466068	7281970	229.67	229.67
4		377.25	14053	814583		



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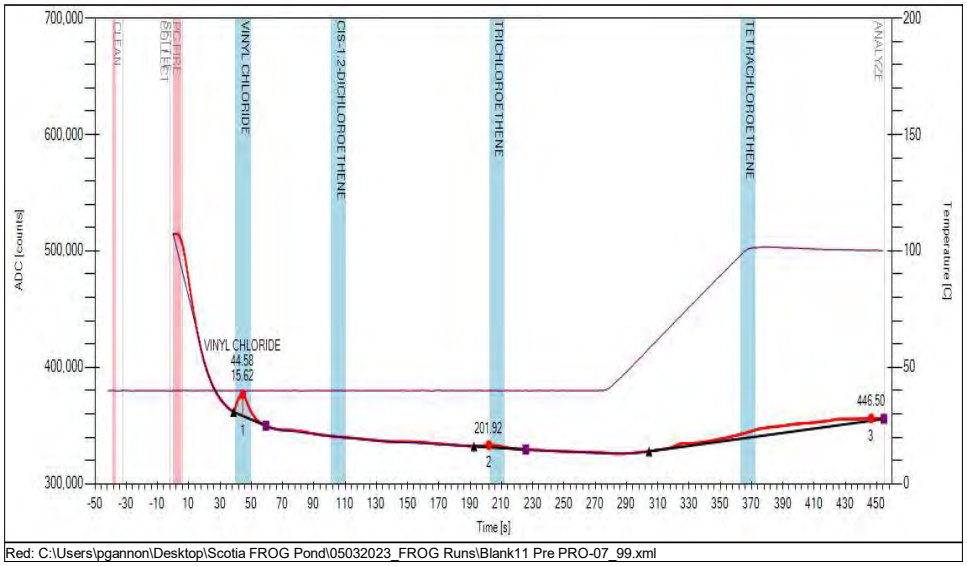
Pump=15%,58%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.58	18259	154419	15.62	15.62
2		201.92	1814	27897		
3		446.5	2093	526516		



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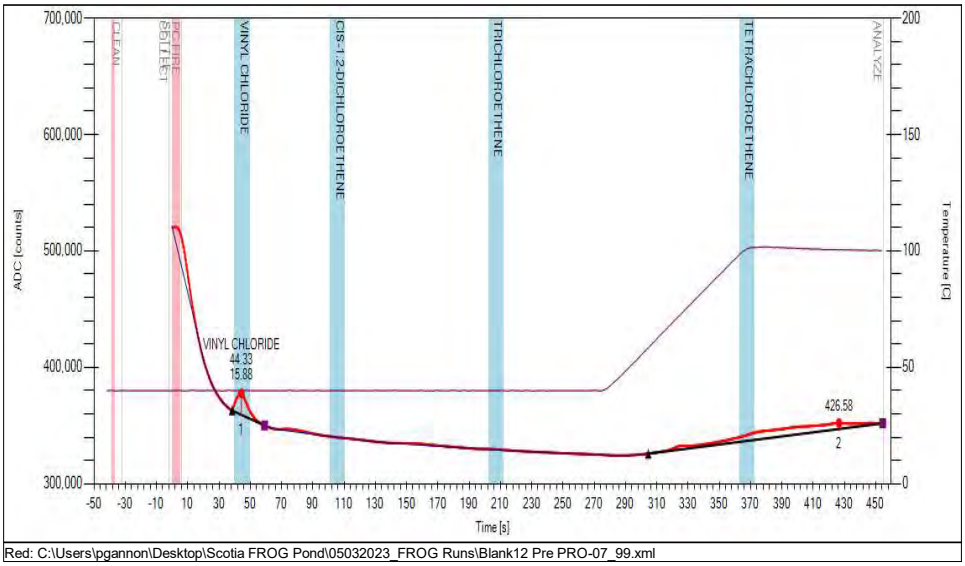
Pump=15%,58%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.33	18409	156982	15.88	15.88
2		426.58	5020	538113		



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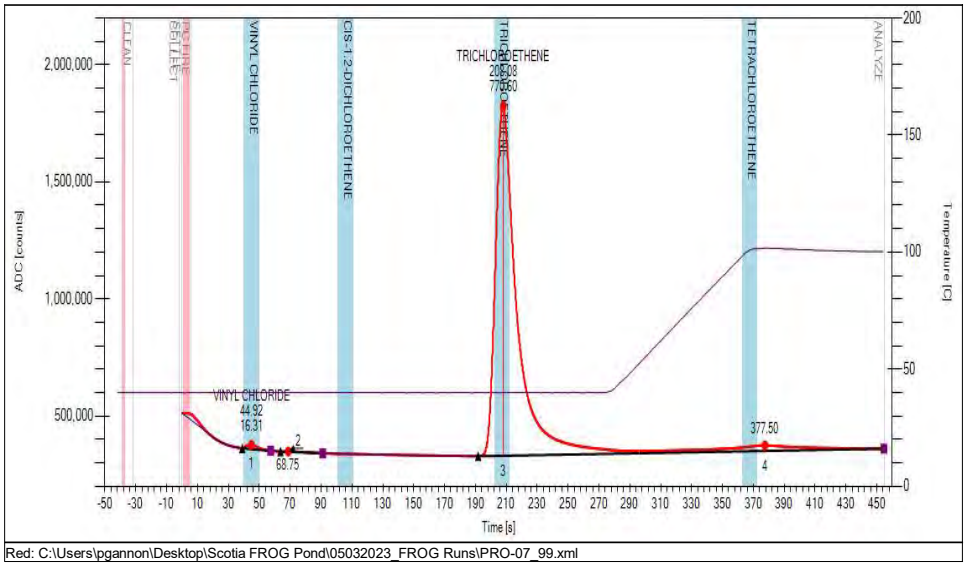
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.92	18504	161274	16.31	16.31
2		68.75	1624	30050		
3	TRICHLOROETHENE	208.08	1495103	24433354	770.60	770.6
4		377.5	23647	1711287		



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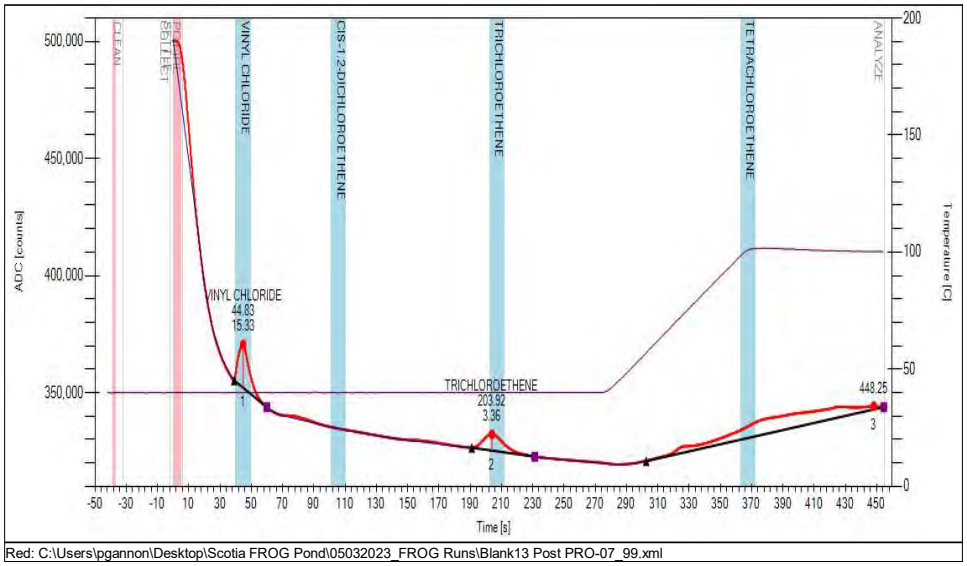
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.83	18389	151599	15.33	15.33
2	TRICHLOROETHENE	203.92	6945	106446	3.36	3.36
3		448.25	1389	508537		



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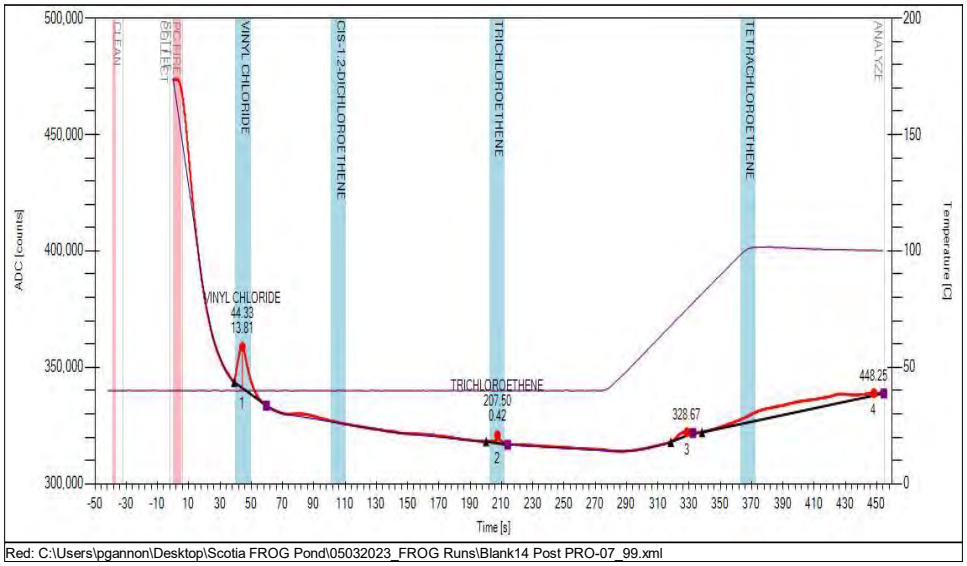
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.33	17613	136559	13.81	13.81
2	TRICHLOROETHENE	207.5	3485	13248	0.42	0.42
3		328.67	1378	14495		
4		448.25	1058	307701		



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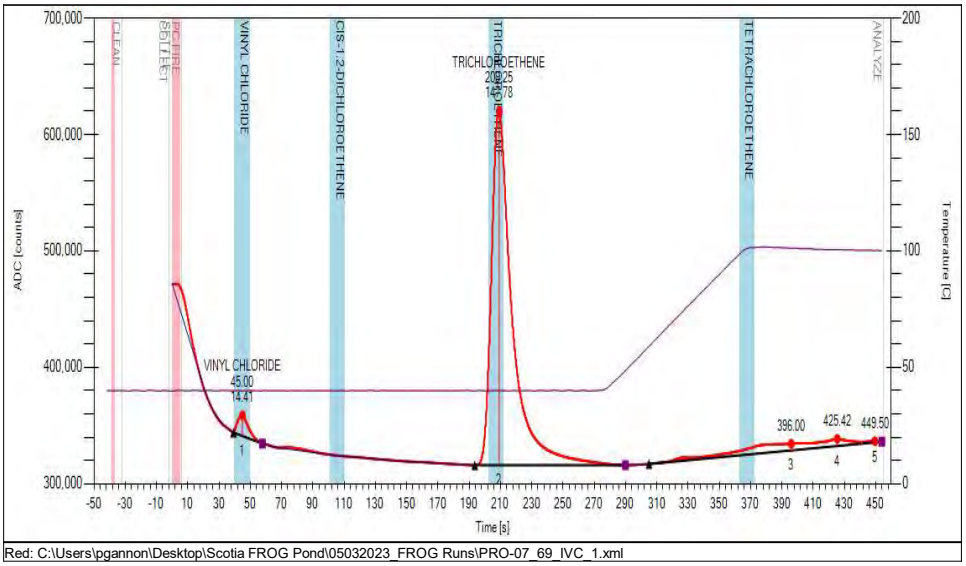
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	17646	142489	14.41	14.41
2	TRICHLOROETHENE	209.25	304140	4685606	147.78	147.78
3		396	5757	299273		
4		425.42	6149	202491		
5		449.5	1030	12905		



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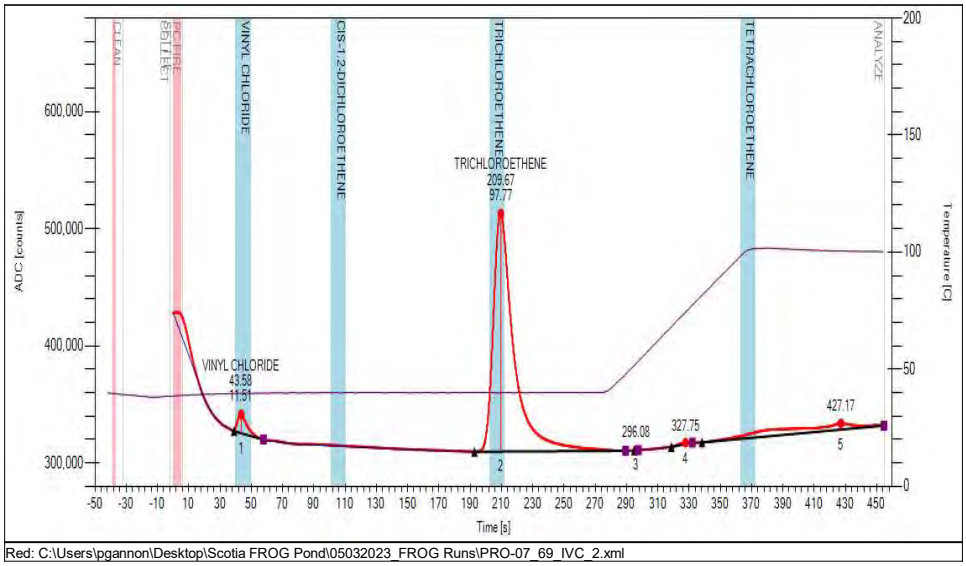
Pump=15%,57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.58	16031	113785	11.51	11.51
2	TRICHLOROETHENE	209.67	203190	3100140	97.77	97.77
3		296.08	372	490		
4		327.75	1214	8910		
5		427.17	5373	351814		



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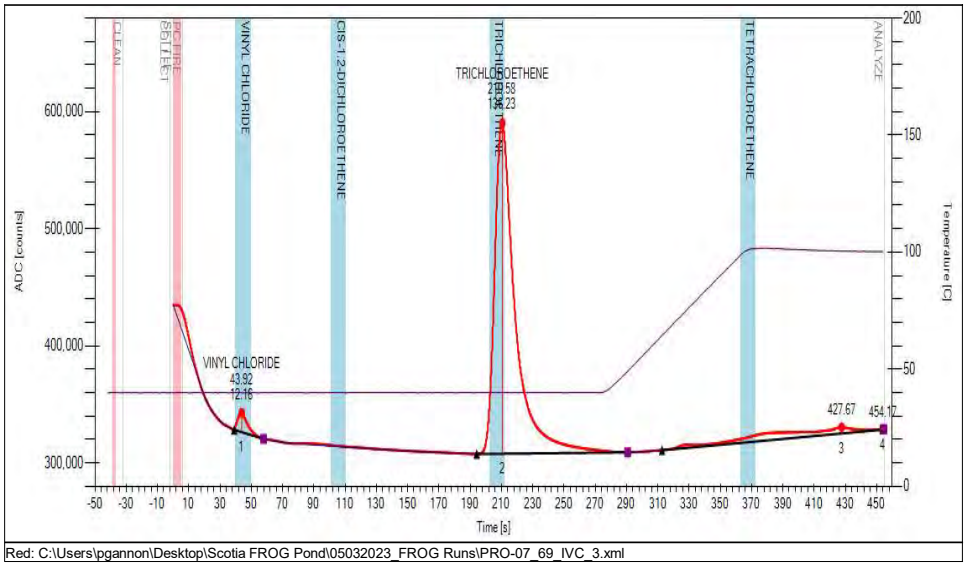
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.92	16487	120243	12.16	12.16
2	TRICHLOROETHENE	210.58	282465	4319370	136.23	136.23
3		427.67	5322	435743		
4		454.17	481	143		



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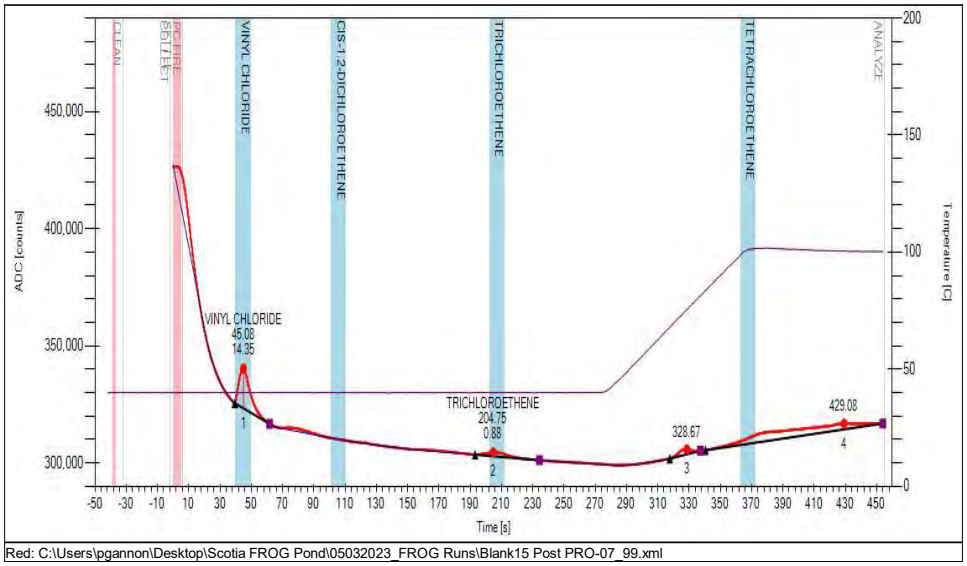
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.08	17064	141870	14.35	14.35
2	TRICHLOROETHENE	204.75	1674	27790	0.88	0.88
3		328.67	2045	21314		
4		429.08	2492	232129		



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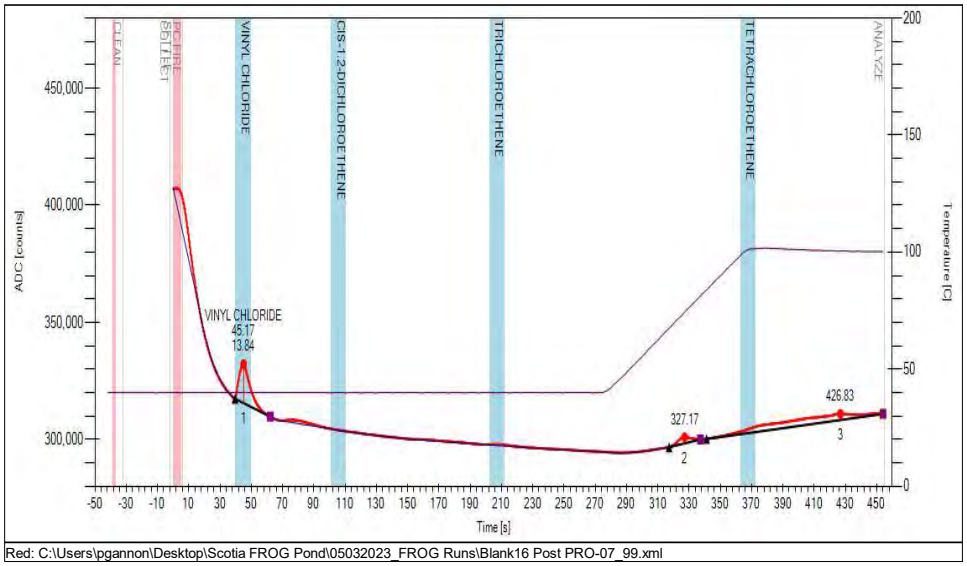
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	16619	136827	13.84	13.84
2		327.17	2660	25082		
3		426.83	2679	194231		



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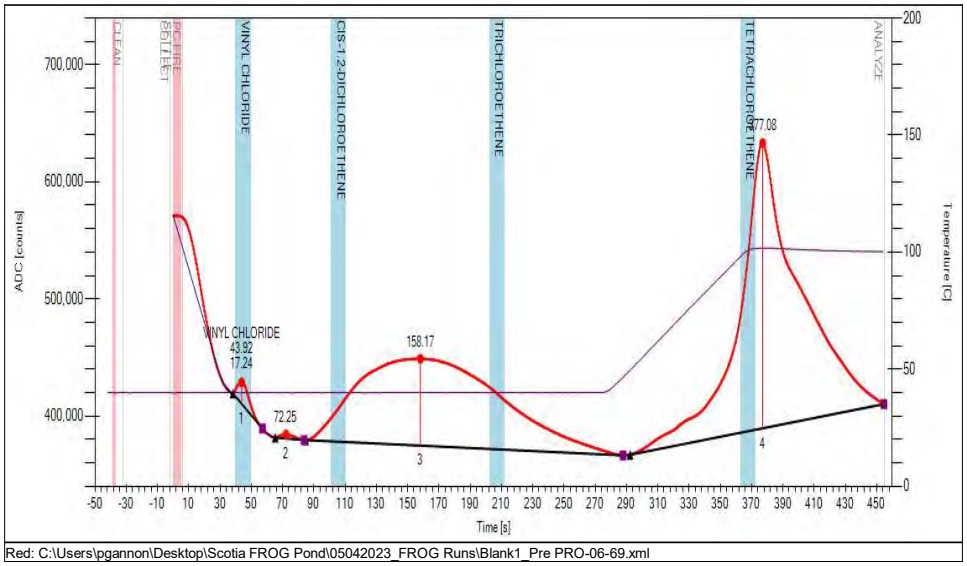
Pump=15%,53%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.92	18294	170435	17.24	17.24
2		72.25	3418	33718		
3		158.17	74171	8045134		
4		377.08	243635	10817050		



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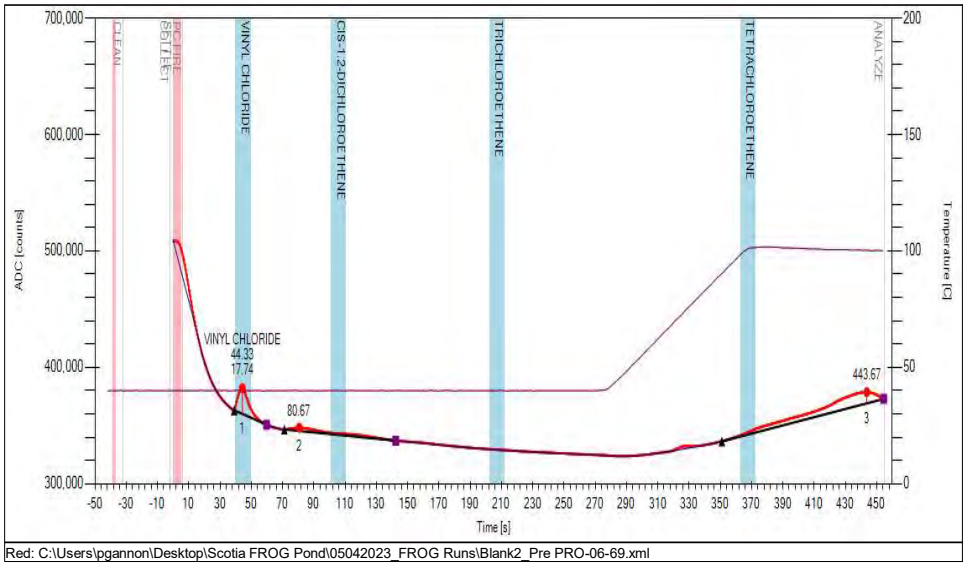
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.33	22197	175381	17.74	17.74
2		80.67	2725	97628		
3		443.67	9639	502169		



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2023-05-04 07:46:55Z
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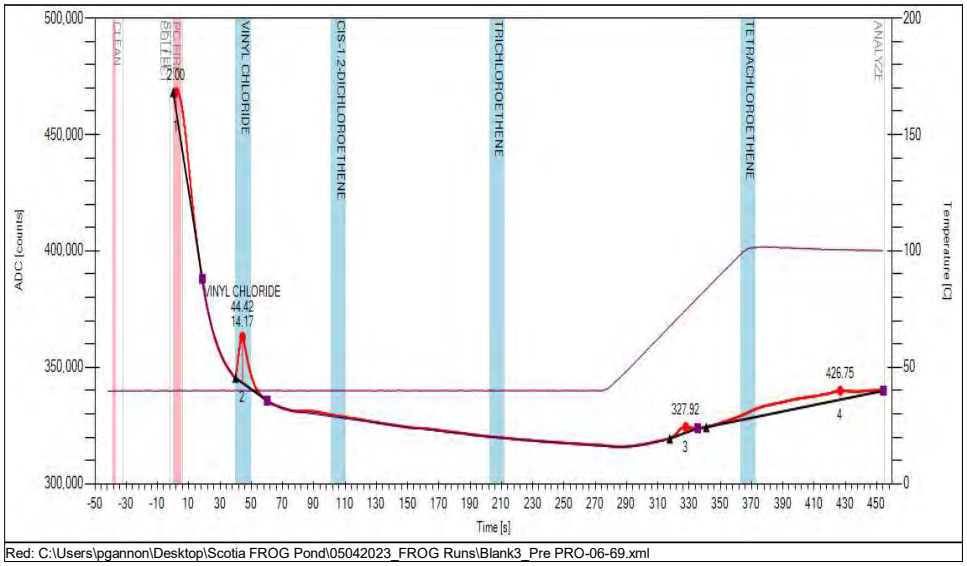
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	8359	173201		
2	VINYL CHLORIDE	44.42	19778	140135	14.17	14.17
3		327.92	2496	23110		
4		426.75	3880	299998		



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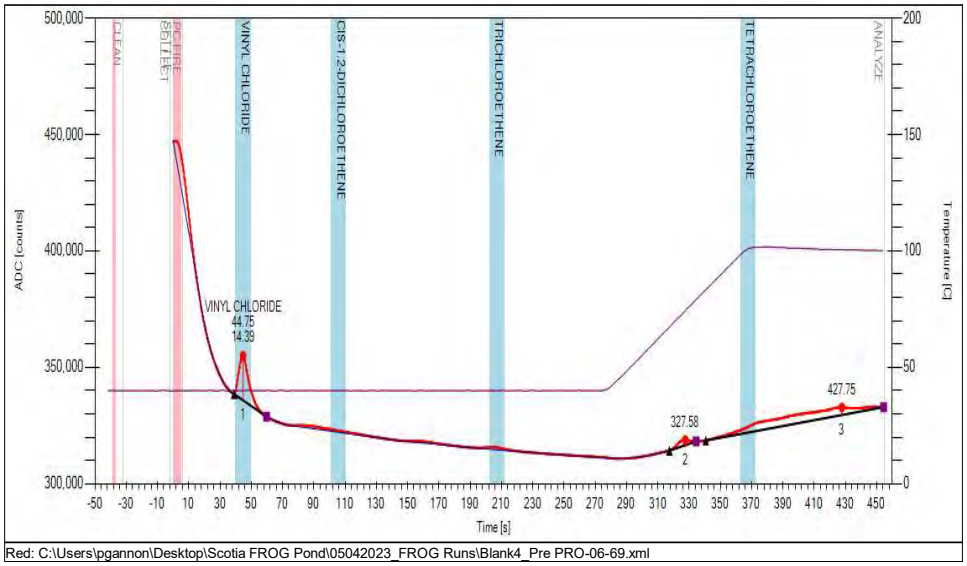
2023-05-04 08:00:32Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	19109	142274	14.39	14.39
2		327.58	2295	20656		
3		427.75	3247	268955		



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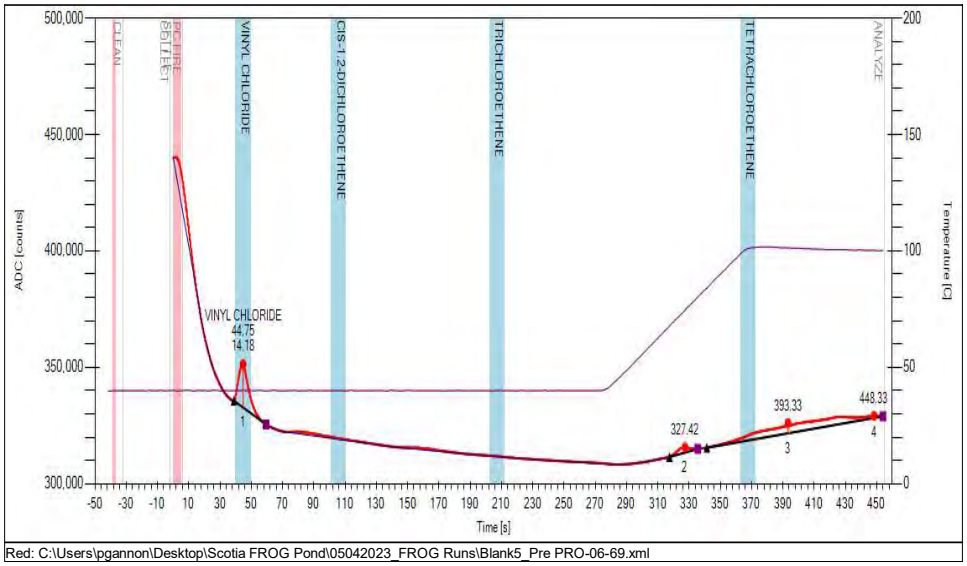
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	18547	140143	14.18	14.18
2		327.42	2214	21375		
3		393.33	4456	95868		
4		448.33	909	144979		



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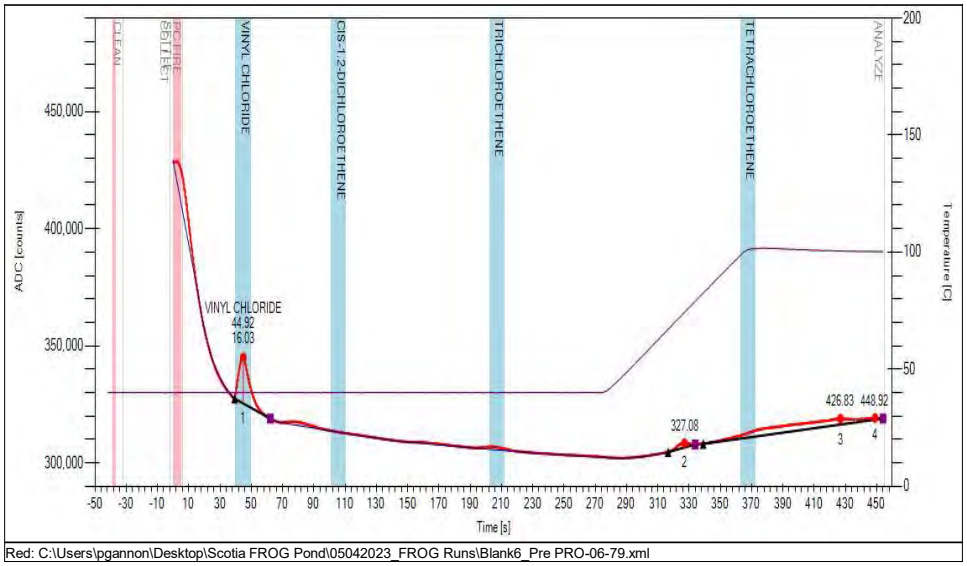
2023-05-04 10:36:51Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.92	19608	158489	16.03	16.03
2		327.08	1814	16423		
3		426.83	2486	192114		
4		448.92	708	13407		



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2023-05-04 11:22:09Z
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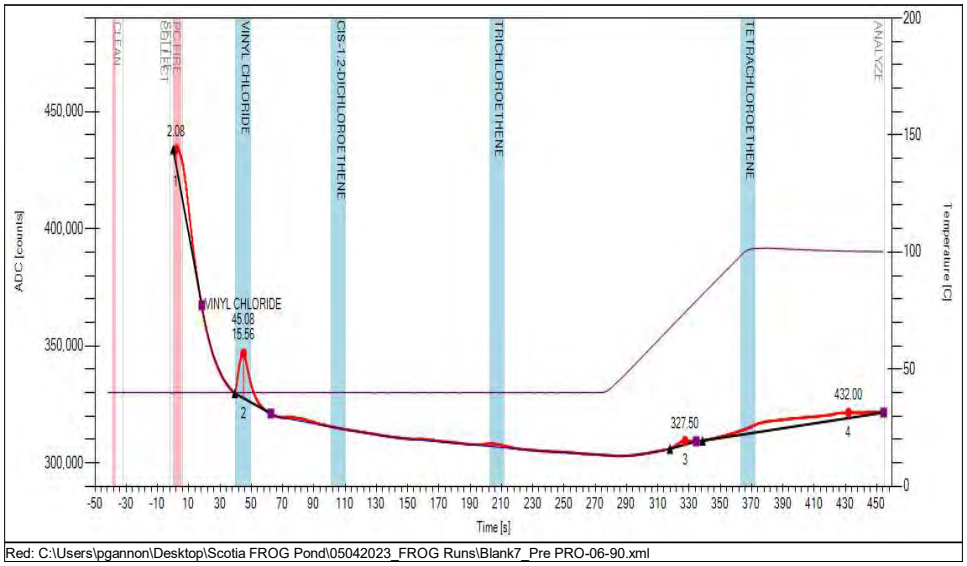
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.08	7369	156399		
2	VINYL CHLORIDE	45.08	19087	153863	15.56	15.56
3		327.5	1576	14119		
4		432	2392	254494		



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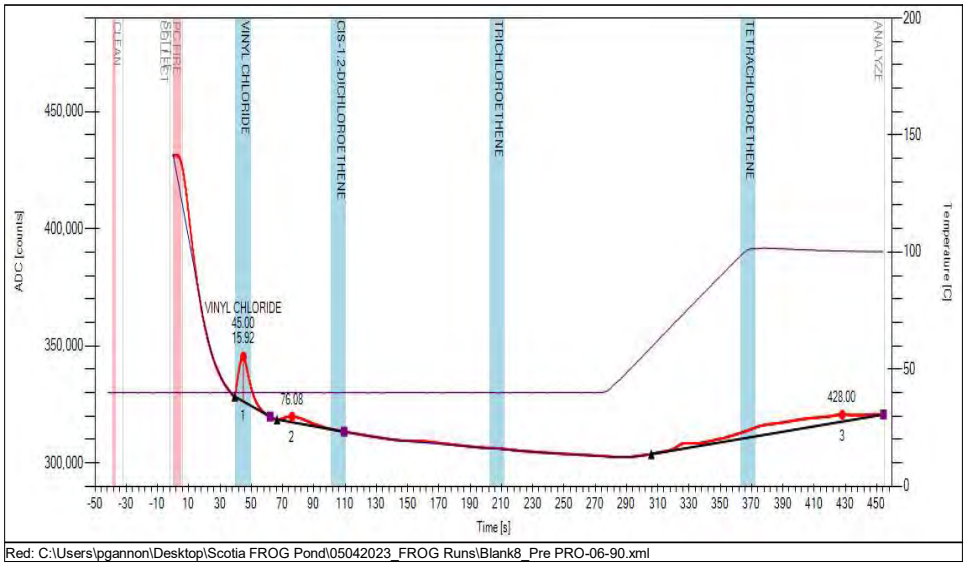
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	19134	157410	15.92	15.92
2		76.08	2475	46304		
3		428	2973	346738		



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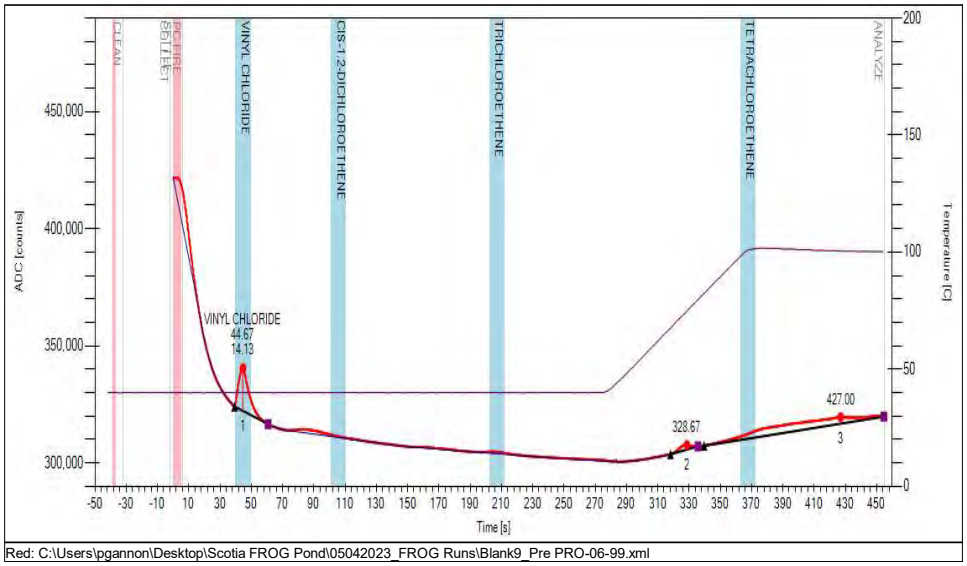
2023-05-04 12:27:10Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	18216	139684	14.13	14.13
2		328.67	1916	17894		
3		427	2861	237760		



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2023-05-04 10:06:04Z
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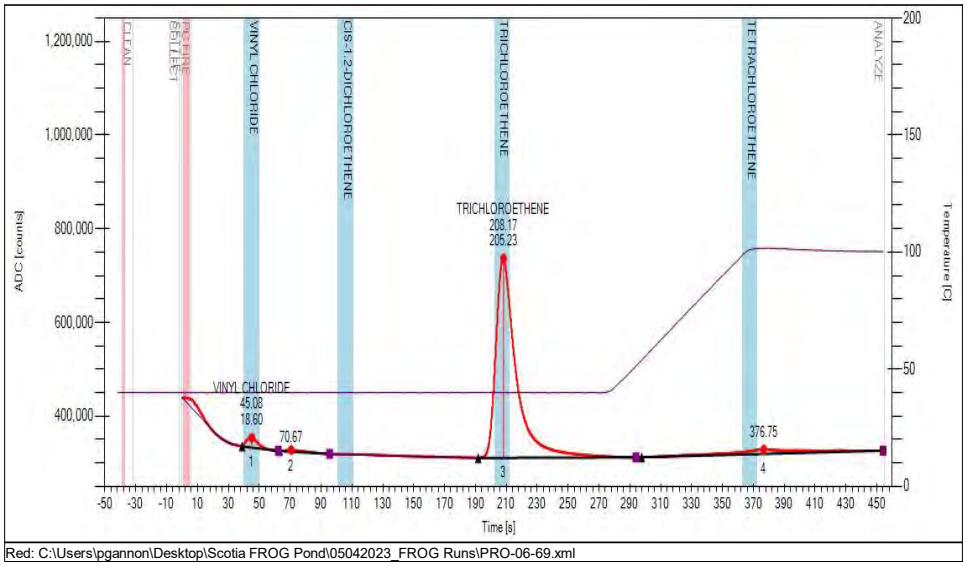
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.08	21019	183868	18.60	18.6
2		70.67	3273	49680		
3	TRICHLOROETHENE	208.17	425041	6507318	205.23	205.23
4		376.75	9480	524073		



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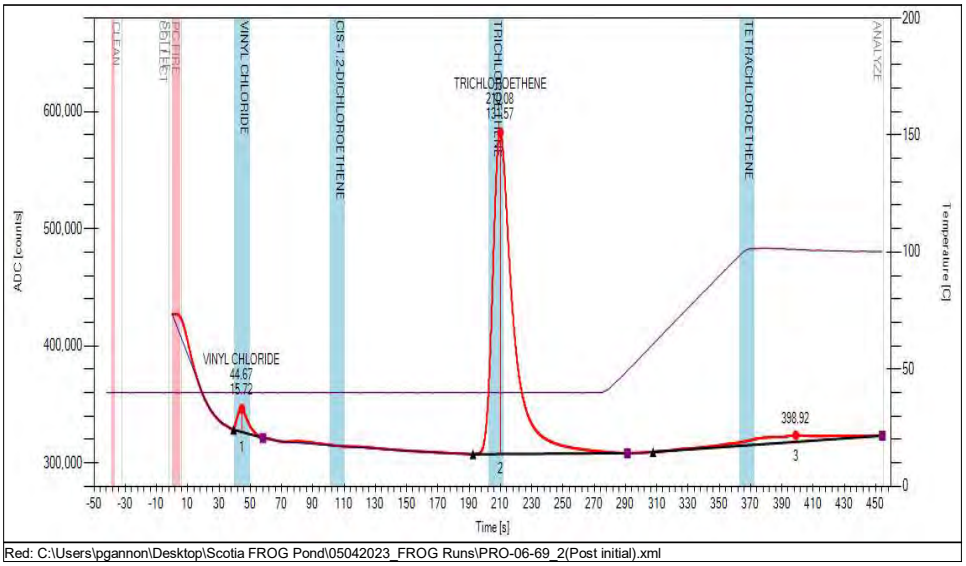
Pump=15%,54%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	19789	155376	15.72	15.72
2	TRICHLOROETHENE	210.08	274526	4171709	131.57	131.57
3		398.92	5548	374817		



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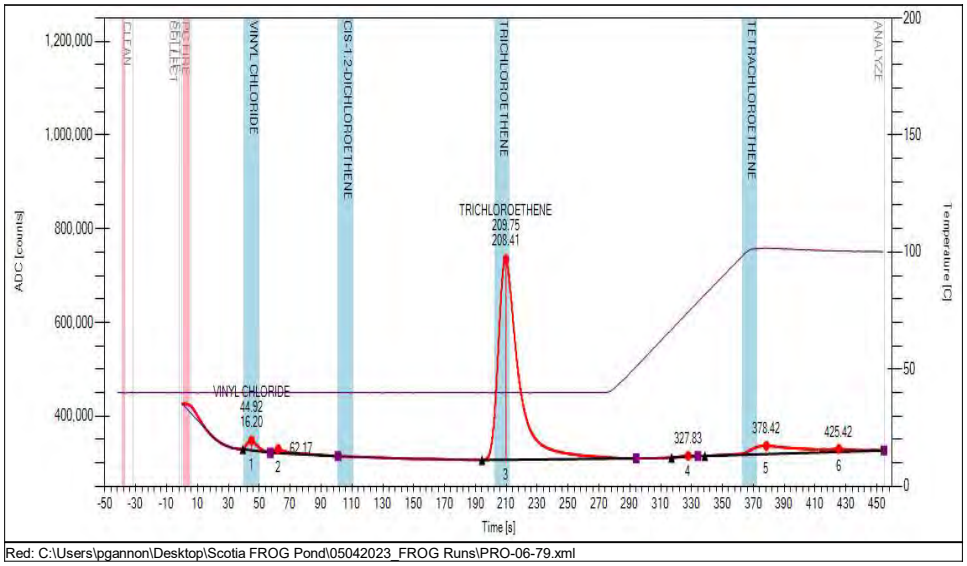
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.92	20758	160192	16.20	16.2
2		62.17	8458	95249		
3	TRICHLOROETHENE	209.75	427709	6607940	208.41	208.41
4		327.83	1684	15747		
5		378.42	17713	593924		
6		425.42	6300	155439		



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2023-05-04 11:03:15Z
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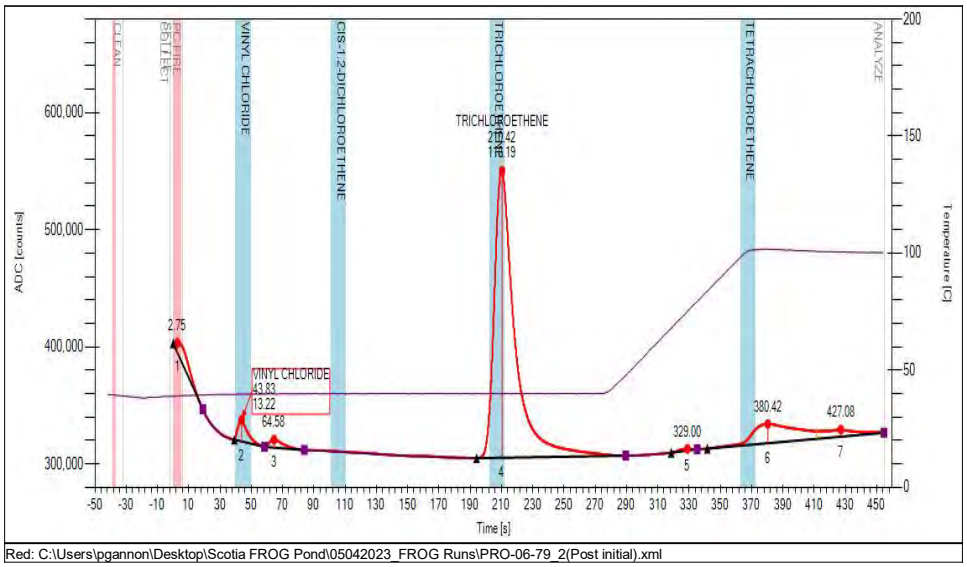
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.75	8298	140235		
2	VINYL CHLORIDE	43.83	18331	130656	13.22	13.22
3		64.58	6829	68463		
4	TRICHLOROETHENE	210.42	245052	3747450	118.19	118.19
5		329	1371	13528		
6		380.42	16389	535094		
7		427.08	6019	163408		



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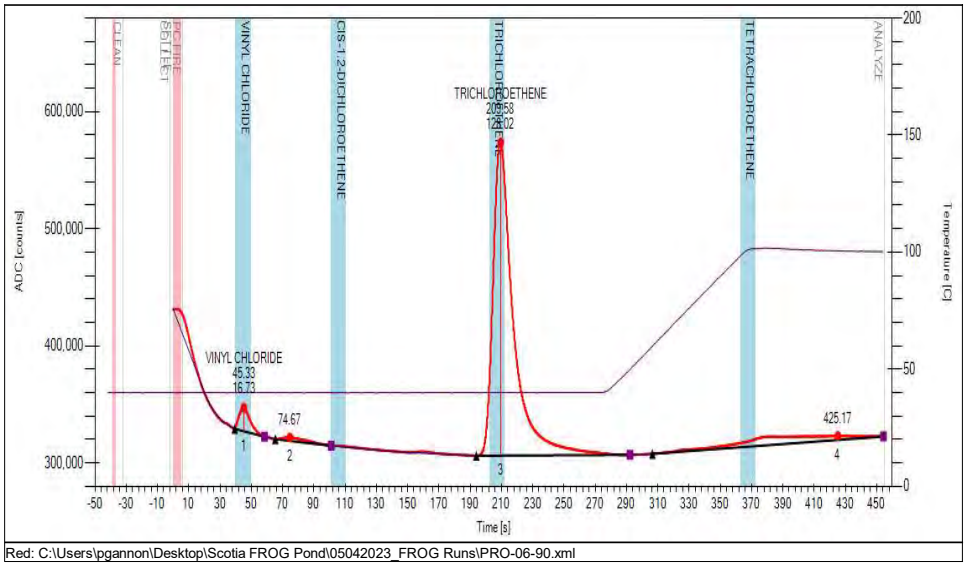
Pump=15%,54%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.33	20117	165426	16.73	16.73
2		74.67	2958	54816		
3	TRICHLOROETHENE	209.58	267311	4059118	128.02	128.02
4		425.17	3435	449152		



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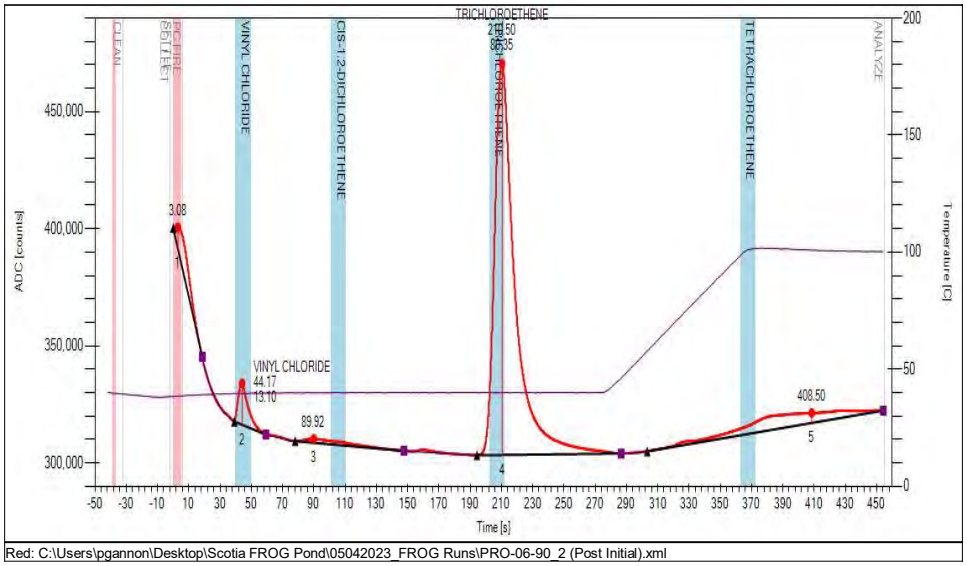
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		3.08	9185	137132		
2	VINYL CHLORIDE	44.17	17682	129475	13.10	13.1
3		89.92	1670	56325		
4	TRICHLOROETHENE	210.5	167073	2547645	80.35	80.35
5		408.5	4245	388423		



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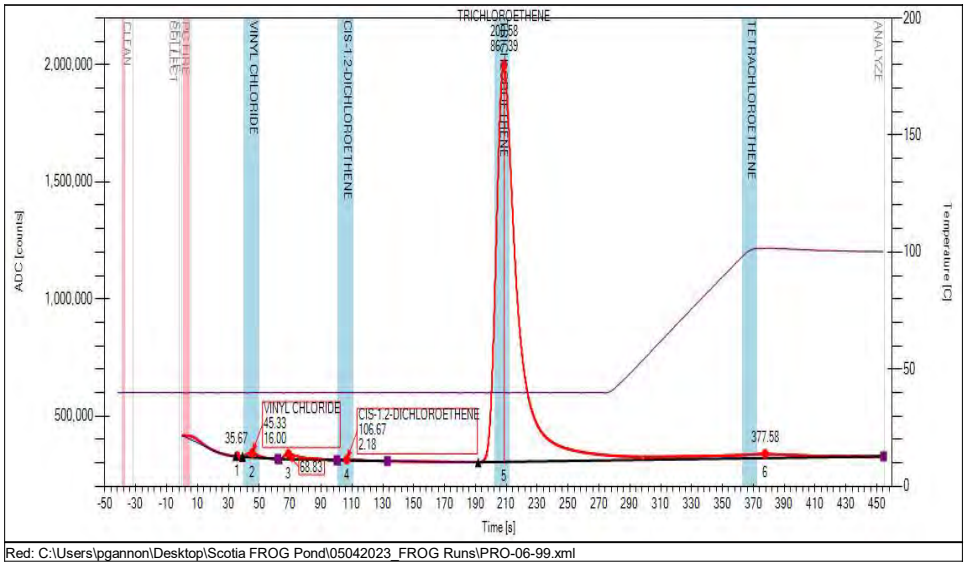
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		35.67	1038	3014		
2	VINYL CHLORIDE	45.33	18905	158189	16.00	16
3		68.83	23160	291900		
4	CIS-1.2-DICHLOROETHENE	106.67	2948	31391	2.18	2.18
5	TRICHLOROETHENE	208.58	1694123	27502143	867.39	867.39
6		377.58	17855	1566059		



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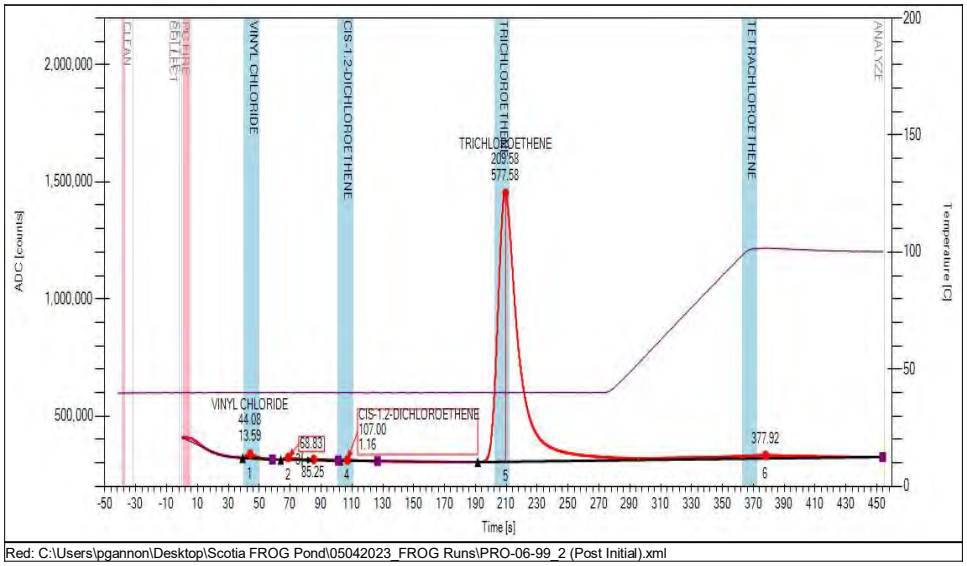
Pump=15%, 55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.08	18089	134336	13.59	13.59
2		68.83	9838	85954		
3		85.25	2807	27834		
4	CIS-1.2-DICHLOROETHENE	107	1875	16676	1.16	1.16
5	TRICHLOROETHENE	209.58	1145762	18313137	577.58	577.58
6		377.92	14119	1162762		



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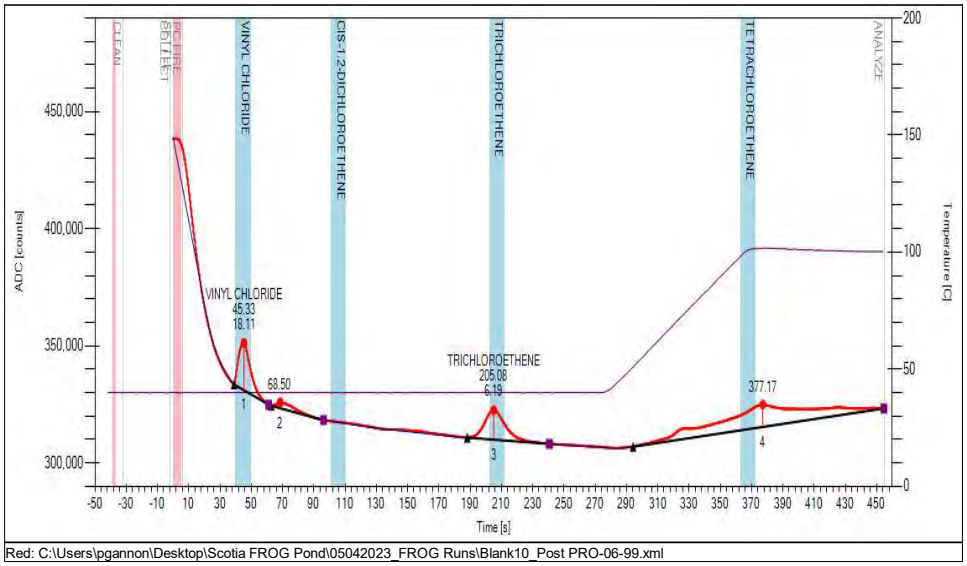
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.33	20185	179080	18.11	18.11
2		68.5	2495	37331		
3	TRICHLOROETHENE	205.08	12600	196341	6.19	6.19
4		377.17	9510	640692		



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2023-05-04 15:19:02Z
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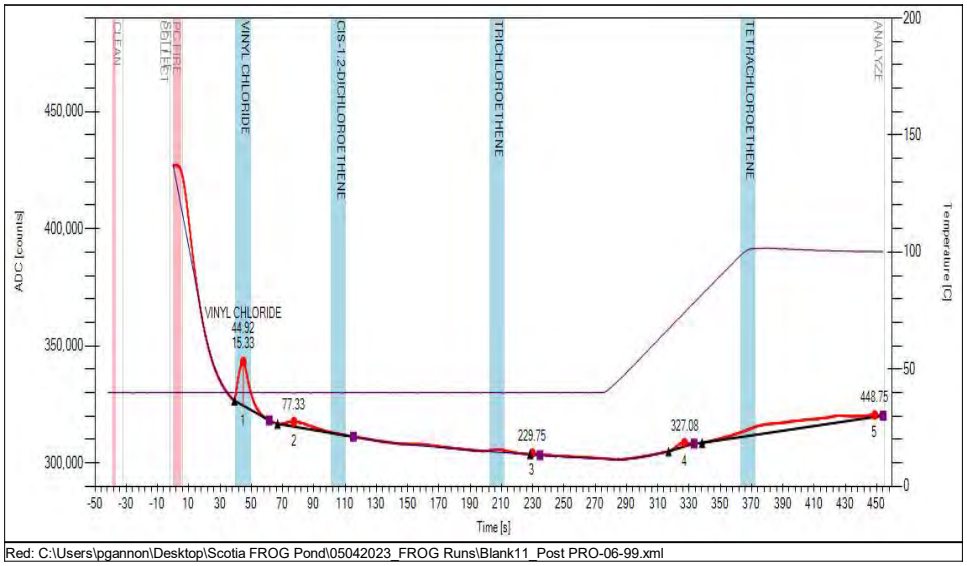
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.92	18755	151546	15.33	15.33
2		77.33	2137	44068		
3		229.75	599	1923		
4		327.08	1605	14083		
5		448.75	847	257360		



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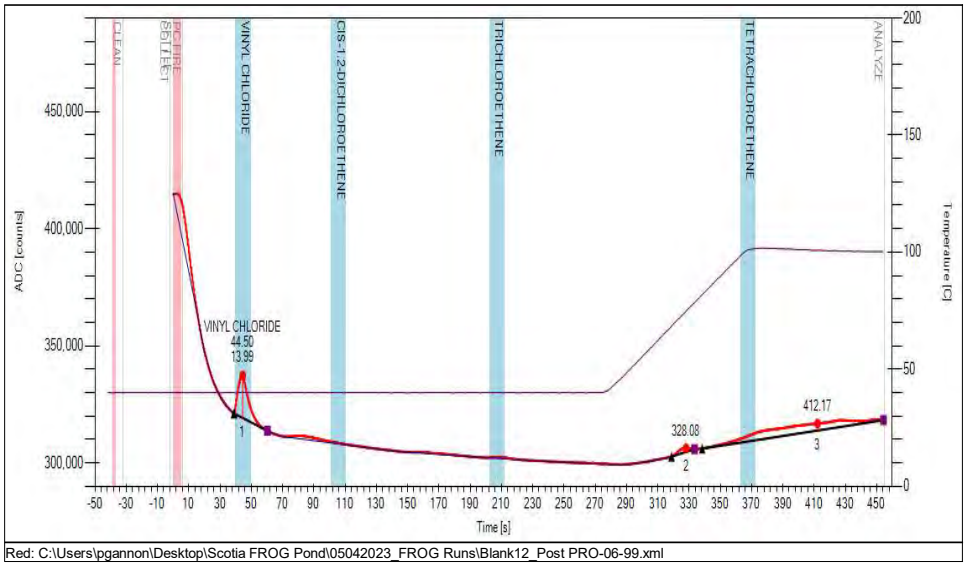
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.5	18069	138340	13.99	13.99
2		328.08	1554	13967		
3		412.17	2967	243732		



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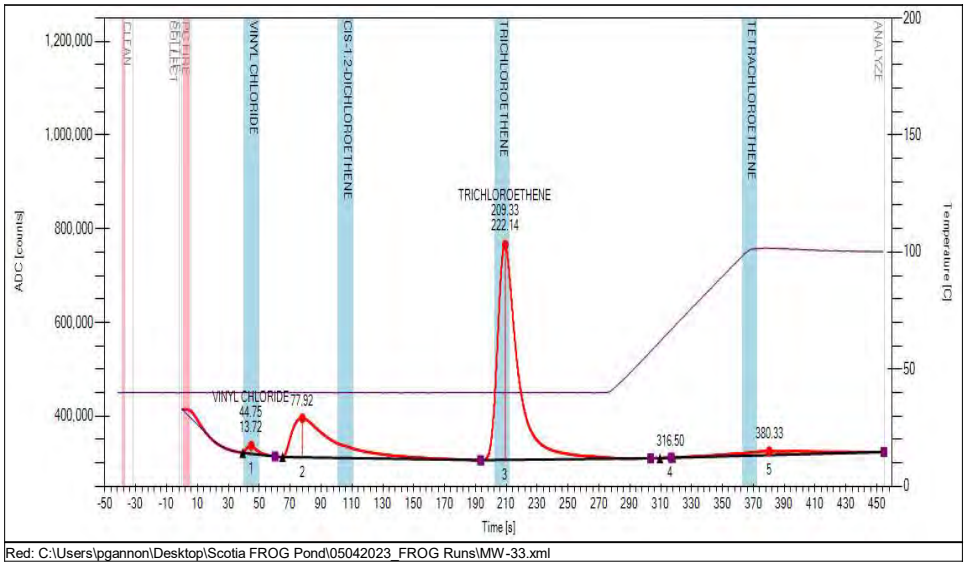
Pump=15%, 55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	17674	135656	13.72	13.72
2		77.92	83624	2633360		
3	TRICHLOROETHENE	209.33	459409	7043460	222.14	222.14
4		316.5	166	1306		
5		380.33	8468	548301		



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2023-05-04 16:09:39Z
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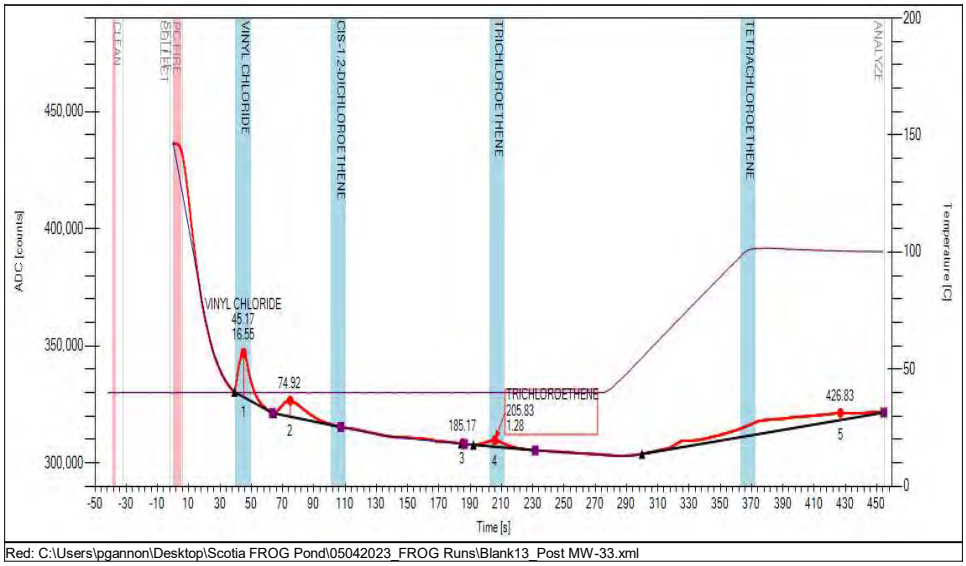
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	18819	163622	16.55	16.55
2		74.92	6841	121175		
3		185.17	395	307		
4	TRICHLOROETHENE	205.83	2715	40565	1.28	1.28
5		426.83	3049	425375		



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2023-05-04 16:27:49Z
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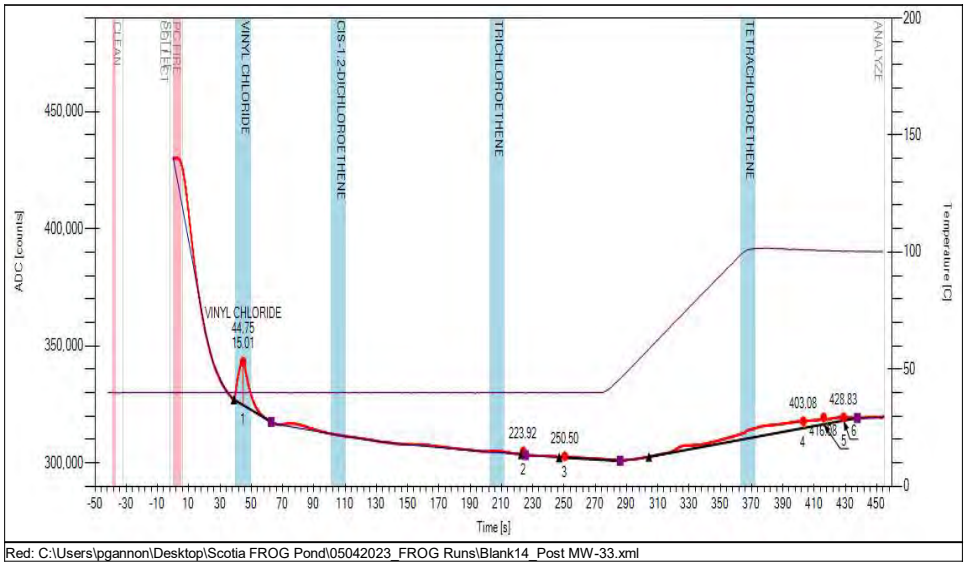
Pump=15%,56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	18431	148349	15.01	15.01
2		223.92	1430	1733		
3		250.5	567	12422		
4		403.08	2920	208770		
5		416.08	2990	35159		
6		428.83	1396	23469		



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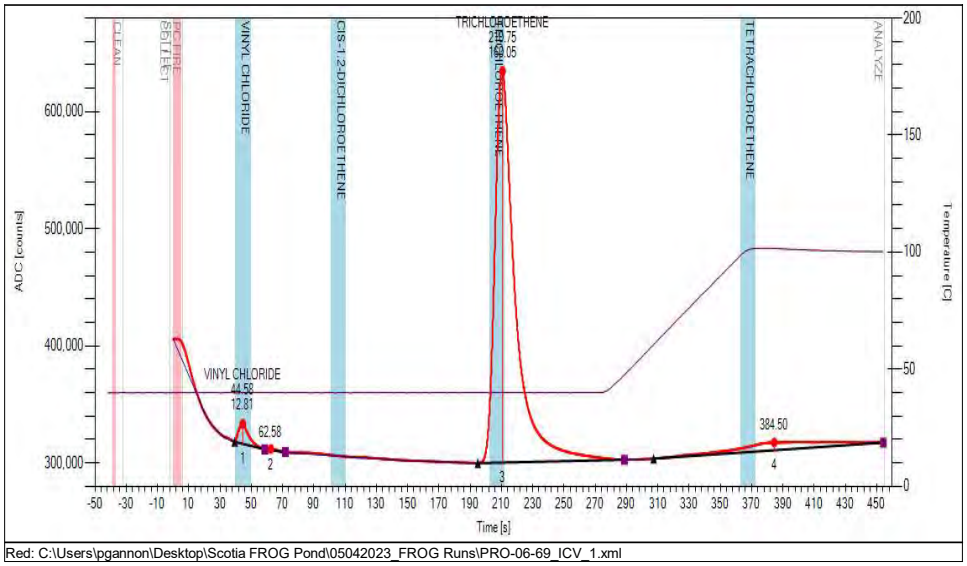
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.58	17188	126695	12.81	12.81
2		62.58	999	7226		
3	TRICHLOROETHENE	210.75	334356	5074830	160.05	160.05
4		384.5	6634	438536		



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2023-05-04 16:50:53Z
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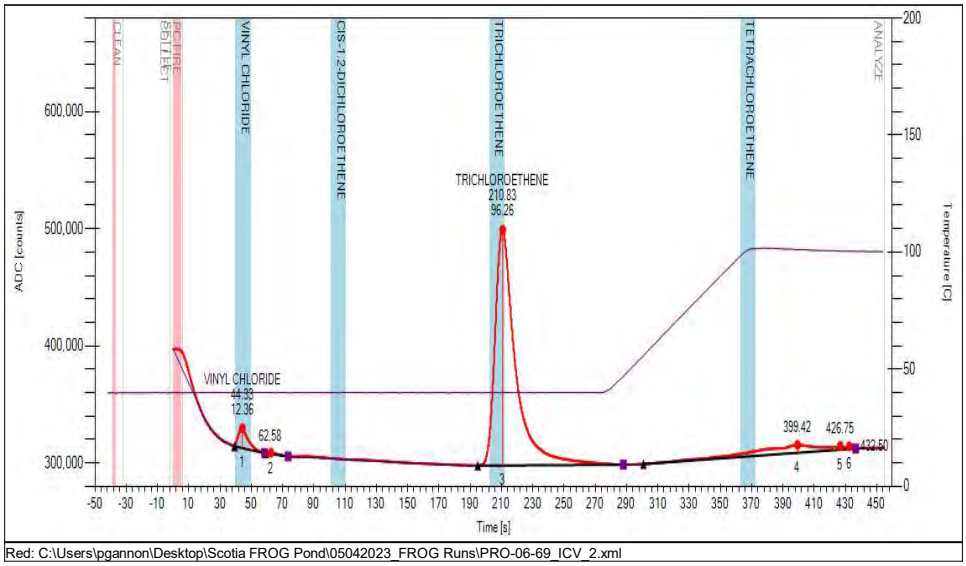
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.33	16910	122221	12.36	12.36
2		62.58	1047	7261		
3	TRICHLOROETHENE	210.83	201266	3052091	96.26	96.26
4		399.42	6749	318793		
5		426.75	3115	12841		
6		432.5	2211	10987		



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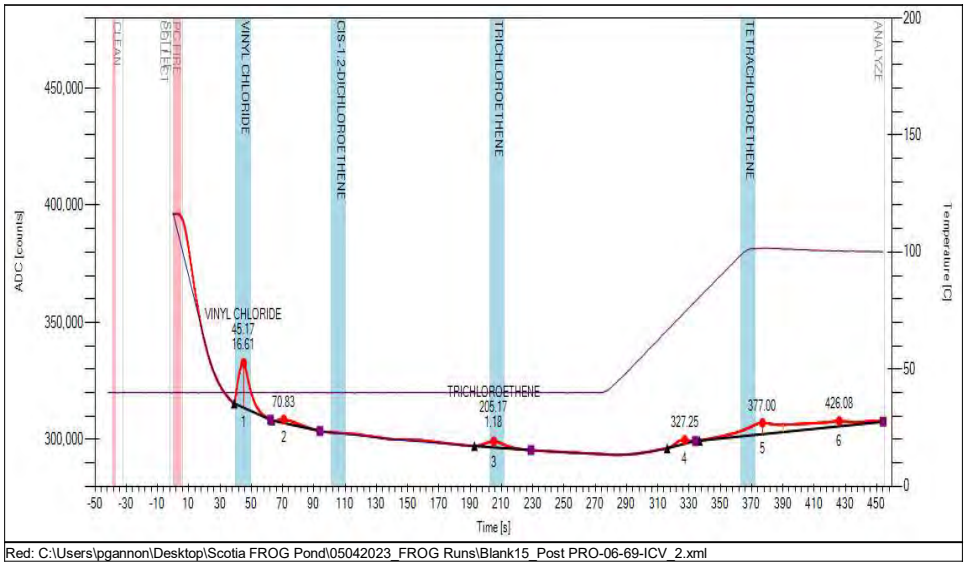
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	19042	164207	16.61	16.61
2		70.83	1526	23627		
3	TRICHLOROETHENE	205.17	2581	37471	1.18	1.18
4		327.25	1610	16340		
5		377	4847	125557		
6		426.08	2252	120649		



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2023-05-04 18:27:36Z
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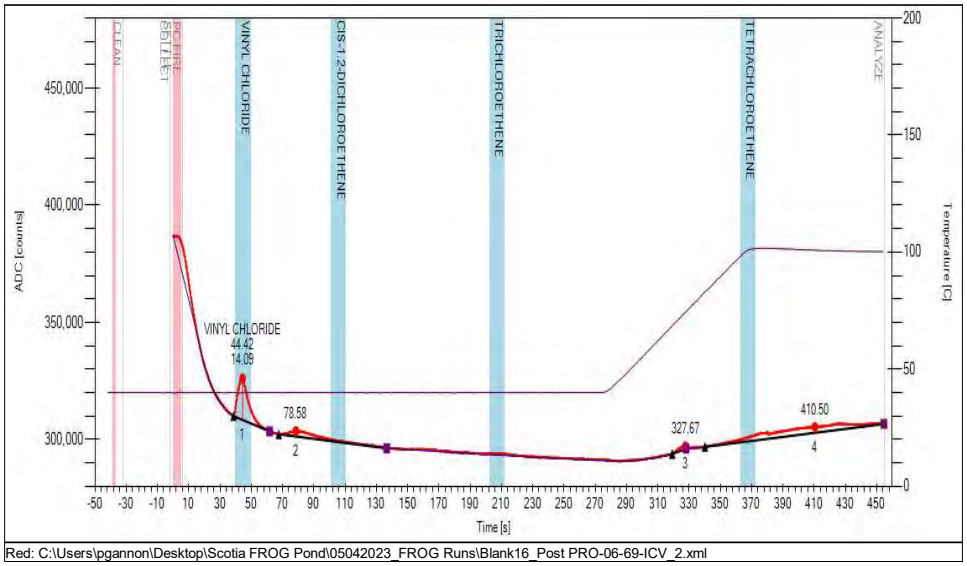
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.42	17694	139275	14.09	14.09
2		78.58	2345	60249		
3		327.67	1180	7094		
4		410.5	2459	190665		



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2023-05-05 07:06:05Z
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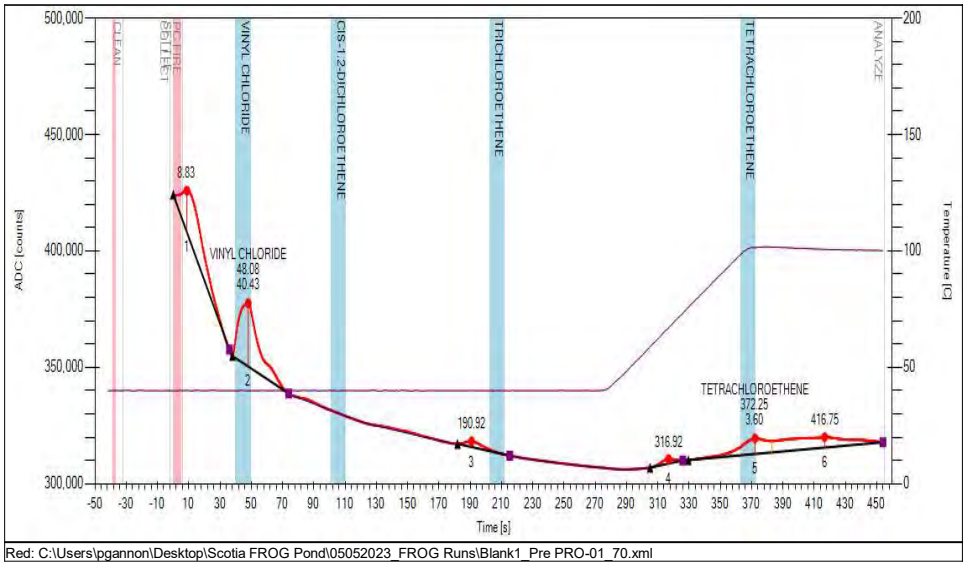
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		8.83	17868	341557		
2	VINYL CHLORIDE	48.08	27173	399707	40.43	40.43
3		190.92	2453	33844		
4		316.92	1978	18580		
5	TETRACHLOROETHENE	372.25	6666	142120	3.60	3.6
6		416.75	4478	244019		



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2023-05-05 07:23:08Z
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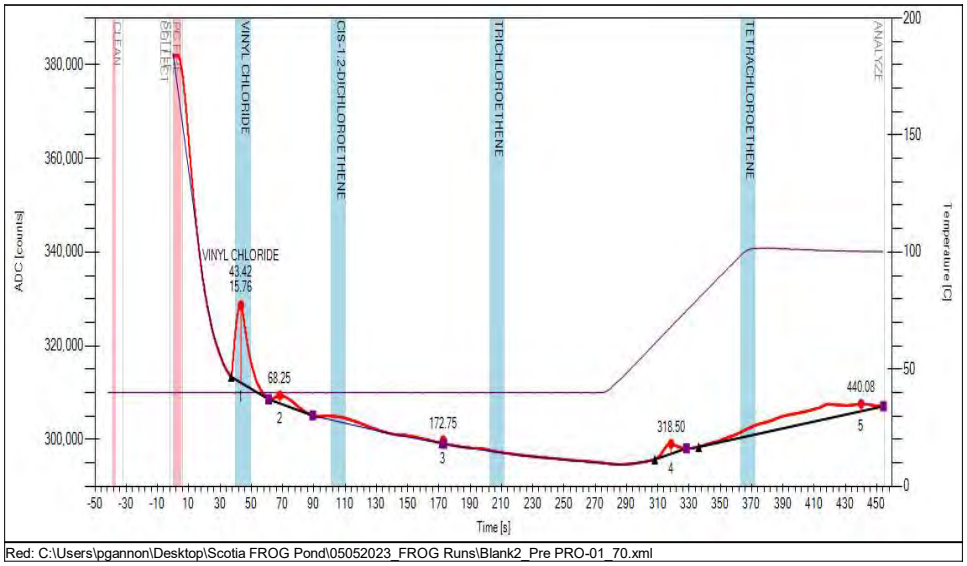
Pump=15%,55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.42	16570	155765	15.76	15.76
2		68.25	1721	26271		
3		172.75	695	376		
4		318.5	2121	21051		
5		440.08	1577	197528		



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2023-05-05 07:39:41Z
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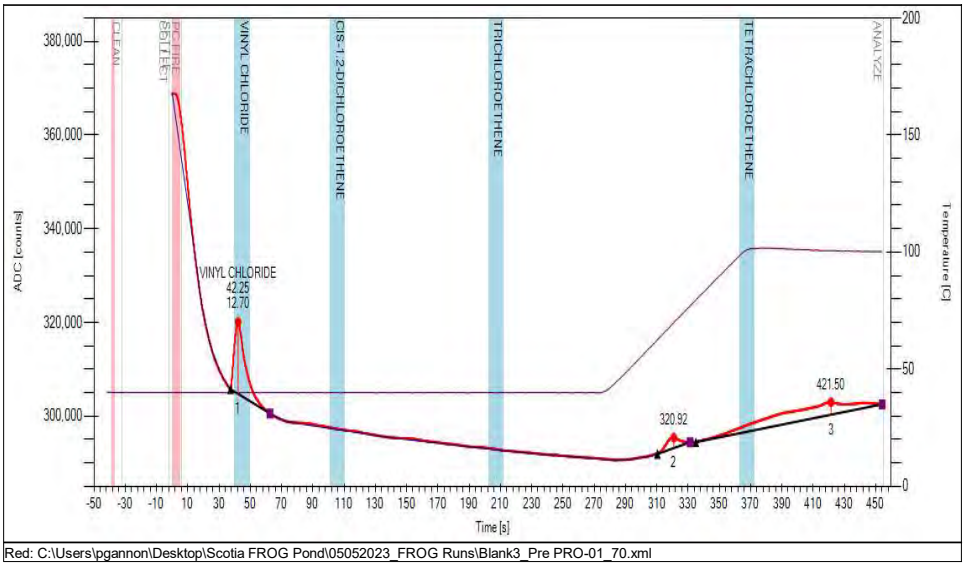
Pump=15%,55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.25	15297	125520	12.70	12.7
2		320.92	2241	22569		
3		421.5	2640	175145		



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2023-05-05 07:49:58Z
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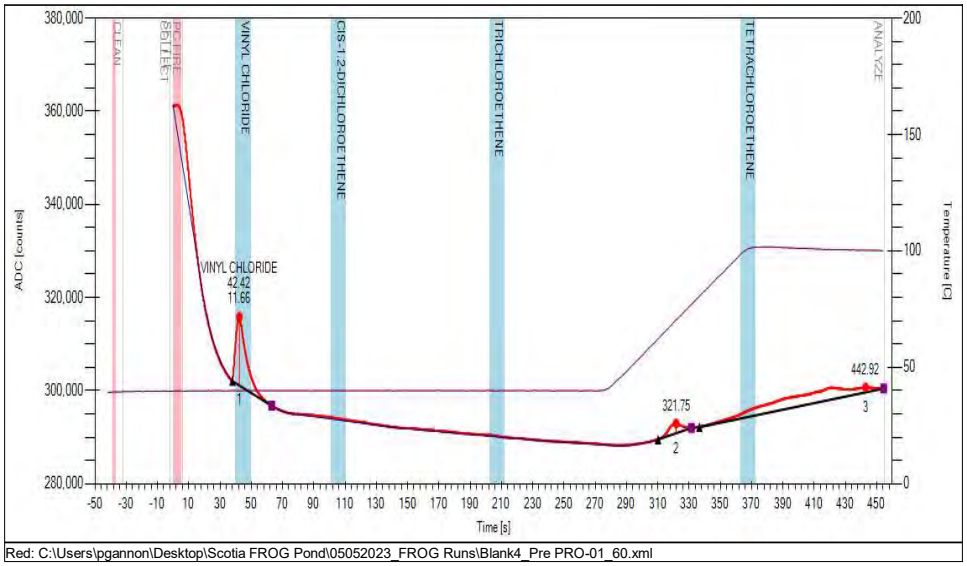
Pump=15%,55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.42	14716	115258	11.66	11.66
2		321.75	2093	20428		
3		442.92	1100	163779		



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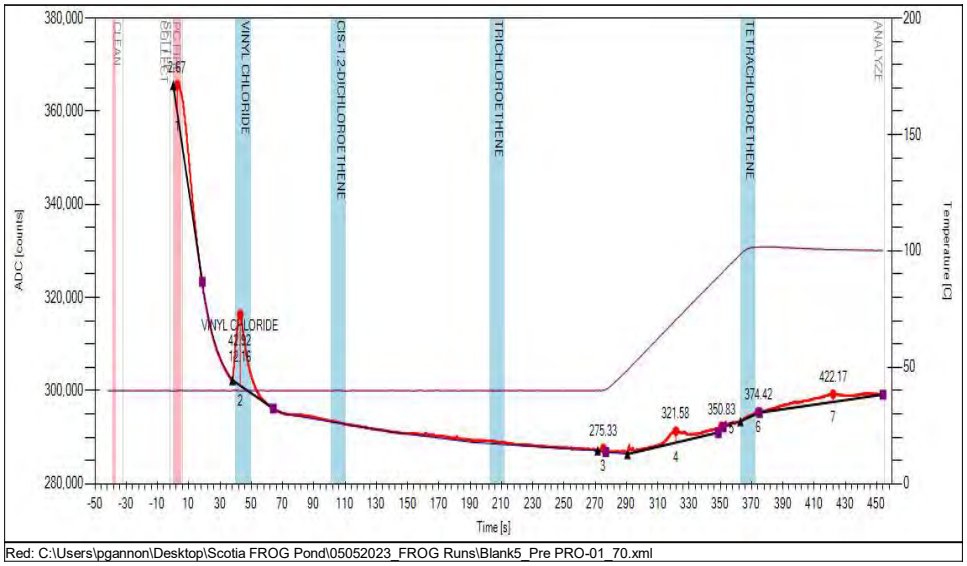
2023-05-05 08:02:05Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.67	5923	99870		
2	VINYL CHLORIDE	42.92	15227	120253	12.16	12.16
3		275.33	668	1630		
4		321.58	2456	53245		
5		350.83	566	1609		
6		374.42	192	2011		
7		422.17	1669	69144		



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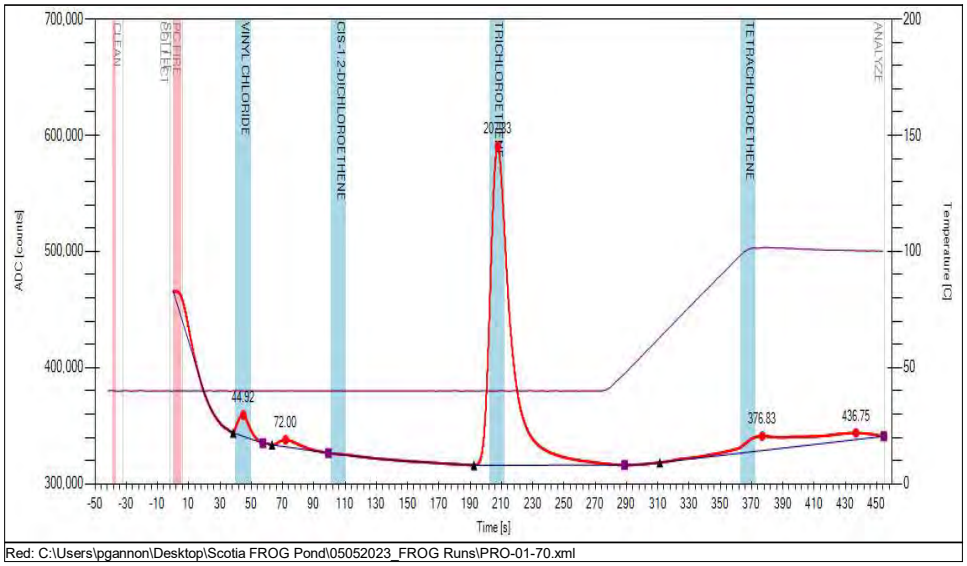
Pump=15%, 51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.



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2023-05-05 15:43:08Z
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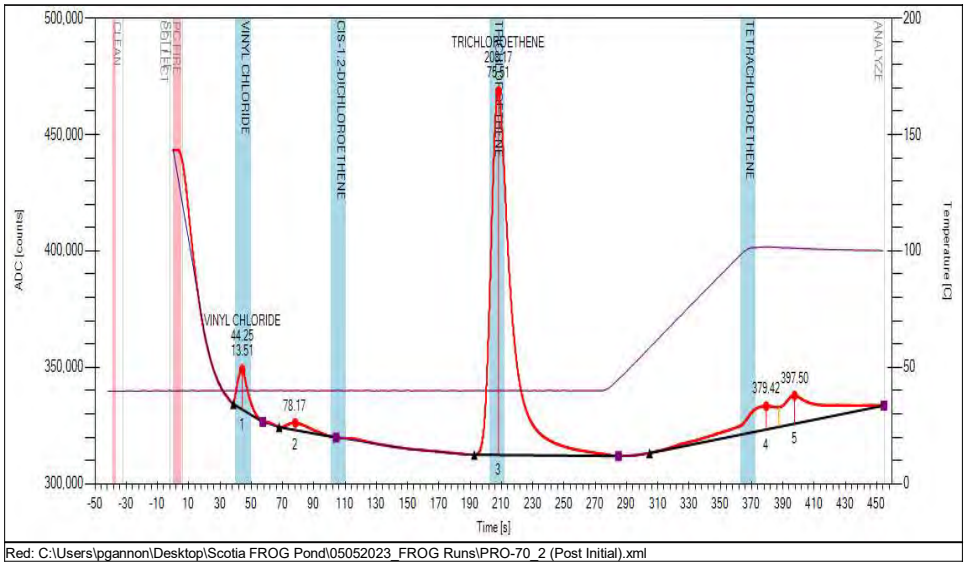
Pump=15%, 52%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.25	17185	133529	13.51	13.51
2		78.17	3099	54454		
3	TRICHLOROETHENE	208.17	156109	2394330	75.51	75.51
4		379.42	9991	295338		
5		397.5	12066	359862		



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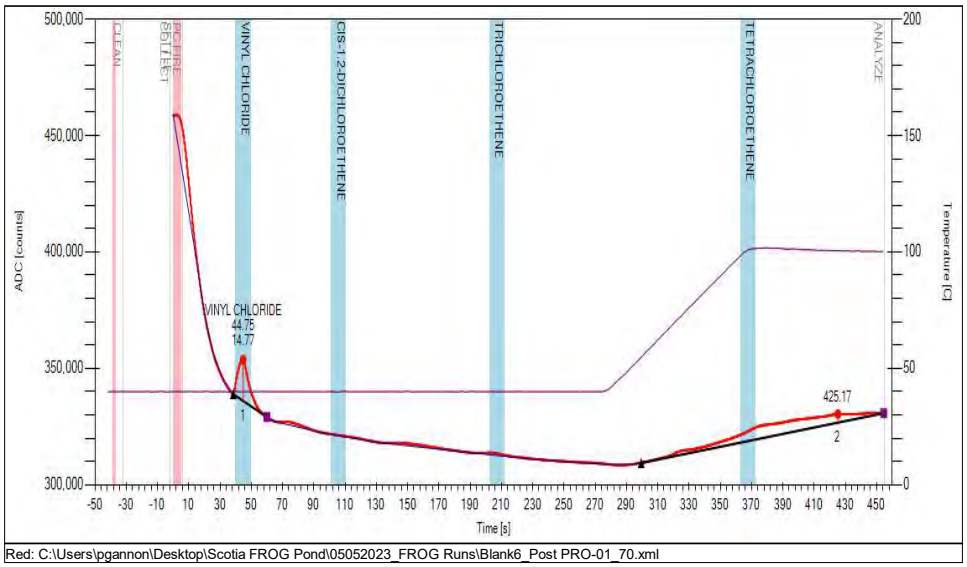
Pump=15%,52%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	17642	146059	14.77	14.77
2		425.17	3682	416313		



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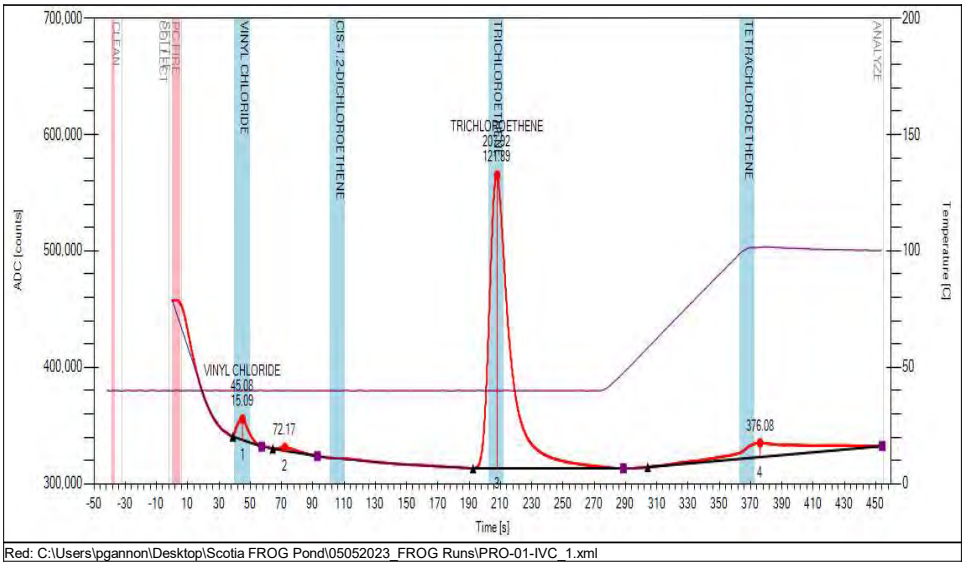
2023-05-05 16:27:14Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 52%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.08	17832	149145	15.09	15.09
2		72.17	2738	38161		
3	TRICHLOROETHENE	207.92	251572	3864862	121.89	121.89
4		376.08	12166	655854		



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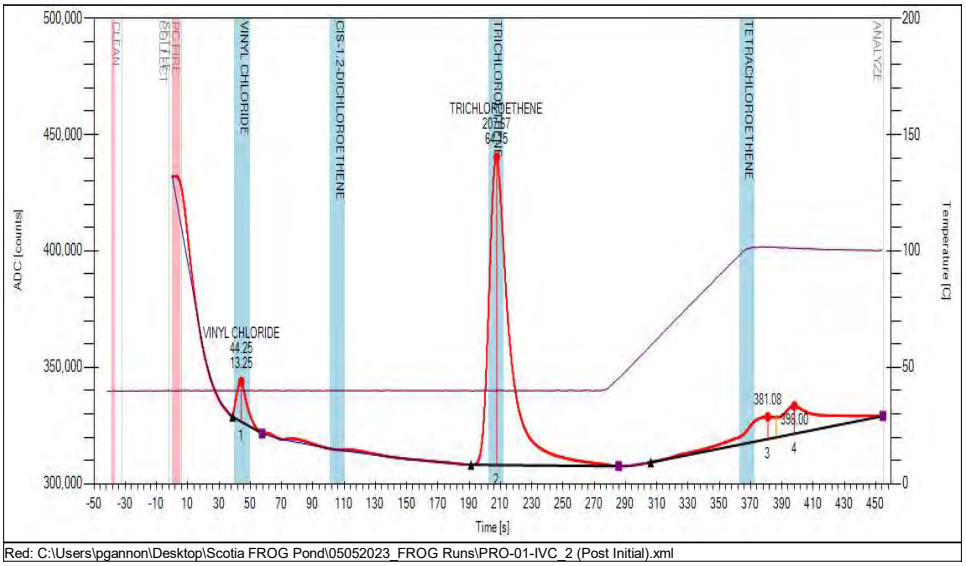
Pump=15%, 52%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.25	17147	131011	13.25	13.25
2	TRICHLOROETHENE	207.67	132109	2033982	64.15	64.15
3		381.08	9510	244755		
4		398	11882	367392		



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2023-05-05 16:55:01Z
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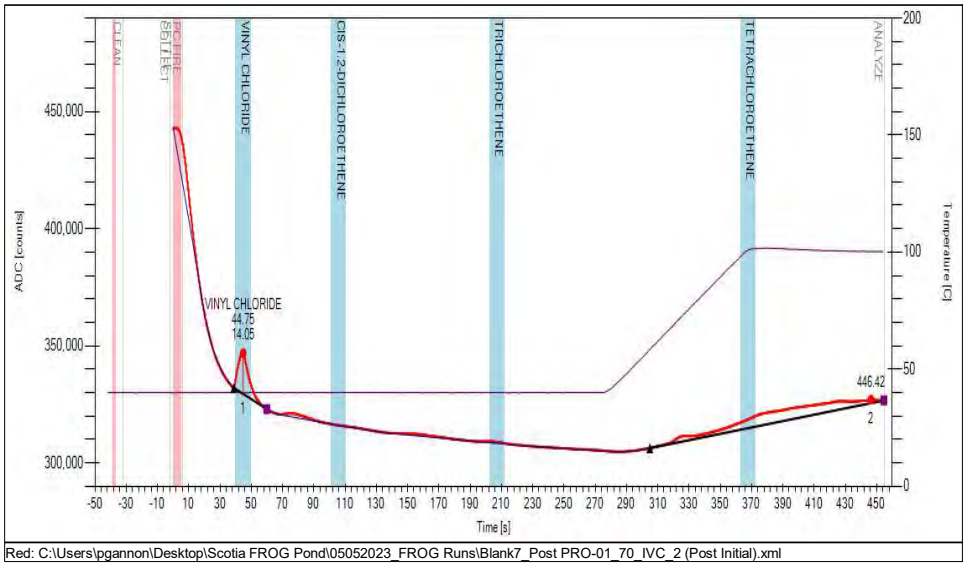
Pump=15%,53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	17340	138914	14.05	14.05
2		446.42	1487	401243		



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2023-05-06 07:31:59Z
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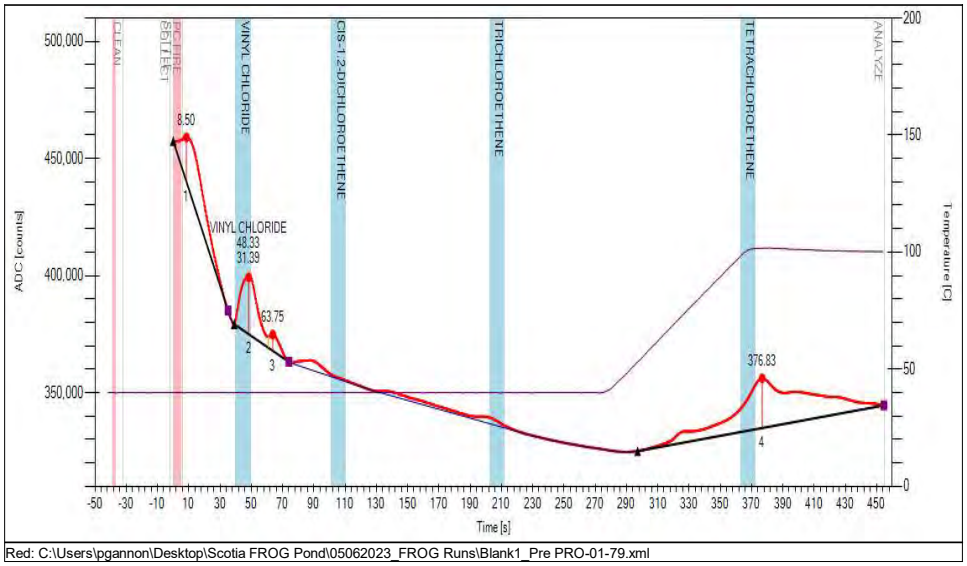
Pump=15%, 45%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		8.5	18817	406900		
2	VINYL CHLORIDE	48.33	24285	310318	31.39	31.39
3		63.75	6917	56329		
4		376.83	21263	1152272		



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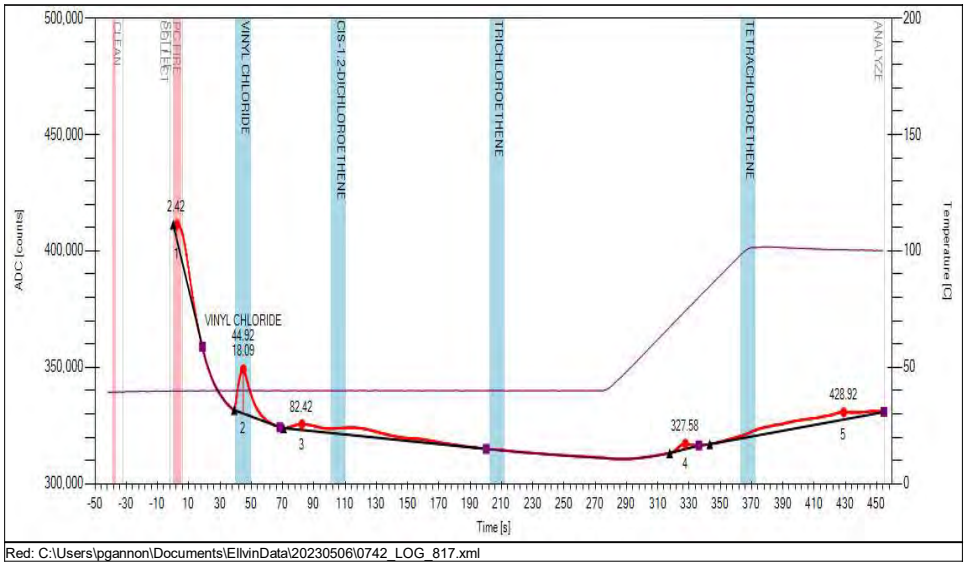
Pump=15%, 49%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	6656	124090		
2	VINYL CHLORIDE	44.92	18970	178891	18.09	18.09
3		82.42	2564	205401		
4		327.58	2367	21102		
5		428.92	3167	233611		



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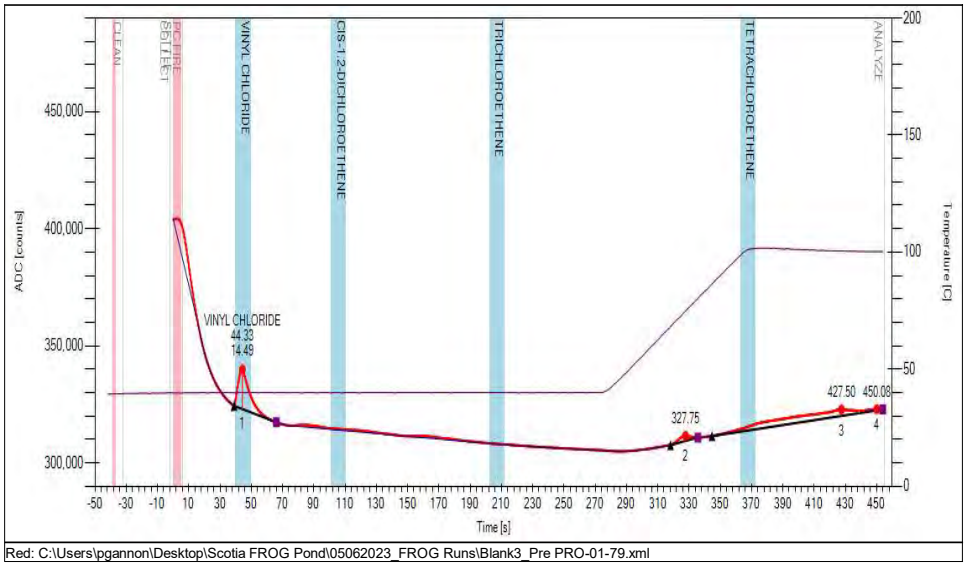
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.33	16877	143234	14.49	14.49
2		327.75	2186	18889		
3		427.5	2729	182693		
4		450.08	531	9728		



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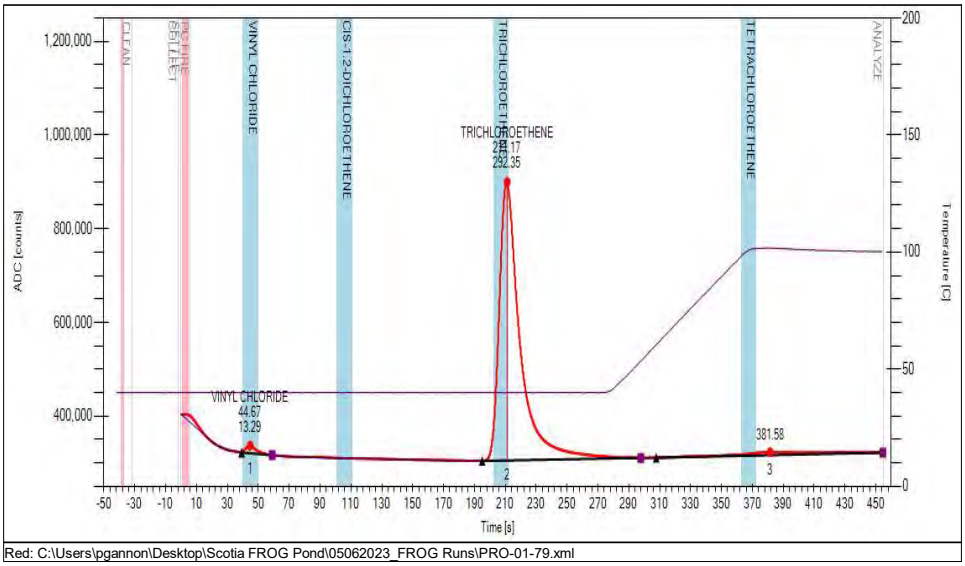
2023-05-06 08:05:07Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	16402	131369	13.29	13.29
2	TRICHLOROETHENE	211.17	594253	9269466	292.35	292.35
3		381.58	6204	364910		



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2023-05-06 08:14:39Z
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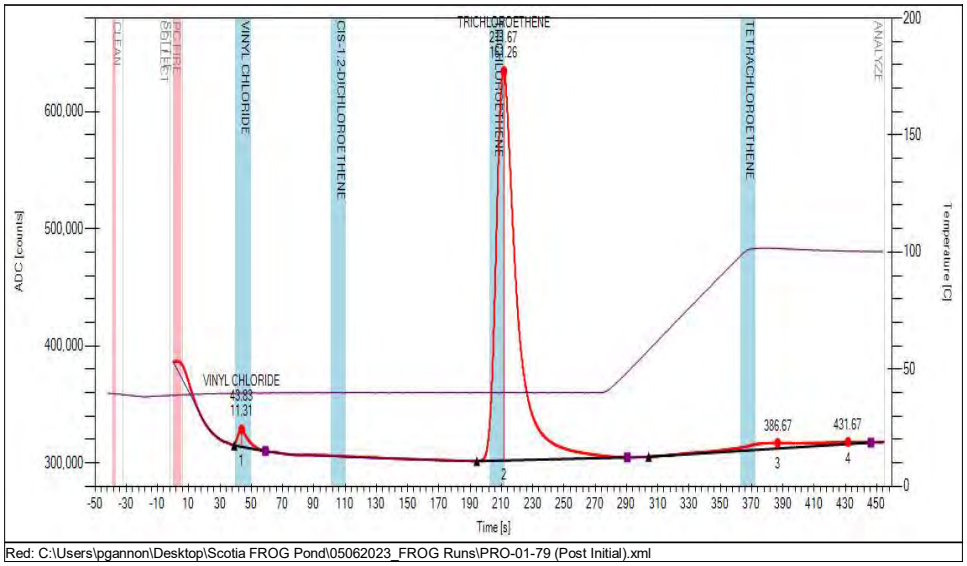
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.83	14843	111845	11.31	11.31
2	TRICHLOROETHENE	211.67	332470	5113202	161.26	161.26
3		386.67	4780	208651		
4		431.67	1767	97331		



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2023-05-06 08:28:26Z
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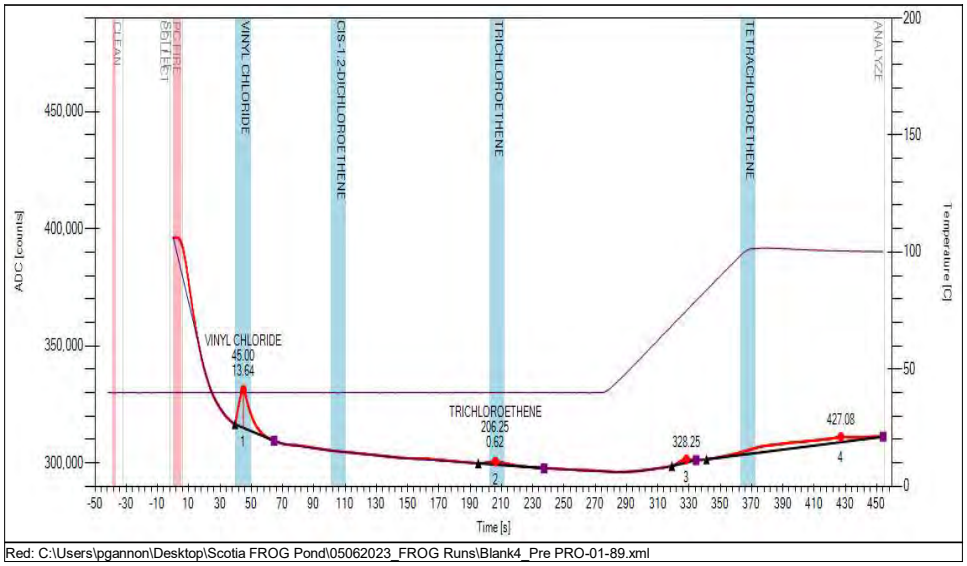
Pump=15%, 49%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	16167	134827	13.64	13.64
2	TRICHLOROETHENE	206.25	1311	19632	0.62	0.62
3		328.25	1391	11553		
4		427.08	2238	178098		



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2023-05-06 08:41:59Z
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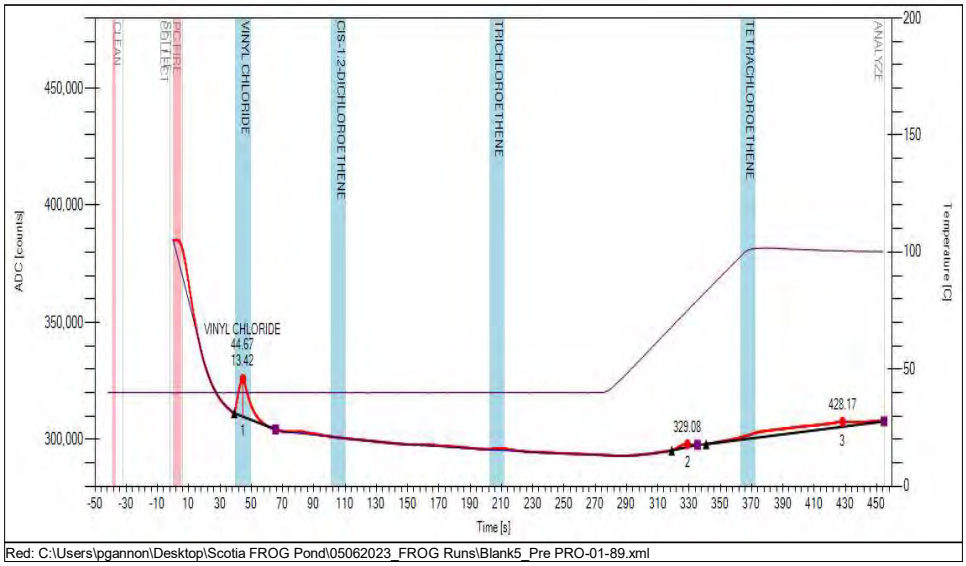
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	16074	132681	13.42	13.42
2		329.08	1236	11995		
3		428.17	2155	173211		



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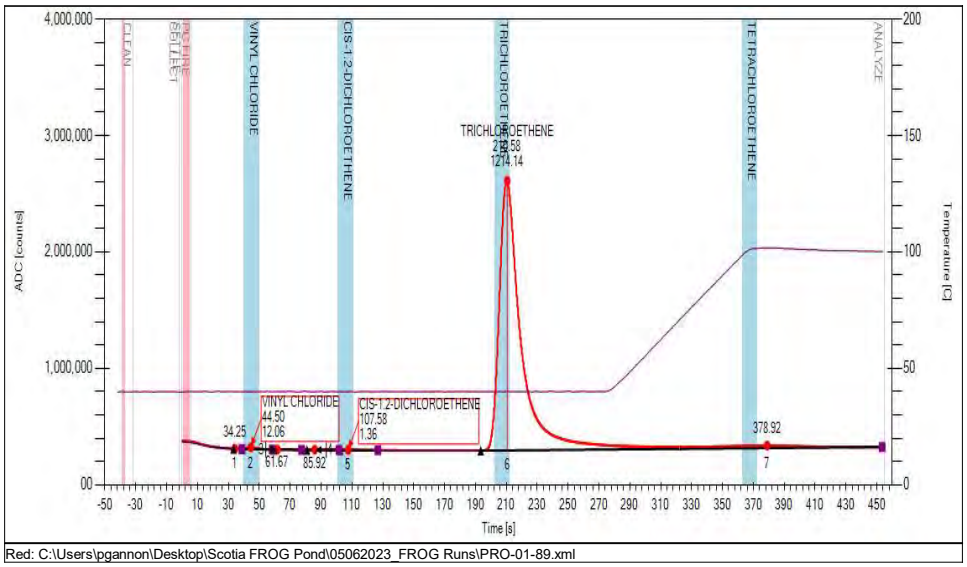
2023-05-06 08:53:35Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		34.25	768	2087		
2	VINYL CHLORIDE	44.5	15556	119201	12.06	12.06
3		61.67	643	9492		
4		85.92	2107	18967		
5	CIS-1.2-DICHLOROETHENE	107.58	2062	19661	1.36	1.36
6	TRICHLOROETHENE	210.58	2316391	38496698	1214.14	1214.14
7		378.92	22802	1728682		



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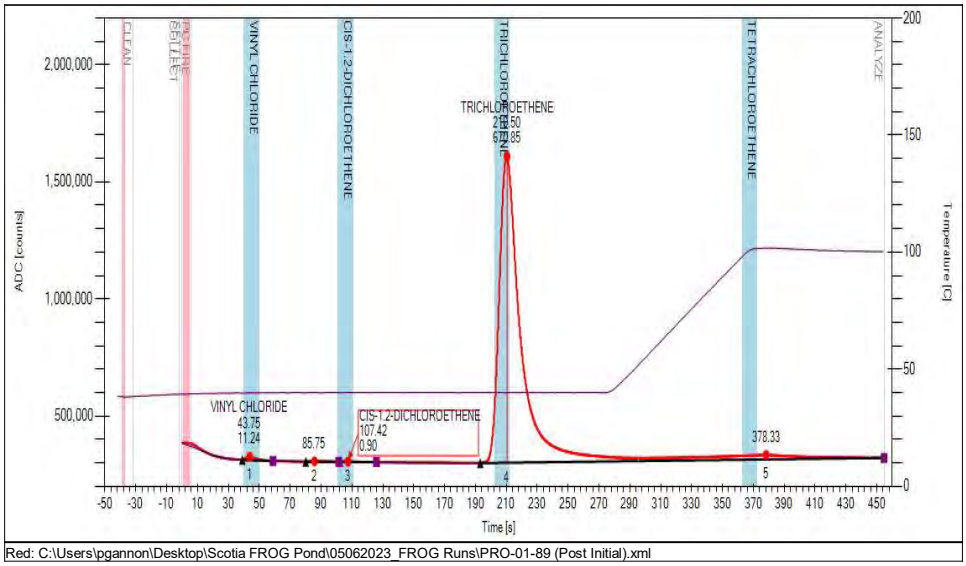
2023-05-06 09:03:30Z
FROG-0230:Ta=275,Tb=90,Tc=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.75	14873	111093	11.24	11.24
2		85.75	1347	14208		
3	CIS-1.2-DICHLOROETHENE	107.42	1392	13041	0.90	0.9
4	TRICHLOROETHENE	210.5	1308299	21270483	670.85	670.85
5		378.33	19024	1725584		



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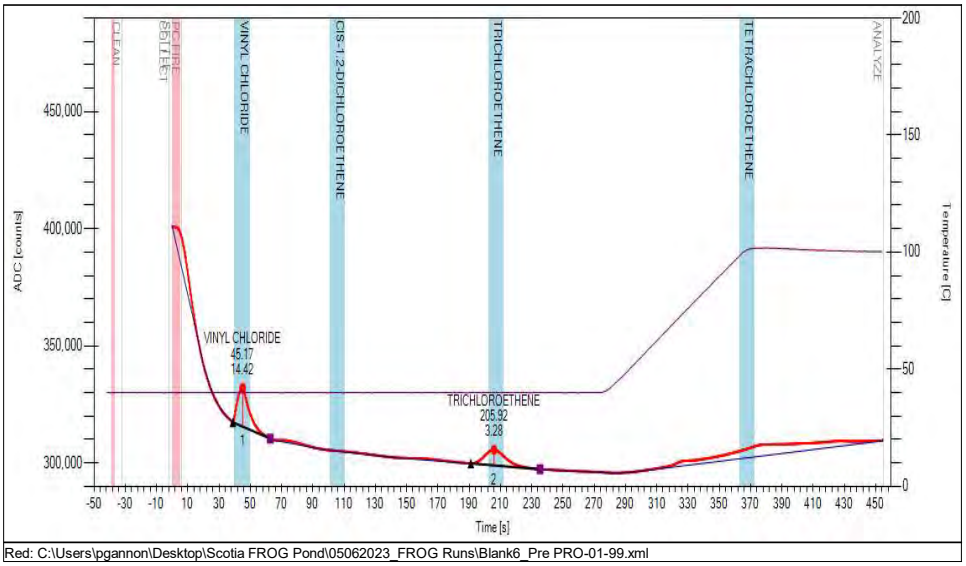
Pump=15%, 50%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	16575	142518	14.42	14.42
2	TRICHLOROETHENE	205.92	6652	103847	3.28	3.28



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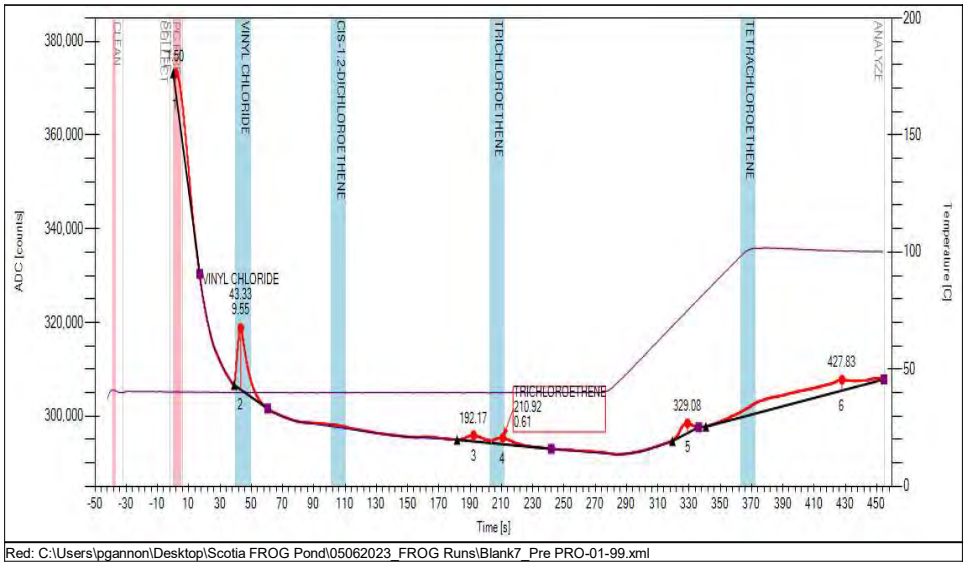
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	3553	76590		
2	VINYL CHLORIDE	43.33	13197	94401	9.55	9.55
3		192.17	1311	16735		
4	TRICHLOROETHENE	210.92	1388	19326	0.61	0.61
5		329.08	2091	18878		
6		427.83	2334	178567		



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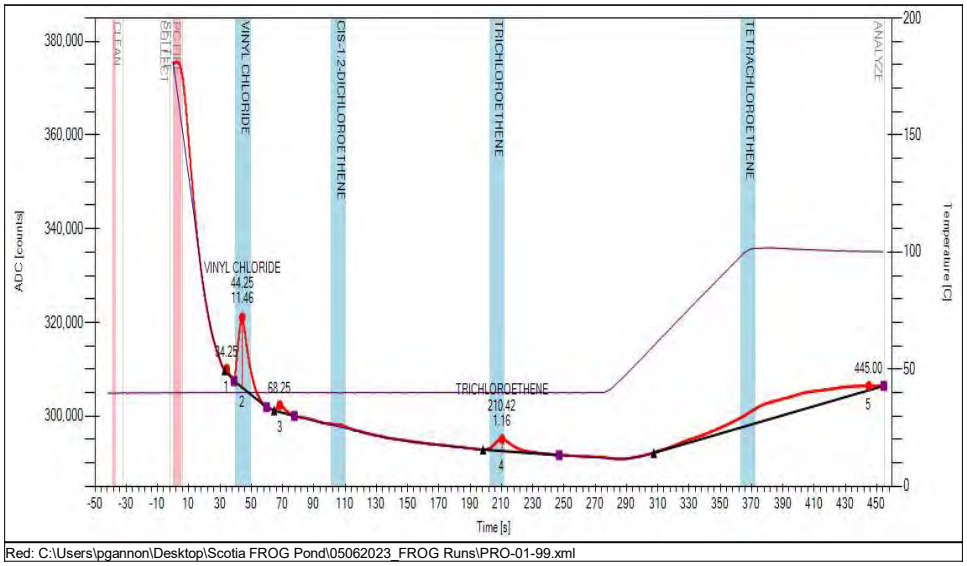
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		34.25	792	2597		
2	VINYL CHLORIDE	44.25	14976	113258	11.46	11.46
3		68.25	1458	8924		
4	TRICHLOROETHENE	210.42	2527	36684	1.16	1.16
5		445	958	276611		



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2023-05-06 10:00:59Z
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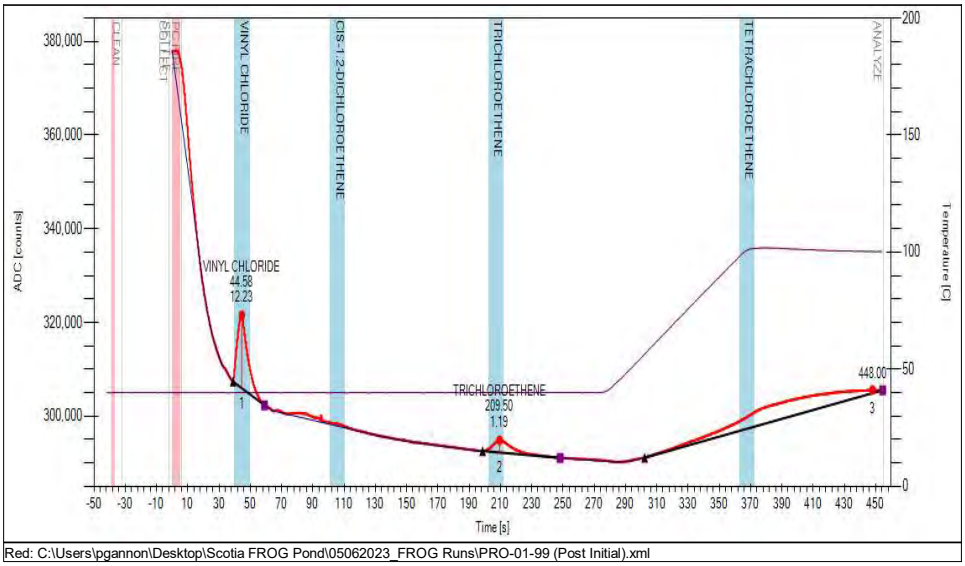
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.58	15560	120872	12.23	12.23
2	TRICHLOROETHENE	209.5	2601	37695	1.19	1.19
3		448	656	269772		



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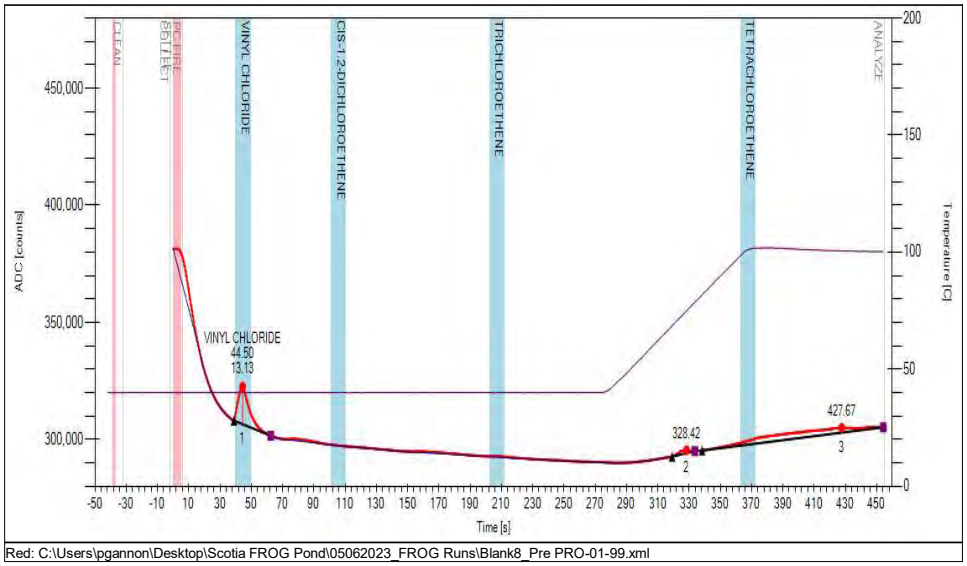
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.5	15945	129820	13.13	13.13
2		328.42	1183	10716		
3		427.67	2081	181090		



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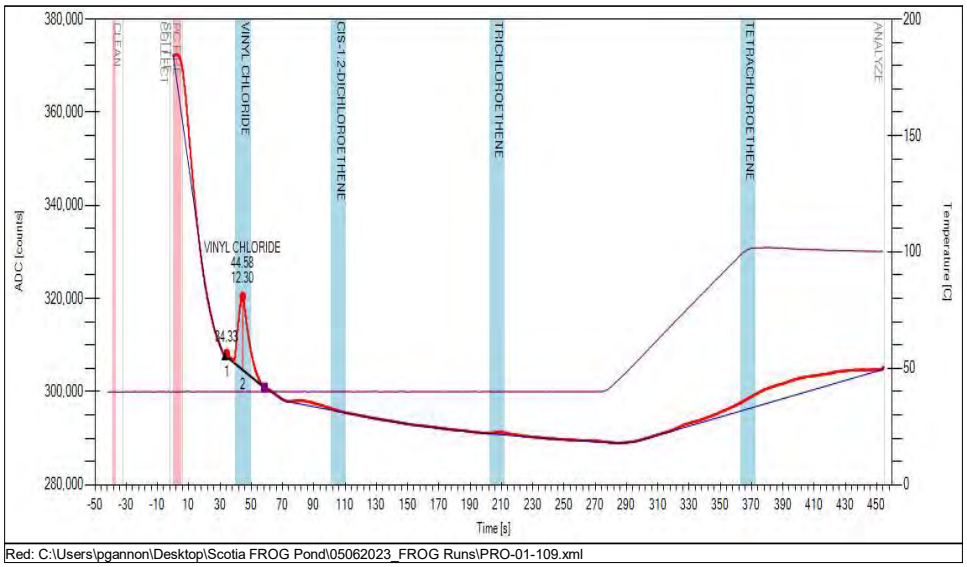
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		34.33	718	3046		
2	VINYL CHLORIDE	44.58	15738	121595	12.30	12.3



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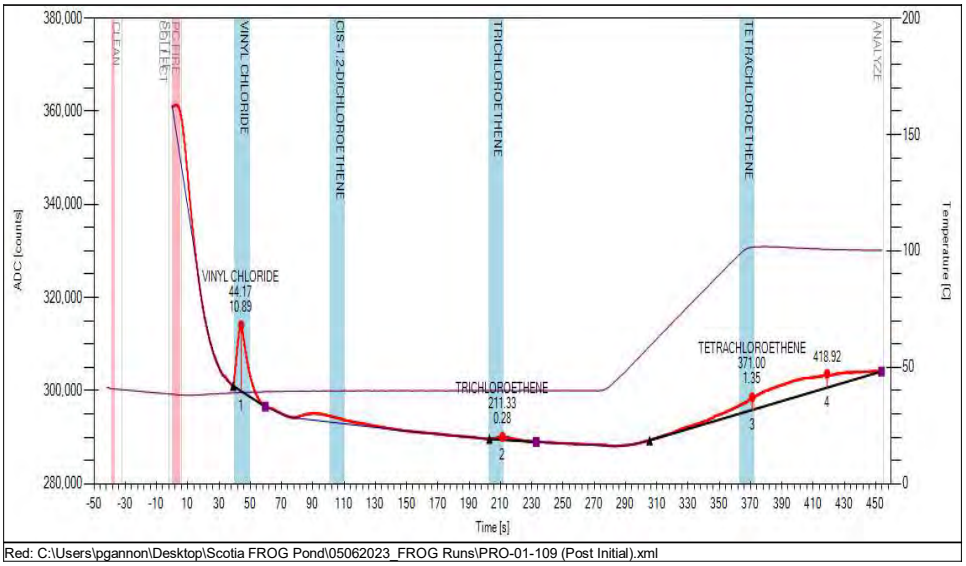
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.17	14110	107694	10.89	10.89
2	TRICHLOROETHENE	211.33	669	8722	0.28	0.28
3	TETRACHLOROETHENE	371	2714	53364	1.35	1.35
4		418.92	2960	203230		



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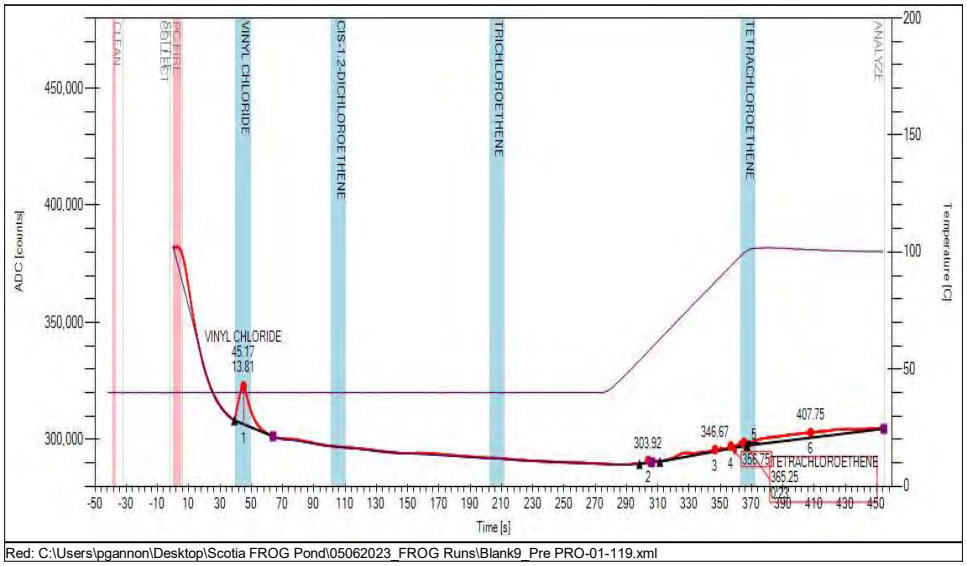
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	16246	136544	13.81	13.81
2		303.92	1052	2141		
3		346.67	767	26911		
4		356.75	1050	4706		
5	TETRACHLOROETHENE	365.25	1521	9223	0.23	0.23
6		407.75	2246	153518		



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2023-05-06 11:05:11Z
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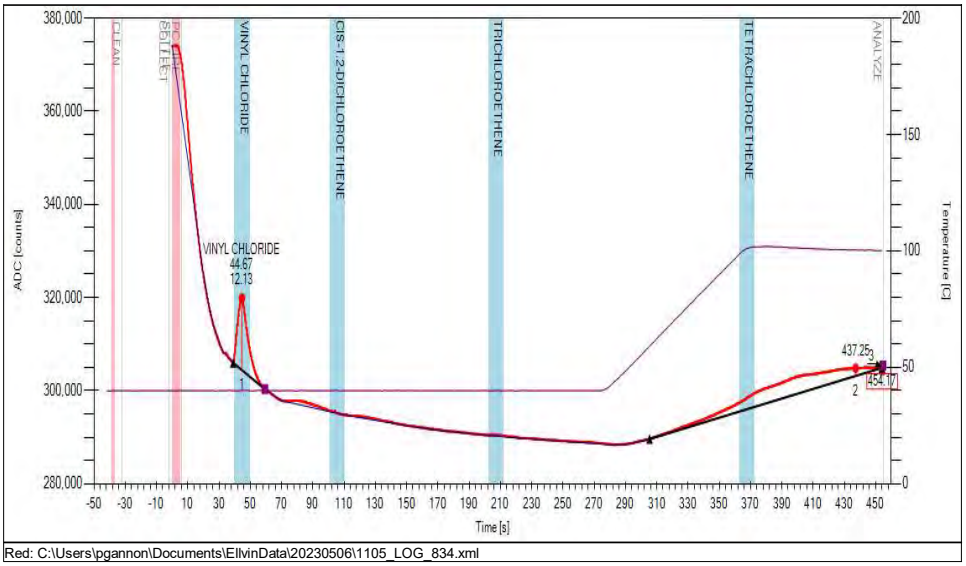
Pump=15%, 49%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	15468	119886	12.13	12.13
2		437.25	1656	267465		
3		454.17	433	150		



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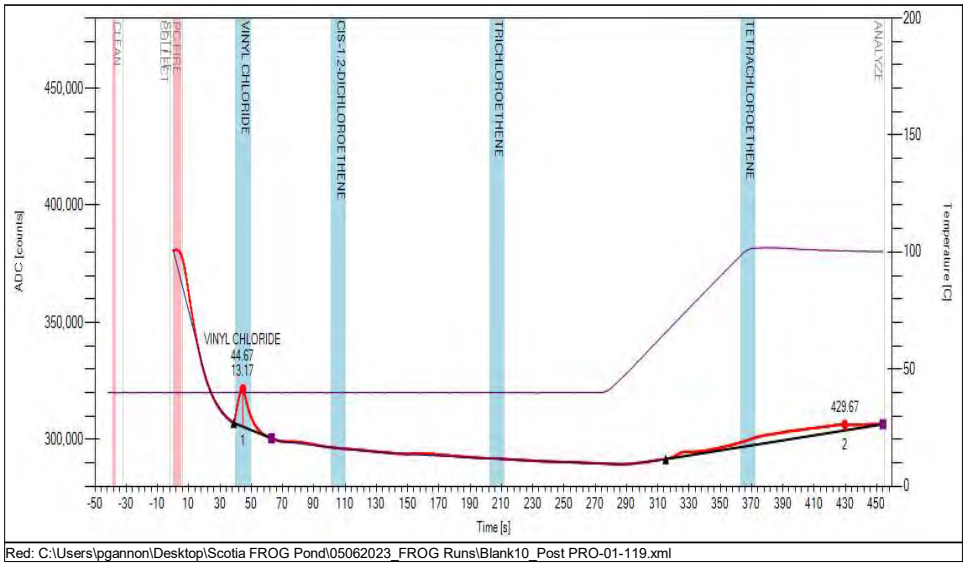
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	16069	130243	13.17	13.17
2		429.67	2492	288020		



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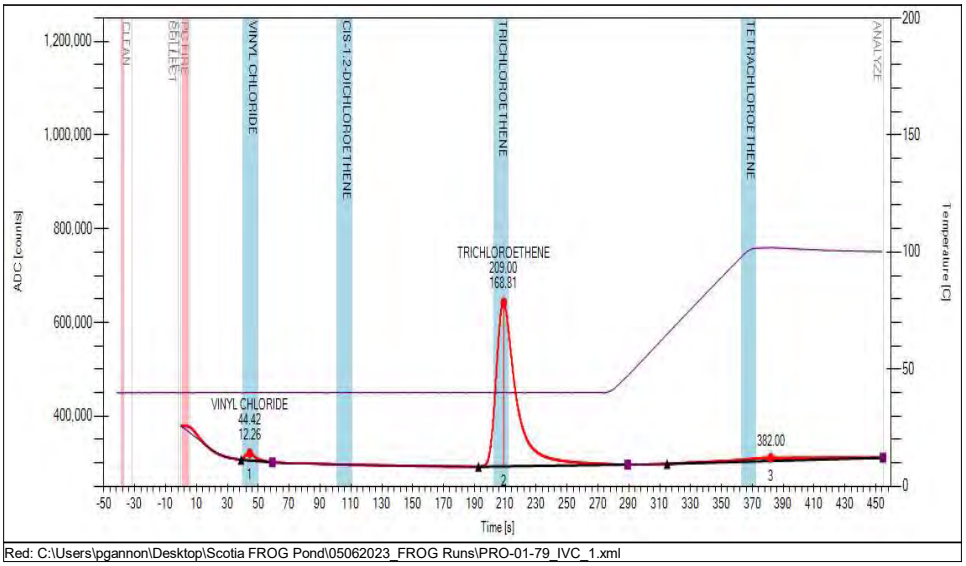
Pump=15%, 50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.42	15638	121190	12.26	12.26
2	TRICHLOROETHENE	209	350012	5352535	168.81	168.81
3		382	6872	444950		



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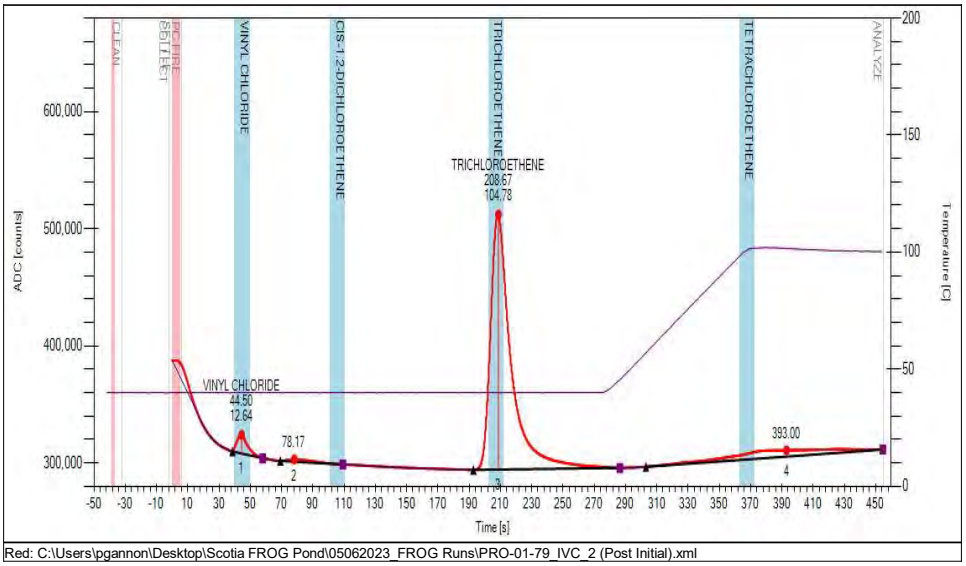
Pump=15%,51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.5	16030	124968	12.64	12.64
2		78.17	1915	39098		
3	TRICHLOROETHENE	208.67	217816	3322263	104.78	104.78
4		393	5413	443259		



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2023-05-06 12:00:48Z
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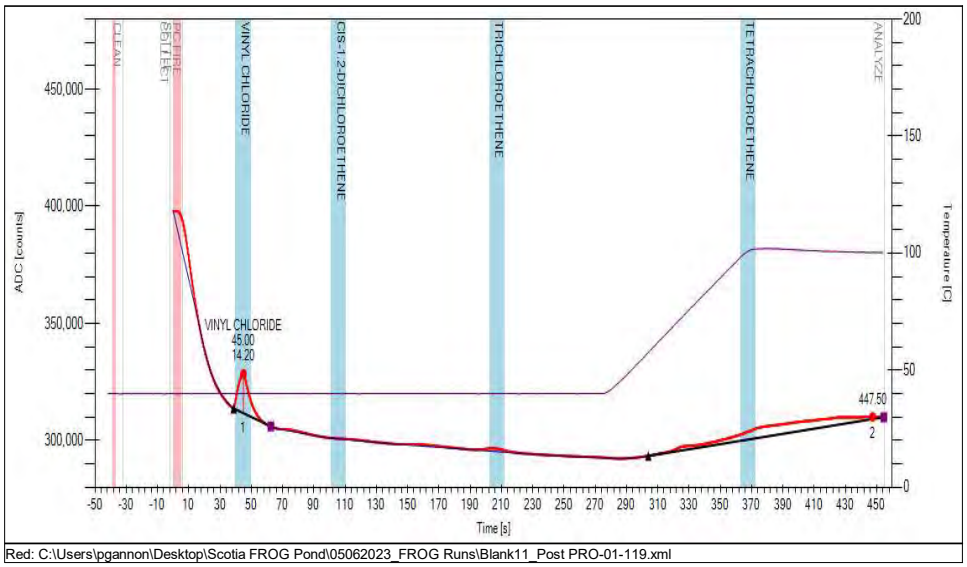
Pump=15%, 51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	16794	140401	14.20	14.2
2		447.5	961	349982		



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2023-05-07 06:43:40Z
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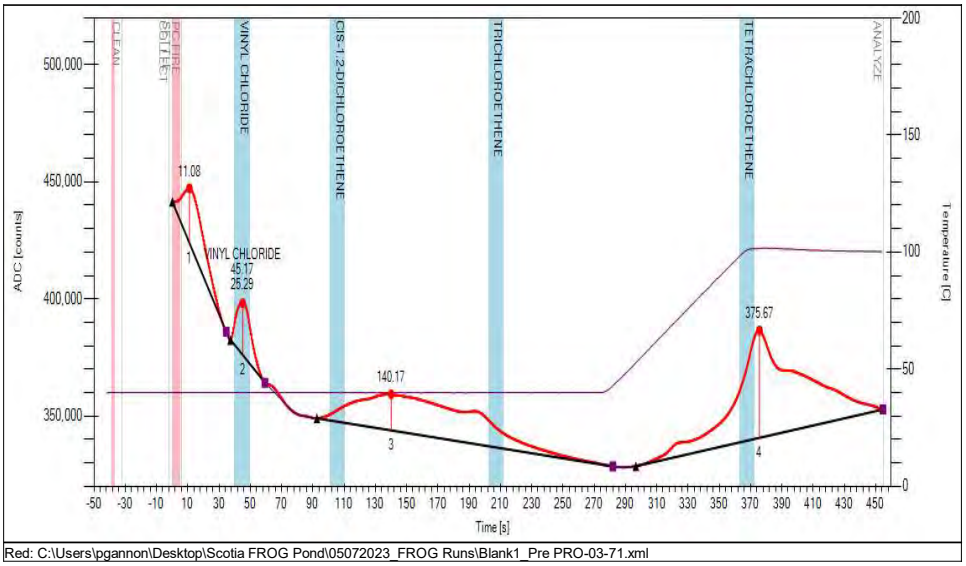
Pump=15%,50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		11.08	23274	415027		
2	VINYL CHLORIDE	45.17	22100	250039	25.29	25.29
3		140.17	15445	1505049		
4		375.67	45936	2238038		



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2023-05-07 06:55:01Z
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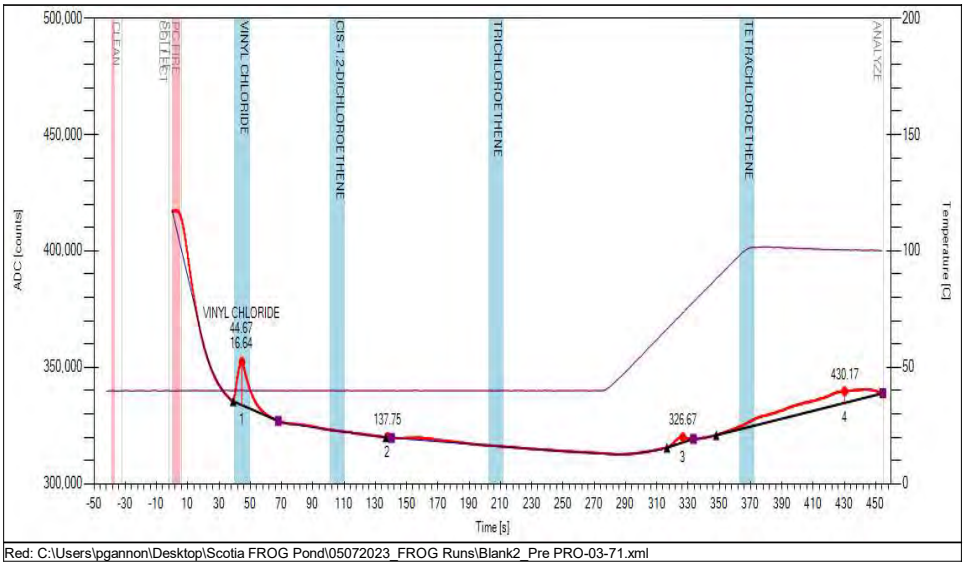
Pump=15%,50%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	18518	164466	16.64	16.64
2		137.75	203	325		
3		326.67	2260	20498		
4		430.17	5009	337799		



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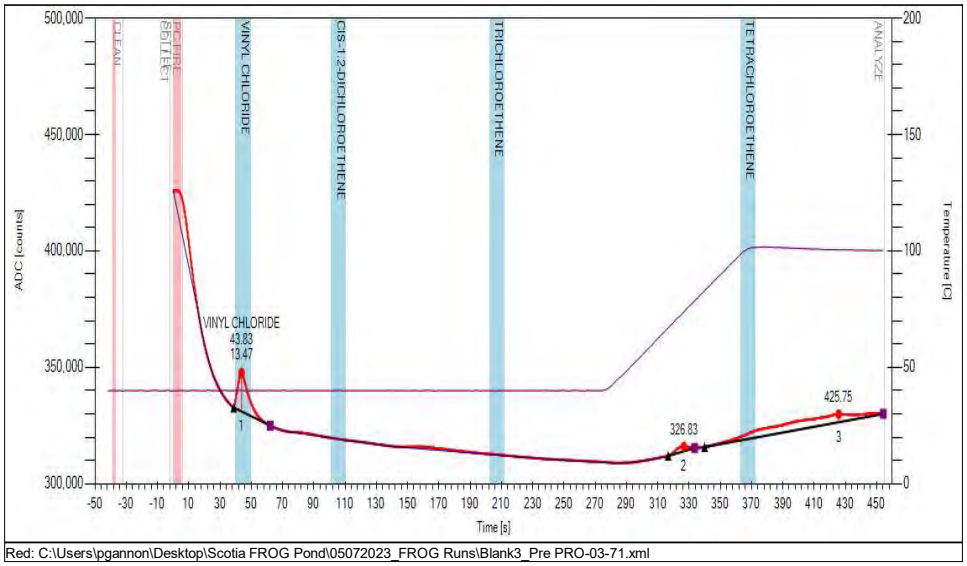
Pump=15%,51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.83	16602	133208	13.47	13.47
2		326.83	2043	19637		
3		425.75	3459	259469		



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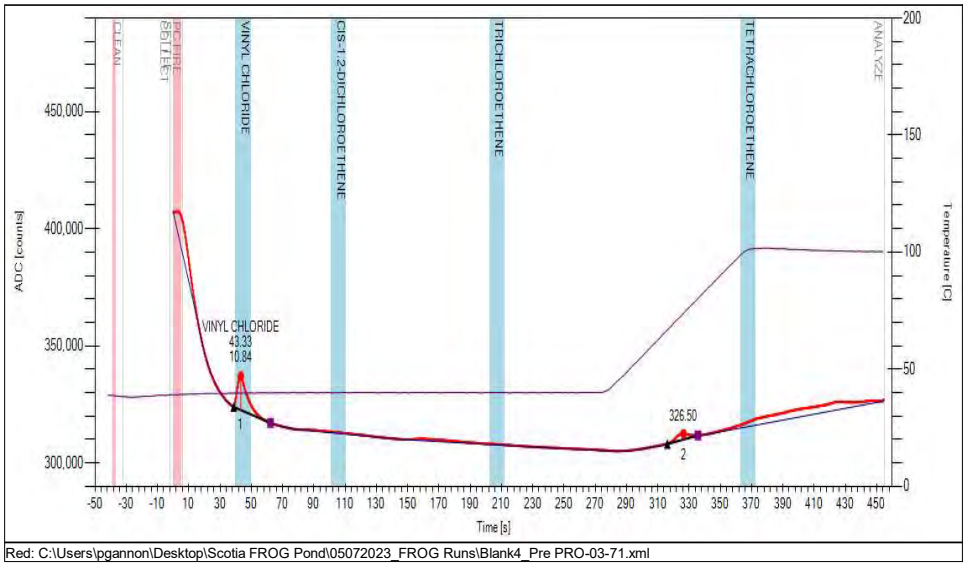
Pump=15%, 51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.33	14385	107214	10.84	10.84
2		326.5	2440	24286		



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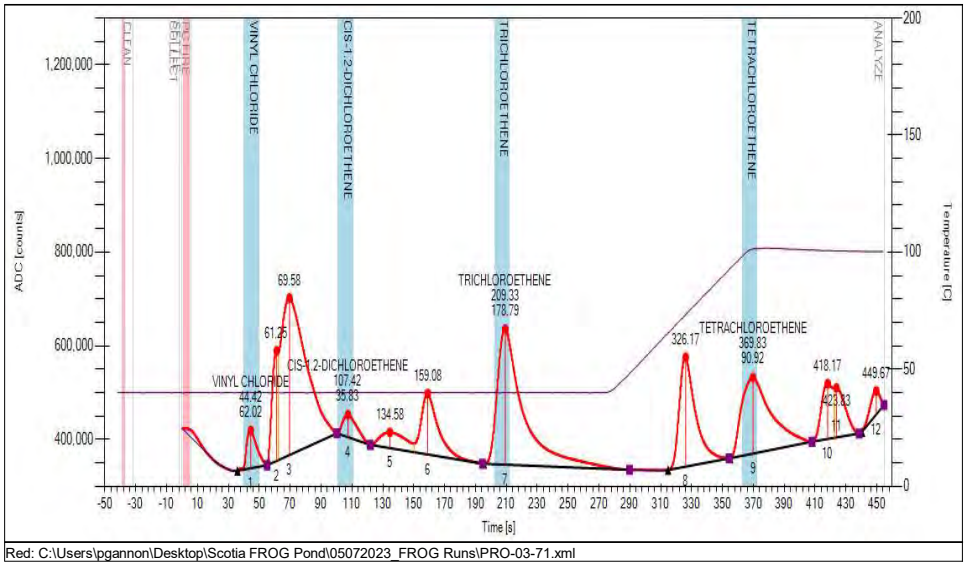
Pump=15%,51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.42	80652	613151	62.02	62.02
2		61.25	234909	1006980		
3		69.58	335428	6437474		
4	CIS-1.2-DICHLOROETHENE	107.42	47688	516933	35.83	35.83
5		134.58	33664	661296		
6		159.08	130290	1660891		
7	TRICHLOROETHENE	209.33	289719	5668922	178.79	178.79
8		326.17	233532	2840456		
9	TETRACHLOROETHENE	369.83	162185	3590534	90.92	90.92
10		418.17	118125	1010460		
11		423.83	105918	875334		
12		449.67	50017	369713		



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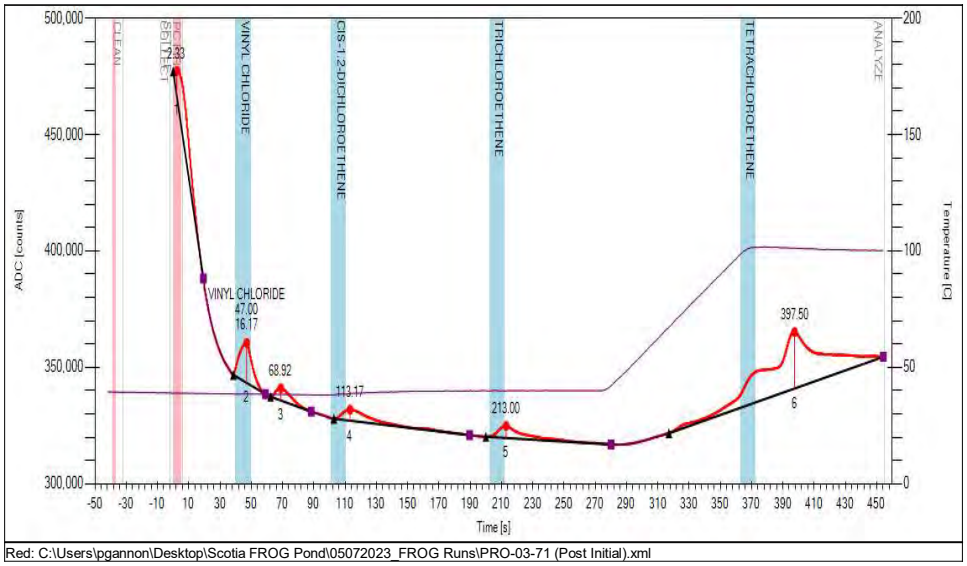
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.33	10573	214290		
2	VINYL CHLORIDE	47	17111	159896	16.17	16.17
3		68.92	5271	61063		
4		113.17	4684	102758		
5		213	5171	101796		
6		397.5	24232	1023515		



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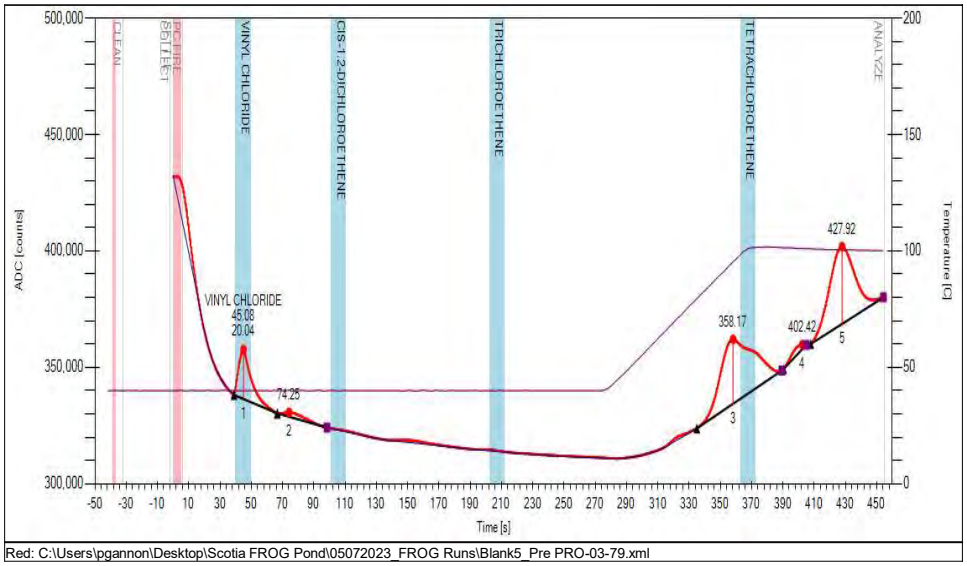
Pump=15%, 51%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.08	21191	198115	20.04	20.04
2		74.25	1875	31900		
3		358.17	27665	672597		
4		402.42	1889	24748		
5		427.92	33100	618193		



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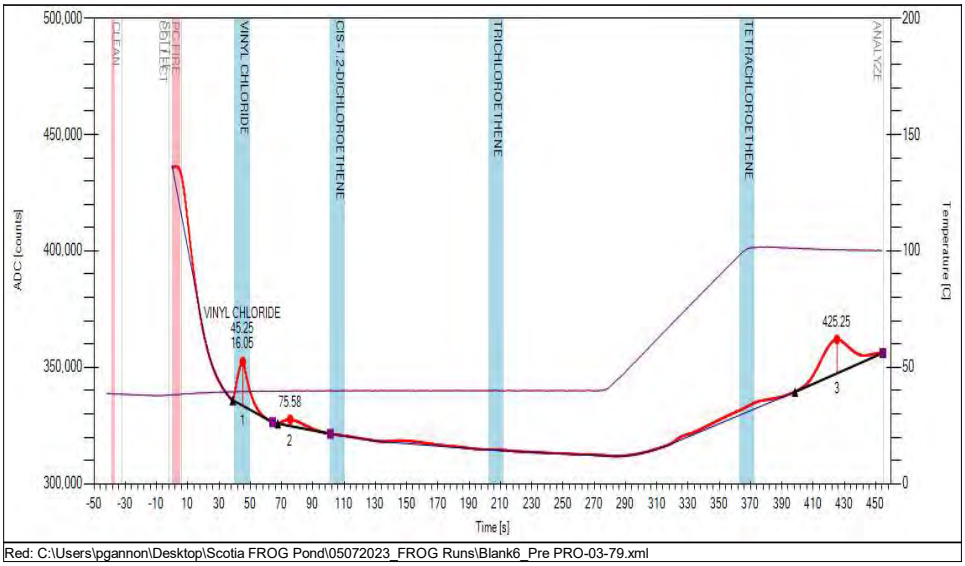
2023-05-07 08:15:04Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	18862	158717	16.05	16.05
2		75.58	2818	44266		
3		425.25	14578	328234		



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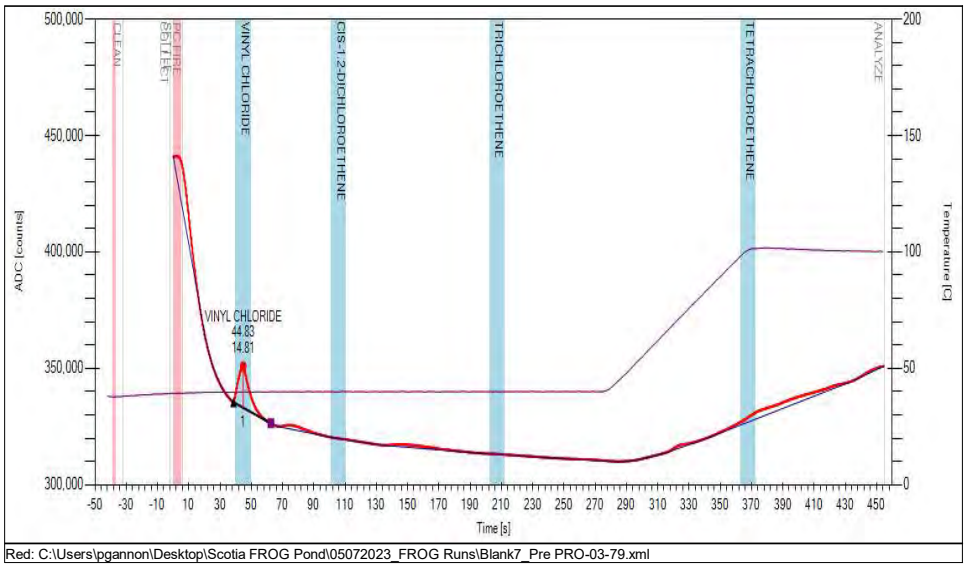
2023-05-07 08:26:03Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.83	17826	146465	14.81	14.81



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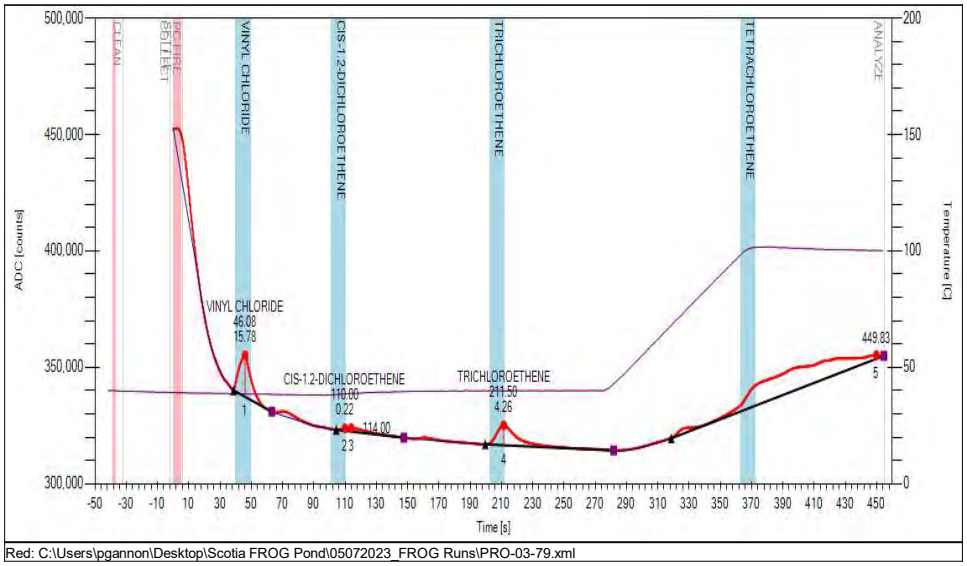
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.08	17795	156035	15.78	15.78
2	CIS-1.2-DICHLOROETHENE	110	1062	3226	0.22	0.22
3		114	1456	23910		
4	TRICHLOROETHENE	211.5	8487	135129	4.26	4.26
5		449.83	1524	632106		



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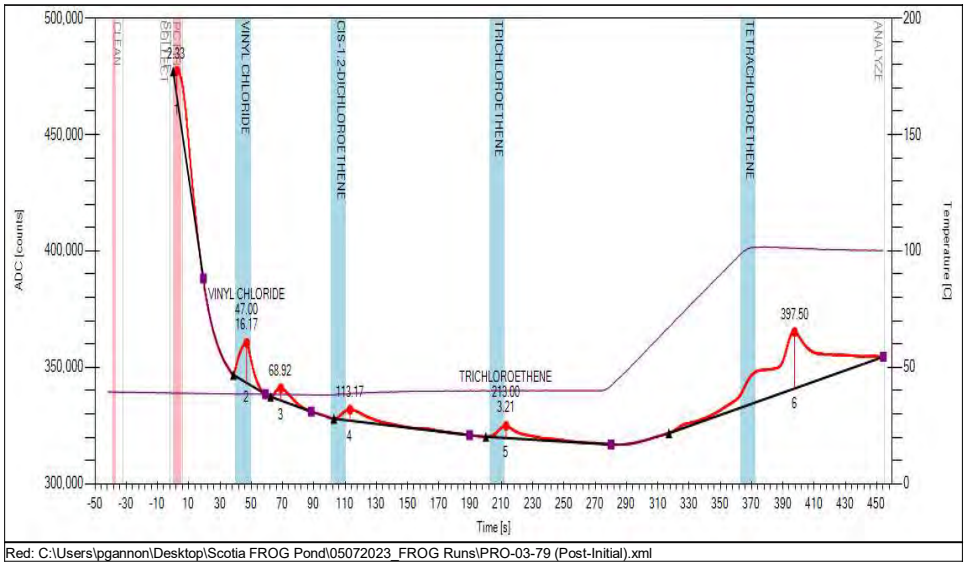
2023-05-07 08:48:19Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.33	10573	214290		
2	VINYL CHLORIDE	47	17111	159896	16.17	16.17
3		68.92	5271	61063		
4		113.17	4684	102758		
5	TRICHLOROETHENE	213	5171	101796	3.21	3.21
6		397.5	24232	1023515		



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2023-05-07 09:03:39Z
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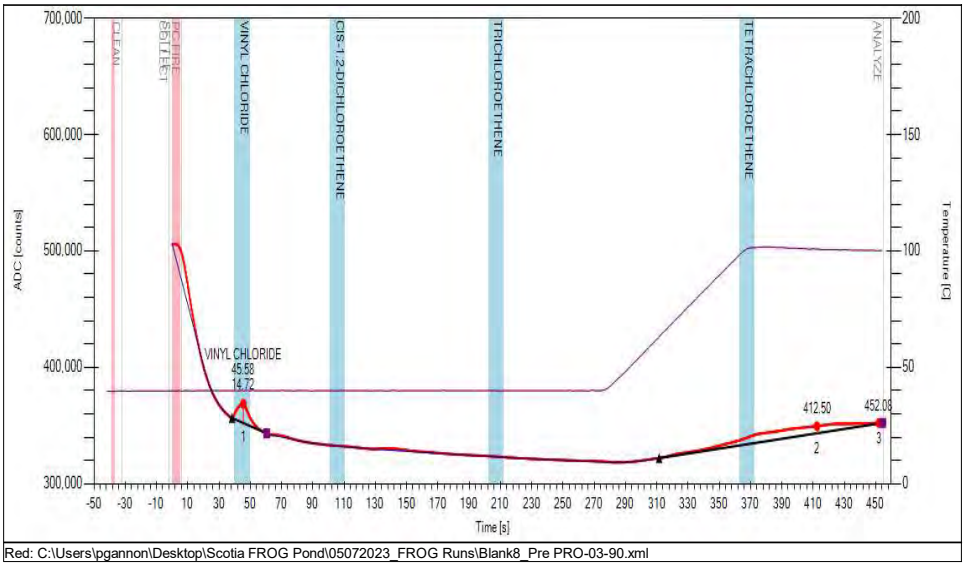
Pump=15%,55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.58	16508	145512	14.72	14.72
2		412.5	6184	418192		
3		452.08	492	147186		



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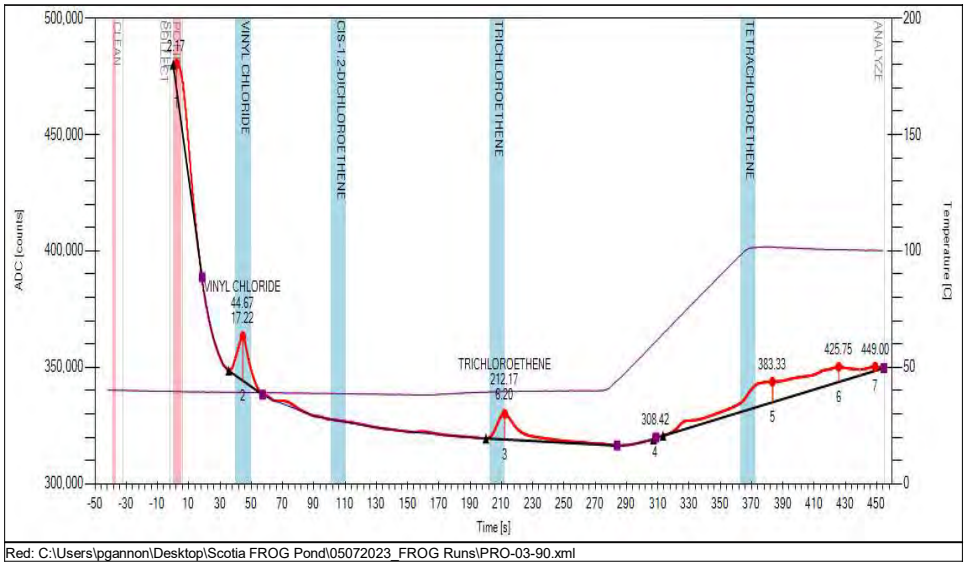
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.17	10589	213136		
2	VINYL CHLORIDE	44.67	19019	170203	17.22	17.22
3	TRICHLOROETHENE	212.17	11028	196544	6.20	6.2
4		308.42	246	327		
5		383.33	8845	279464		
6		425.75	6509	359825		
7		449	1803	26247		



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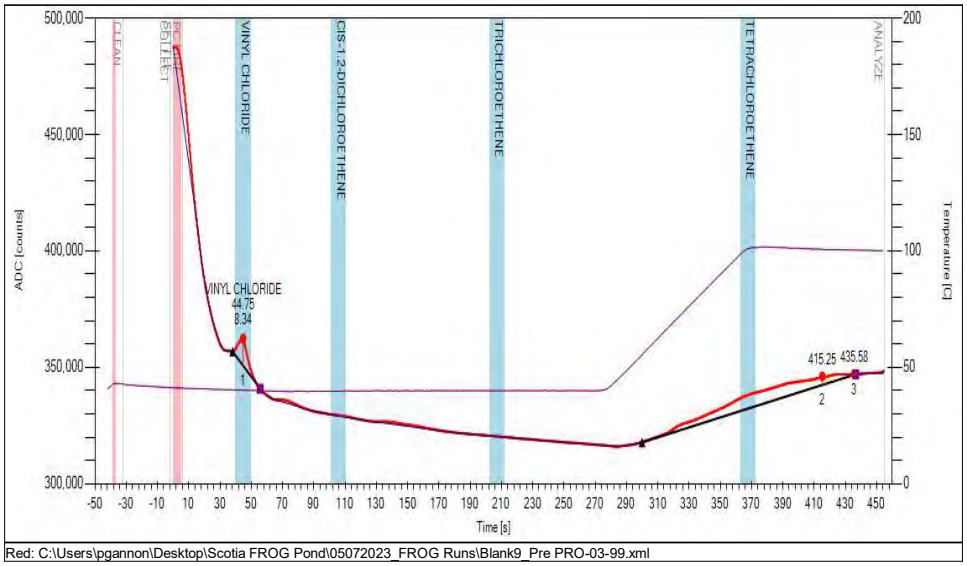
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.75	11596	82482	8.34	8.34
2		415.25	3712	409074		
3		435.58	282	35127		



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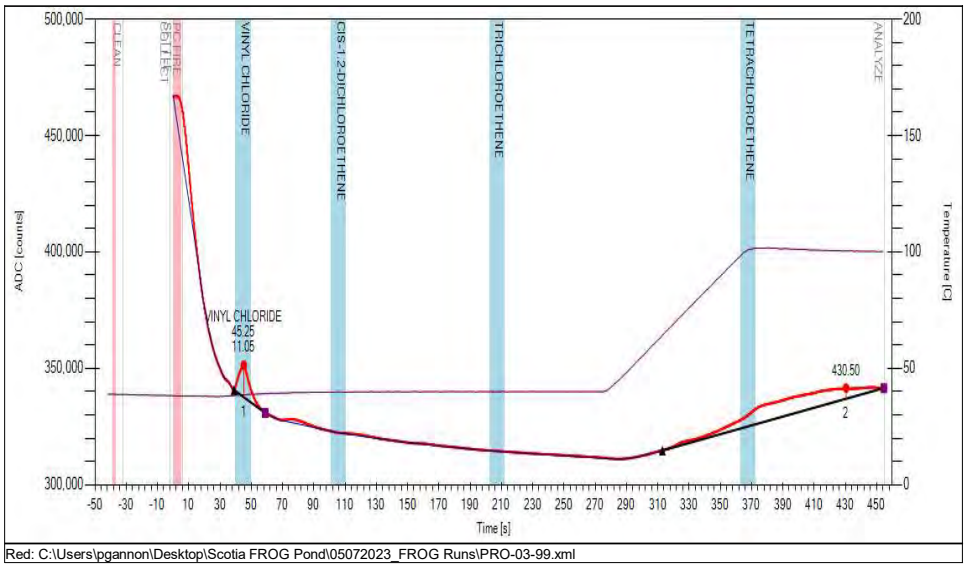
2023-05-07 09:47:36Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	13647	109243	11.05	11.05
2		430.5	4561	541391		



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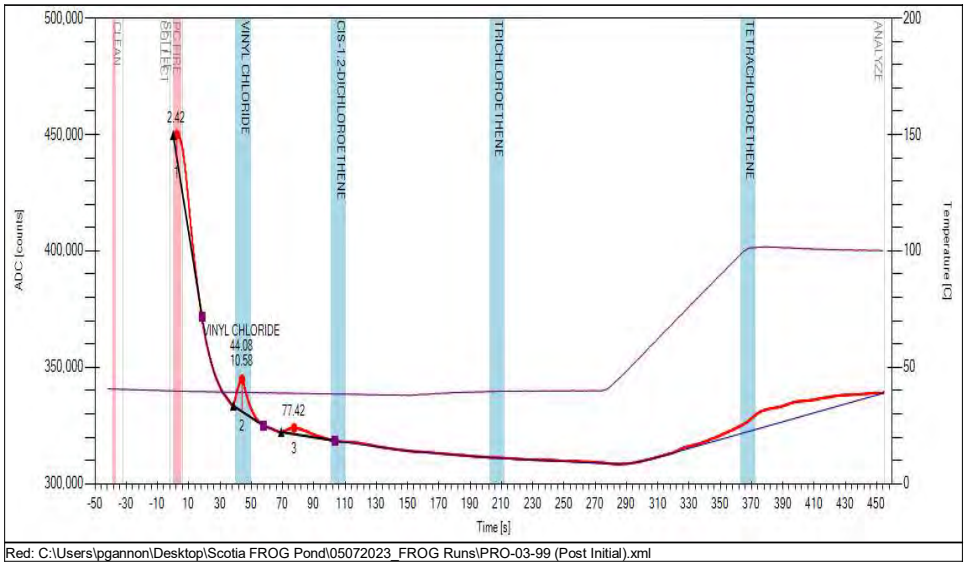
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	10095	186721		
2	VINYL CHLORIDE	44.08	13779	104619	10.58	10.58
3		77.42	2646	46636		



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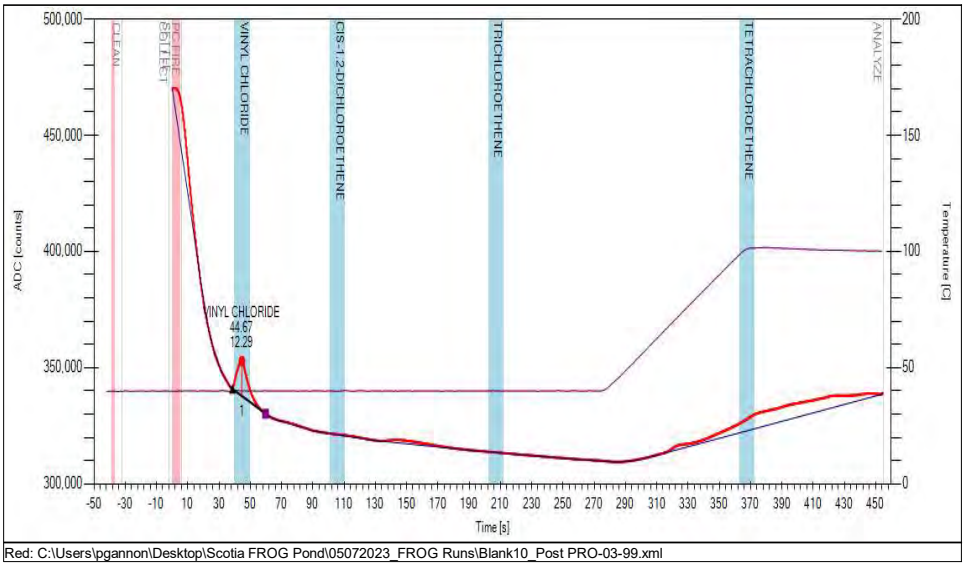
2023-05-07 10:12:29Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	15132	121485	12.29	12.29



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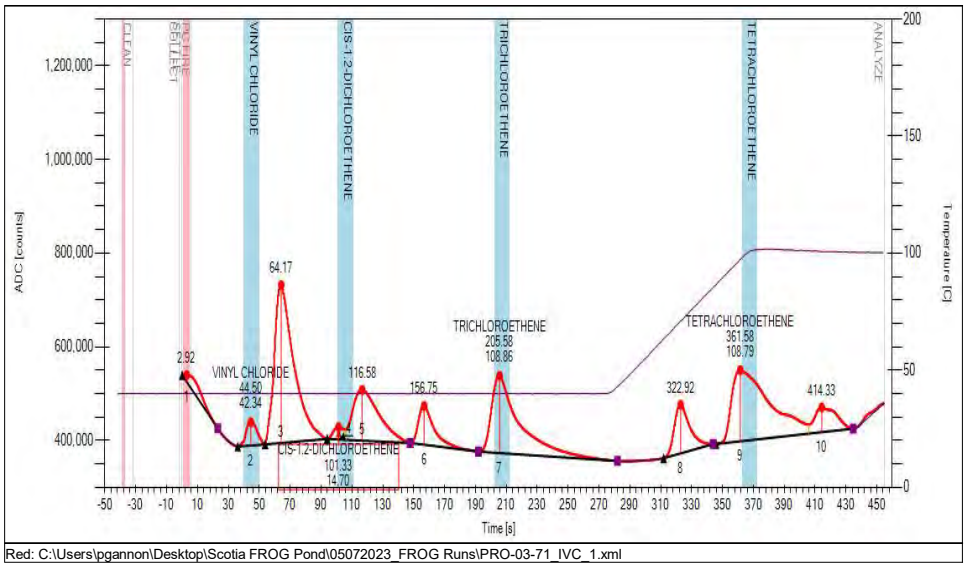
2023-05-07 13:25:34Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.92	14159	339203		
2	VINYL CHLORIDE	44.5	49968	418619	42.34	42.34
3		64.17	337258	4956587		
4	CIS-1.2-DICHLOROETHENE	101.33	26623	212112	14.70	14.7
5		116.58	108455	2139137		
6		156.75	82805	979055		
7	TRICHLOROETHENE	205.58	164947	3451681	108.86	108.86
8		322.92	103768	1211695		
9	TETRACHLOROETHENE	361.58	152004	4296108	108.79	108.79
10		414.33	53060	879013		



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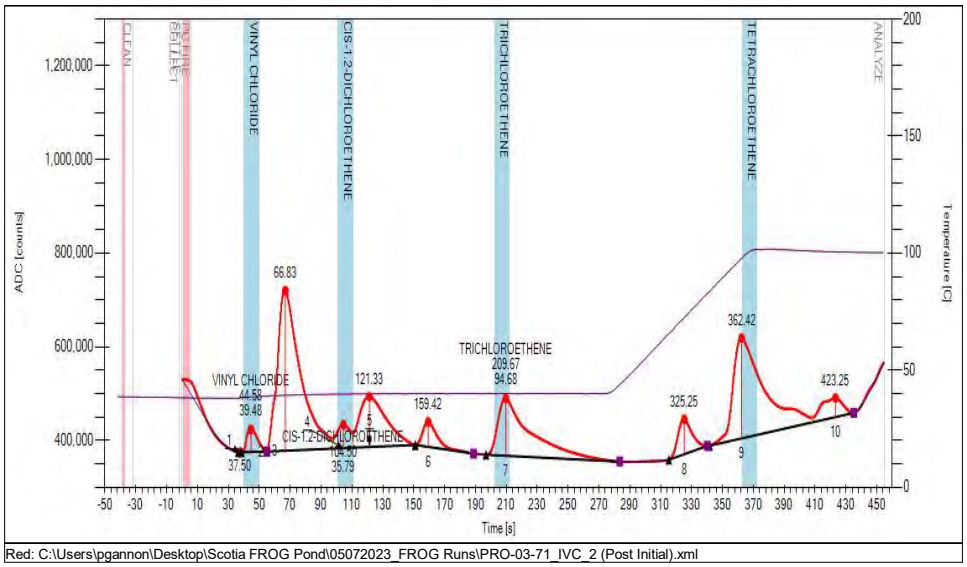
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		37.5	178	185		
2	VINYL CHLORIDE	44.58	48046	390303	39.48	39.48
3		66.83	341862	5913496		
4	CIS-1.2-DICHLOROETHENE	104.5	49954	516428	35.79	35.79
5		121.33	107394	2185272		
6		159.42	53426	571573		
7	TRICHLOROETHENE	209.67	122194	3001935	94.68	94.68
8		325.25	74655	780953		
9		362.42	214119	4960259		
10		423.25	40838	688318		



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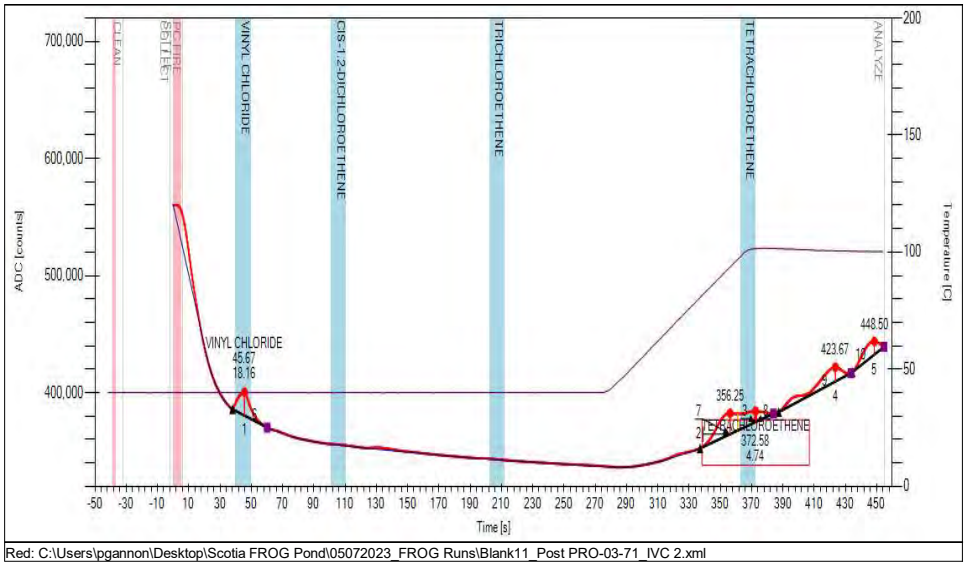
Pump=15%,56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.67	19851	179518	18.16	18.16
2		356.25	17925	250769		
3	TETRACHLOROETHENE	372.58	9298	187231	4.74	4.74
4		423.67	12021	254276		
5		448.5	11273	142761		
6	VINYL CHLORIDE	45.67	19851	179518	18.16	18.16
7		356.25	17925	250769		
8	TETRACHLOROETHENE	372.58	9298	187231	4.74	4.74
9		423.67	12021	254276		
10		448.5	11273	142761		



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2023-05-07 14:12:09Z
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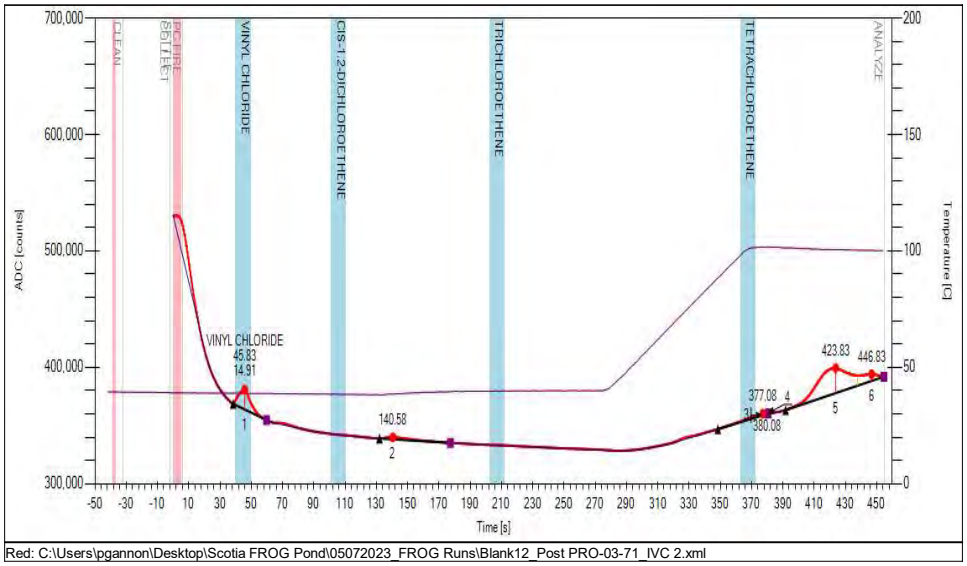
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.83	16980	147368	14.91	14.91
2		140.58	1702	33909		
3		377.08	1290	19297		
4		380.08	395	775		
5		423.83	21463	507485		
6		446.83	5739	88896		



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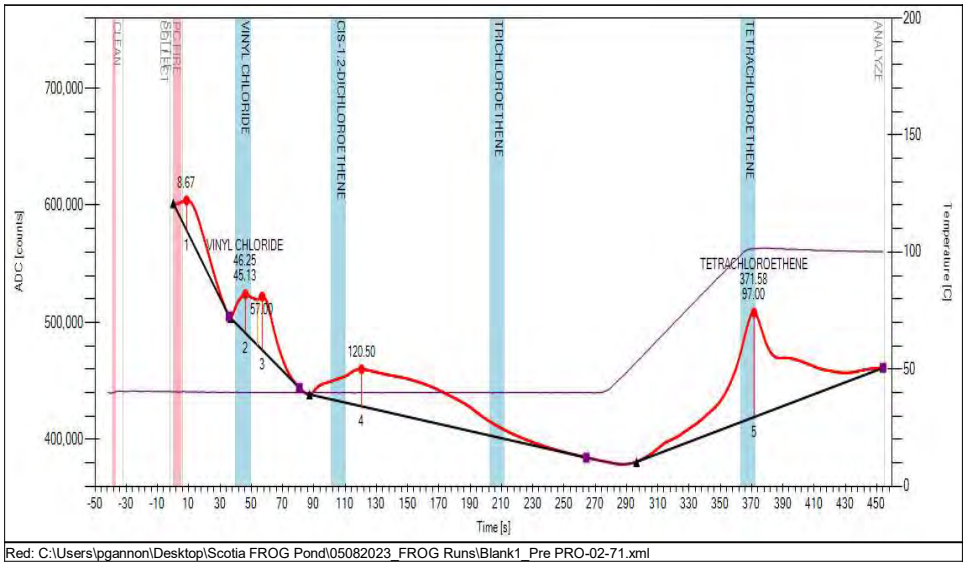
Pump=15%,56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		8.67	25575	595377		
2	VINYL CHLORIDE	46.25	33151	446199	45.13	45.13
3		57	45710	581667		
4		120.5	31650	3072871		
5	TETRACHLOROETHENE	371.58	89196	3830783	97.00	97



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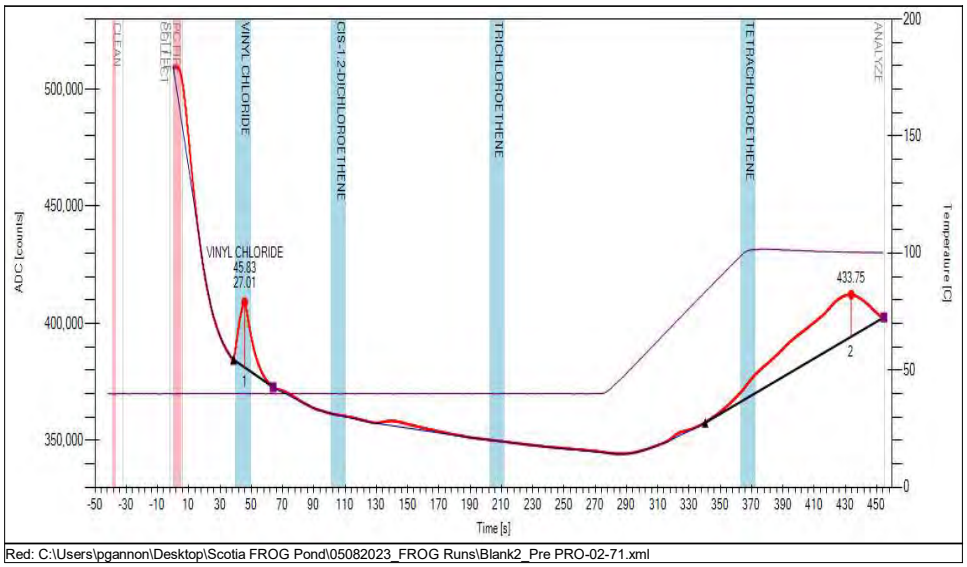
Pump=15%,53%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.83	27866	267000	27.01	27.01
2		433.75	17960	1147500		



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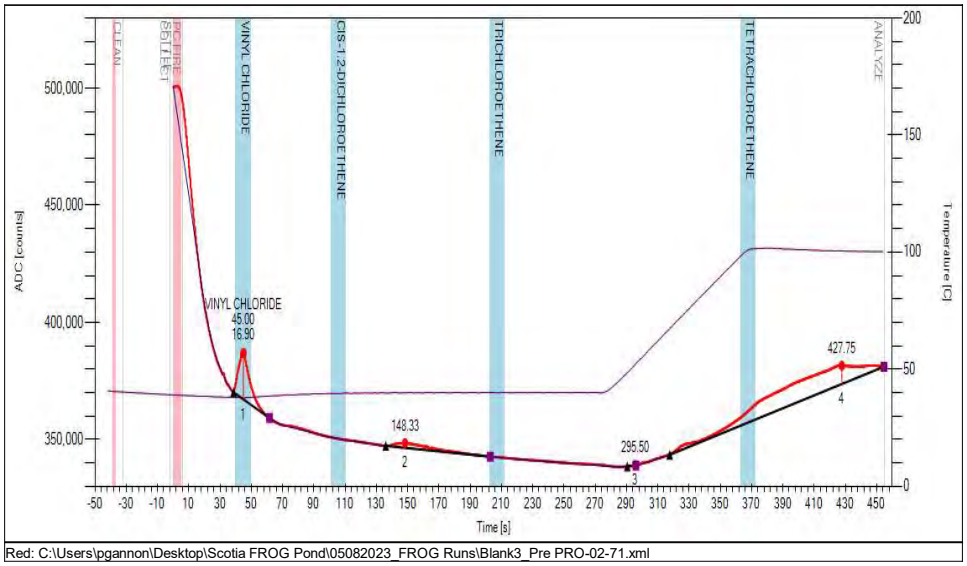
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,54%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	19771	167076	16.90	16.9
2		148.33	1990	56821		
3		295.5	274	600		
4		427.75	7853	655099		



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2023-05-08 12:31:05Z
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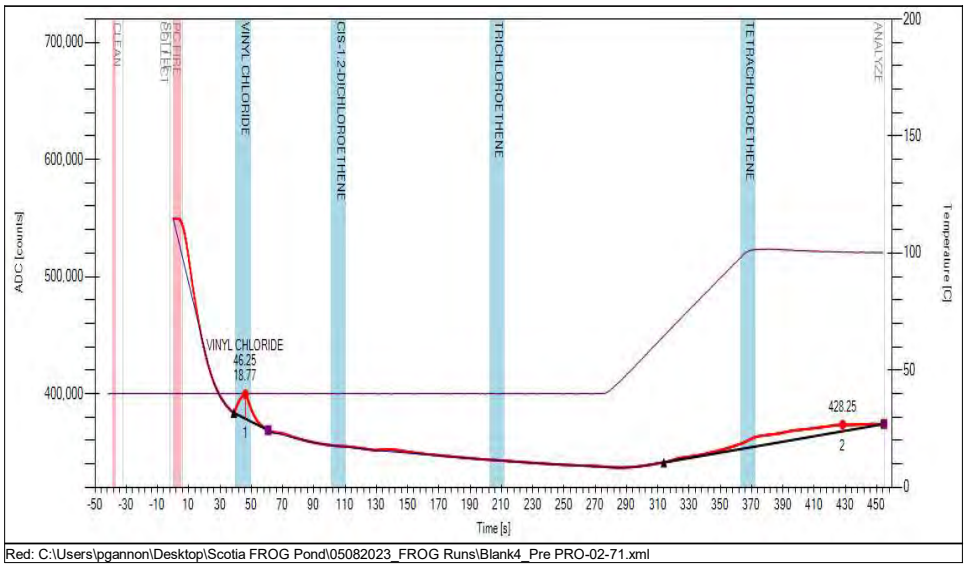
Pump=15%,54%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.25	20886	185617	18.77	18.77
2		428.25	5659	611446		



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2023-05-08 13:52:49Z
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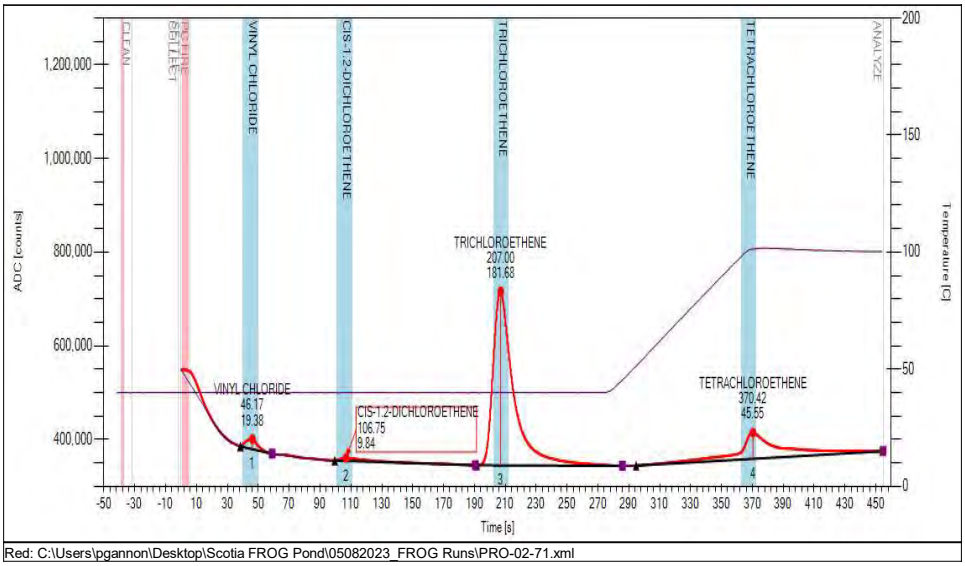
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.17	21545	191642	19.38	19.38
2	CIS-1.2-DICHLOROETHENE	106.75	6396	142036	9.84	9.84
3	TRICHLOROETHENE	207	371414	5760403	181.68	181.68
4	TETRACHLOROETHENE	370.42	55734	1798915	45.55	45.55



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2023-05-08 14:03:17Z
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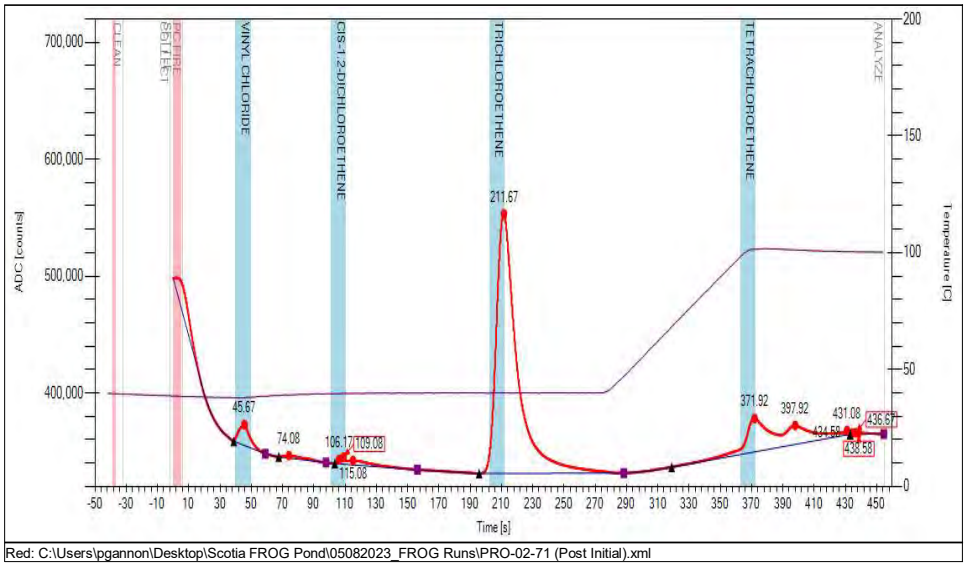
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.



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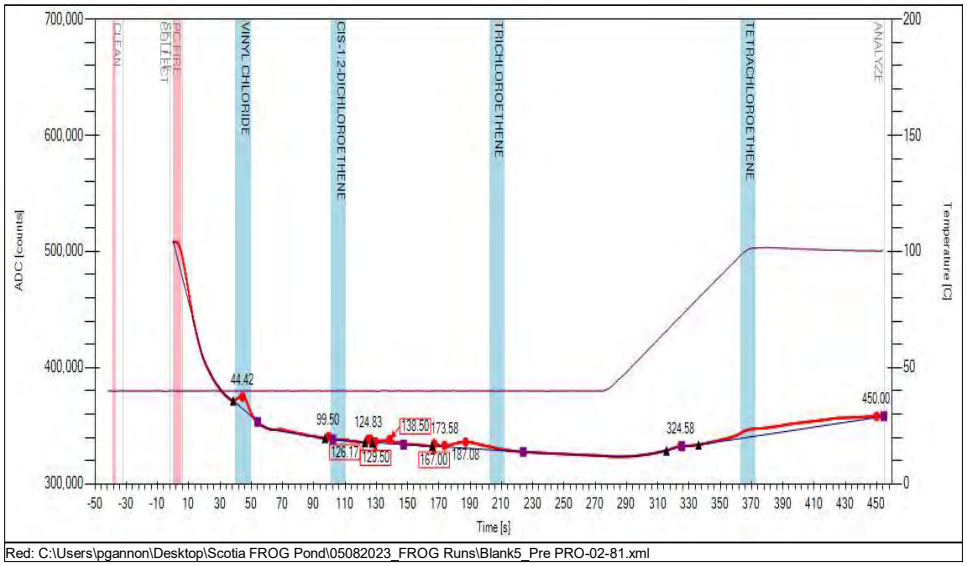
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.

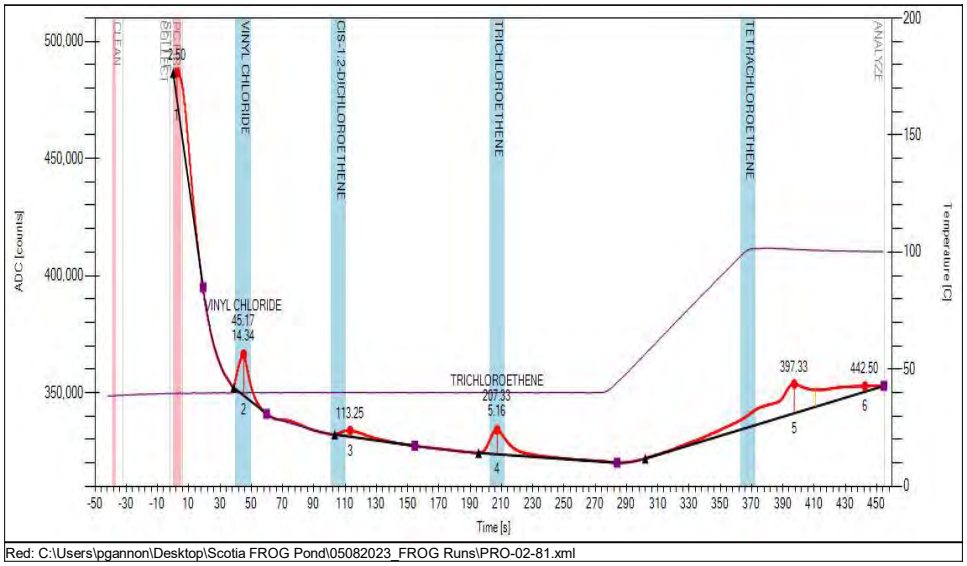


Red: C:\Users\pgannon\Desktop\Scotia FROG Pond\05082023_FROG Runs\Blank5_Pre PRO-02-81.xml

2023-05-08 14:34:01Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.5	11676	220187		
2	VINYL CHLORIDE	45.17	17663	141728	14.34	14.34
3		113.25	2643	51793		
4	TRICHLOROETHENE	207.33	10433	163581	5.16	5.16
5		397.33	12518	461830		
6		442.5	2500	170732		



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2023-05-08 14:44:28Z
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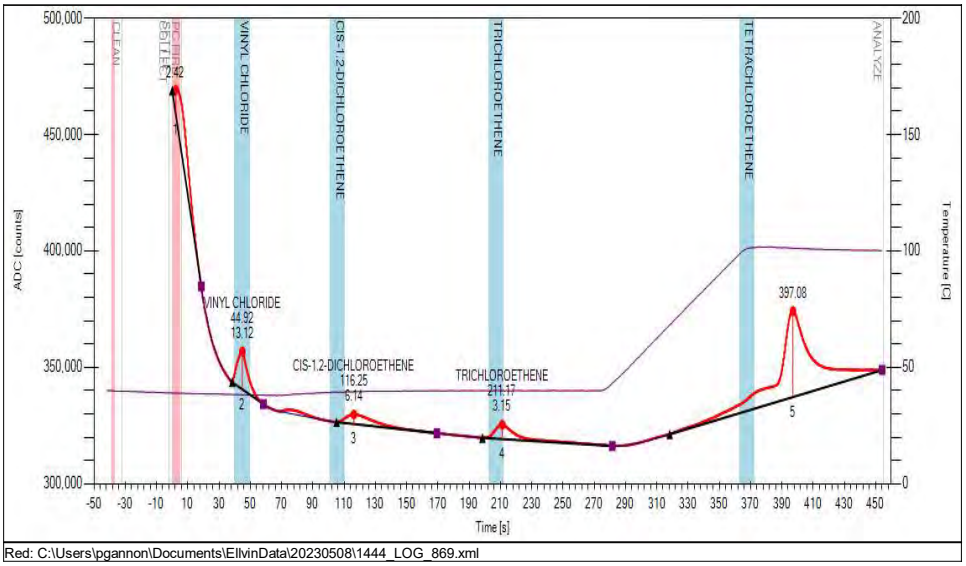
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	10787	205703		
2	VINYL CHLORIDE	44.92	16214	129734	13.12	13.12
3	CIS-1.2-DICHLOROETHENE	116.25	4086	88583	6.14	6.14
4	TRICHLOROETHENE	211.17	6136	99984	3.15	3.15
5		397.08	36938	966159		



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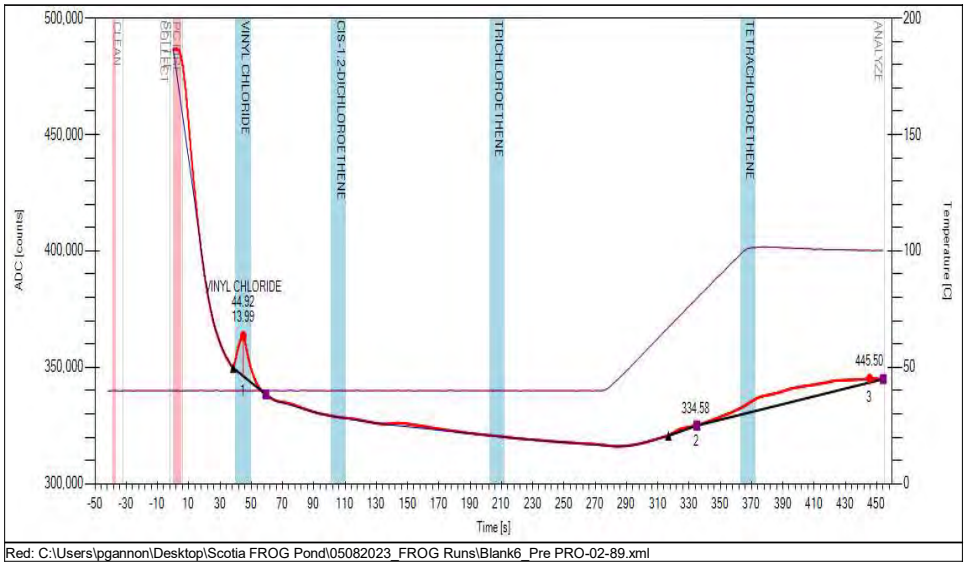
2023-05-08 14:58:37Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.92	17201	138296	13.99	13.99
2		334.58	216	9873		
3		445.5	1697	410420		



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2023-05-08 15:11:00Z
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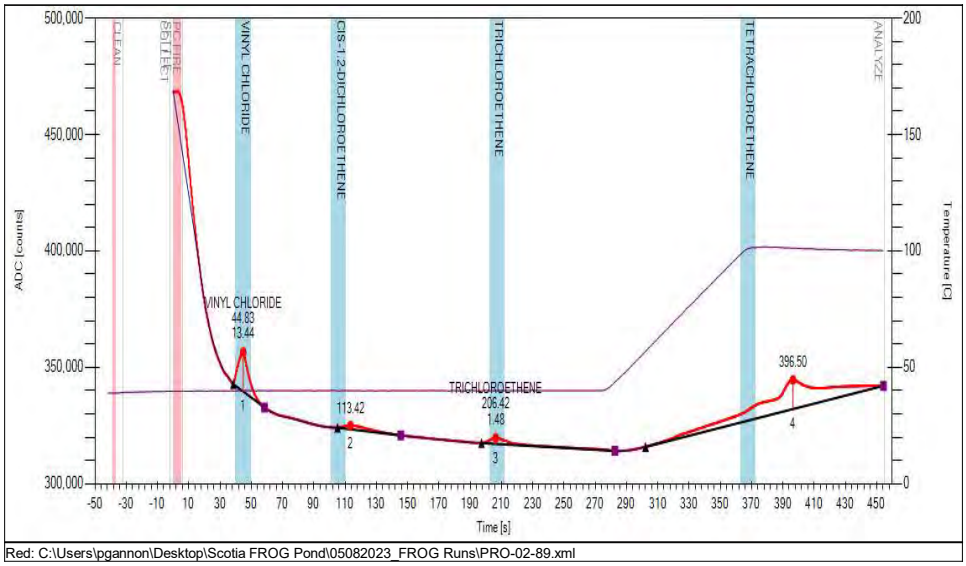
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.83	16872	132836	13.44	13.44
2		113.42	1621	32061		
3	TRICHLOROETHENE	206.42	2628	46961	1.48	1.48
4		396.5	12514	600127		



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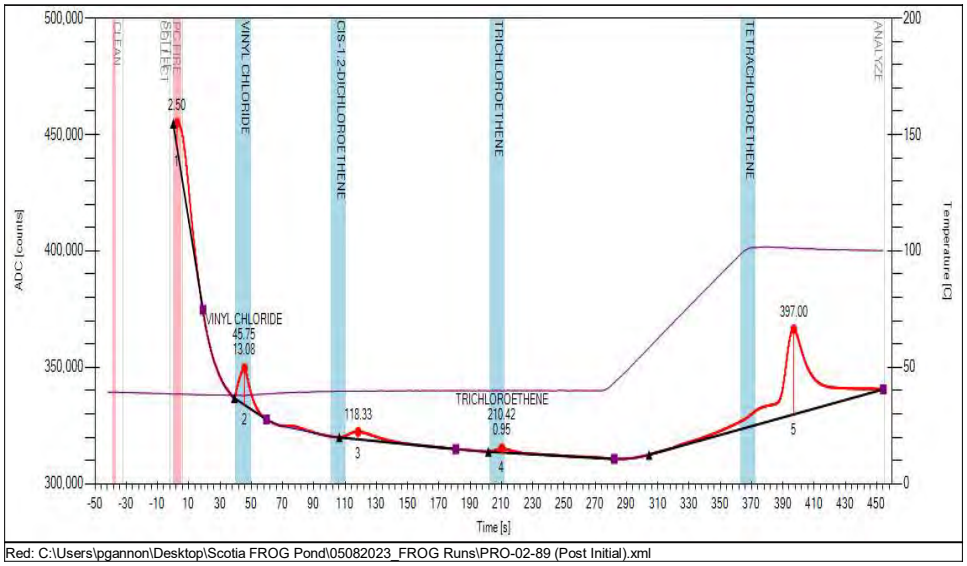
2023-05-08 15:21:52Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.5	10421	195723		
2	VINYL CHLORIDE	45.75	15831	129302	13.08	13.08
3		118.33	3244	71690		
4	TRICHLOROETHENE	210.42	1730	30155	0.95	0.95
5		397	36617	942943		



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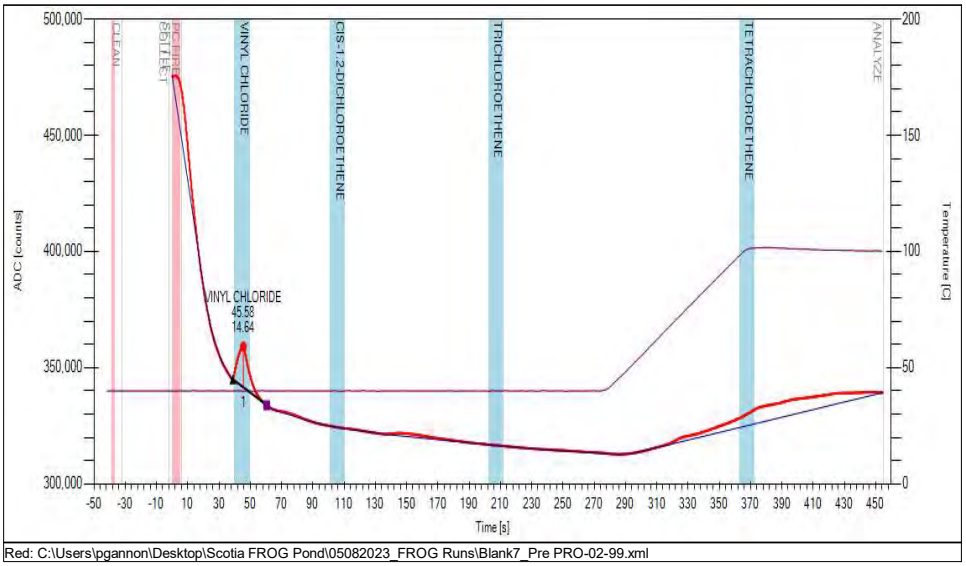
2023-05-08 15:37:35Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.58	17542	144780	14.64	14.64



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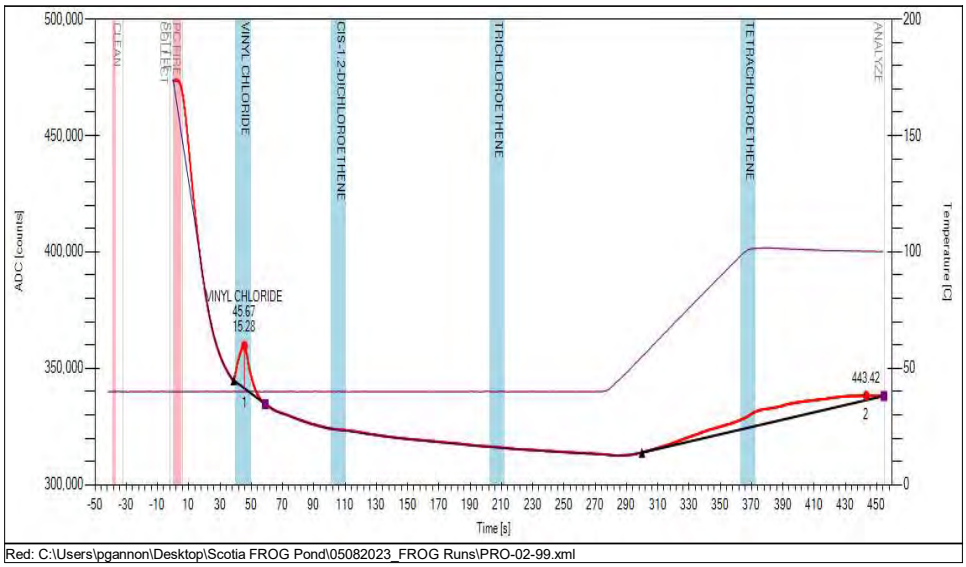
2023-05-08 15:55:34Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.67	18219	151037	15.28	15.28
2		443.42	1934	528485		



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2023-05-08 16:11:23Z
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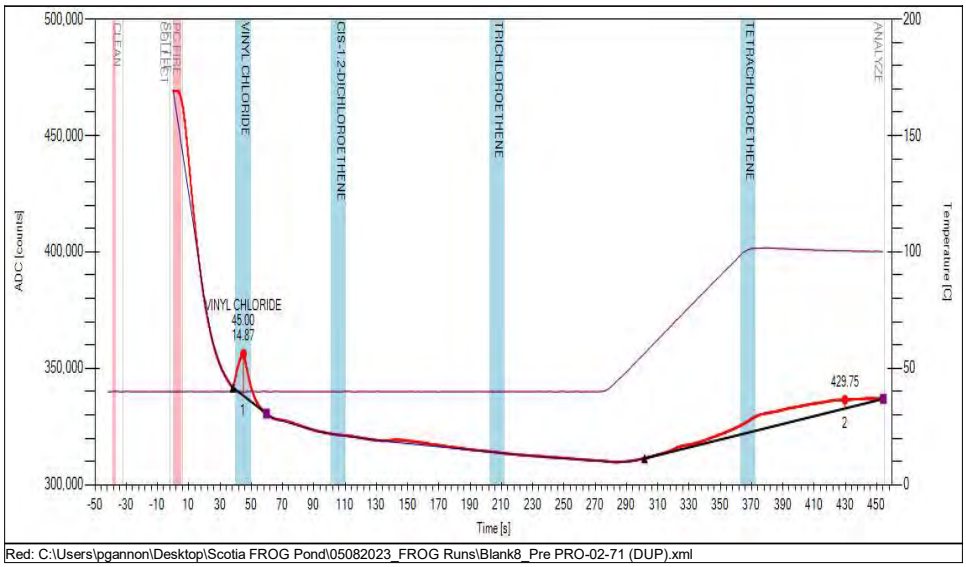
Pump=15%, 57%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	17910	147016	14.87	14.87
2		429.75	3748	493703		



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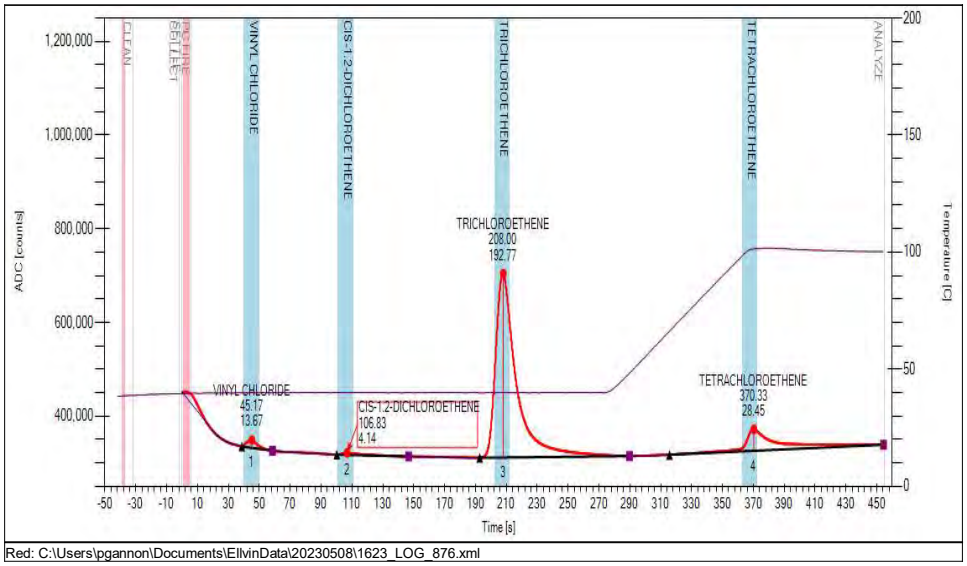
Pump=15%, 57%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.17	16806	135140	13.67	13.67
2	CIS-1.2-DICHLOROETHENE	106.83	4137	59707	4.14	4.14
3	TRICHLOROETHENE	208	392560	6112135	192.77	192.77
4	TETRACHLOROETHENE	370.33	45926	1123341	28.45	28.45



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PRO-02-72 (DUP)

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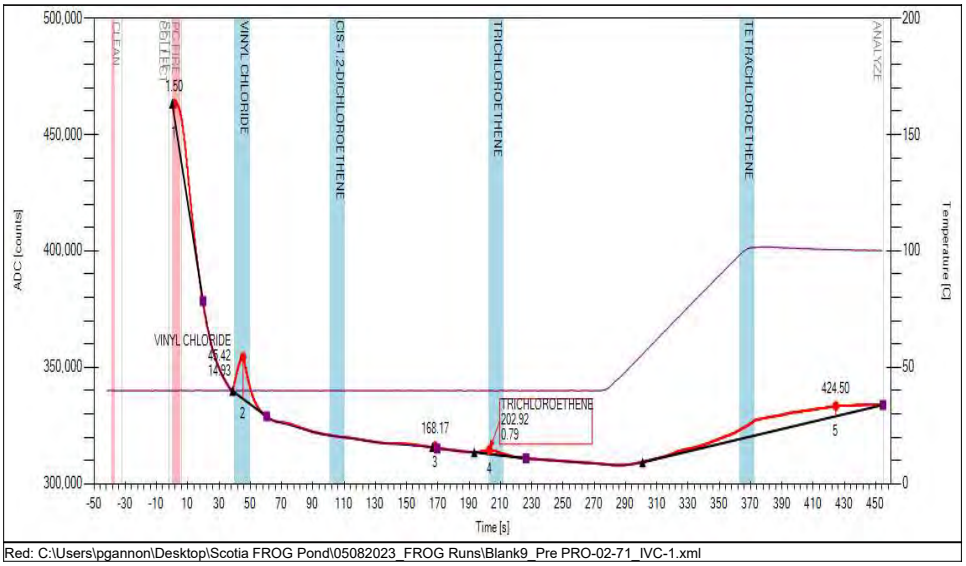
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	6065	194005		
2	VINYL CHLORIDE	45.42	17892	147621	14.93	14.93
3		168.17	798	1143		
4	TRICHLOROETHENE	202.92	1772	25126	0.79	0.79
5		424.5	4394	487655		



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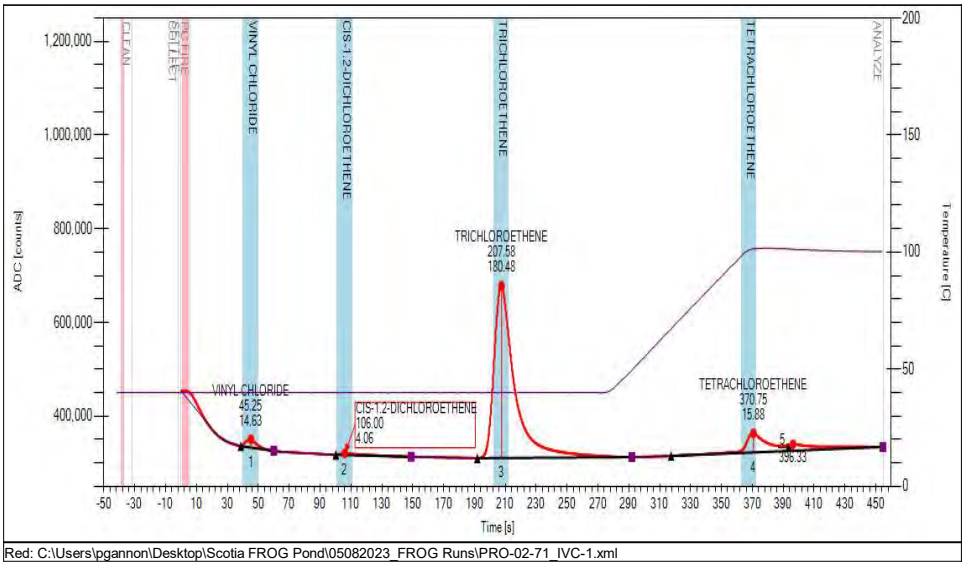
2023-05-08 17:09:48Z
FROG-0230:Ta=275,Tb=90,Tc=90,Ct=40,Ht=100,collect=30,clean=6,presettle=4,settle=2,fire=6;
Pump=15%,57%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	17766	144622	14.63	14.63
2	CIS-1.2-DICHLOROETHENE	106	3626	58625	4.06	4.06
3	TRICHLOROETHENE	207.58	367244	5722328	180.48	180.48
4	TETRACHLOROETHENE	370.75	40588	626957	15.88	15.88
5		396.33	13717	389627		



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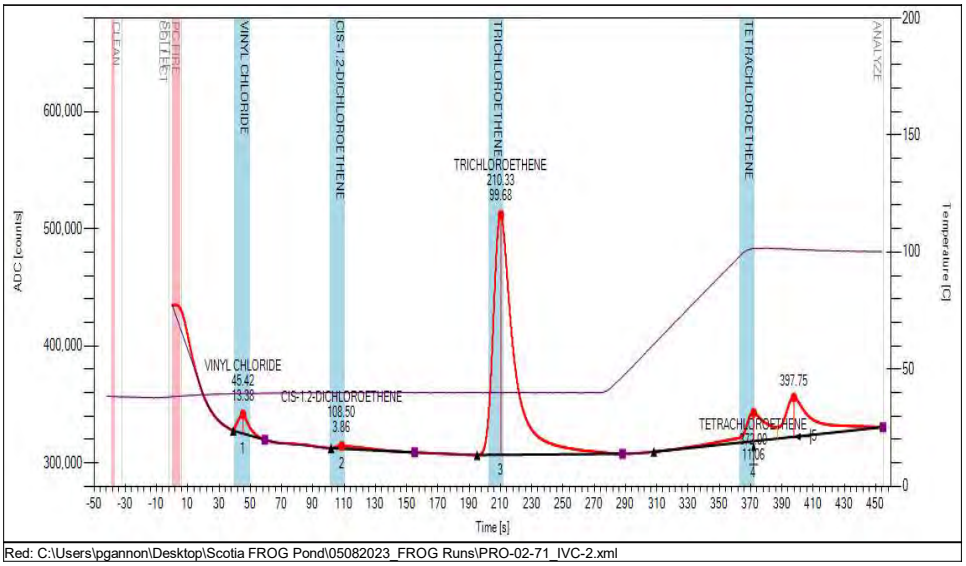
2023-05-08 17:21:09Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.42	16277	132329	13.38	13.38
2	CIS-1.2-DICHLOROETHENE	108.5	2514	55766	3.86	3.86
3	TRICHLOROETHENE	210.33	205082	3160426	99.68	99.68
4	TETRACHLOROETHENE	372	24211	436896	11.06	11.06
5		397.75	33522	702123		



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2023-05-08 17:36:28Z
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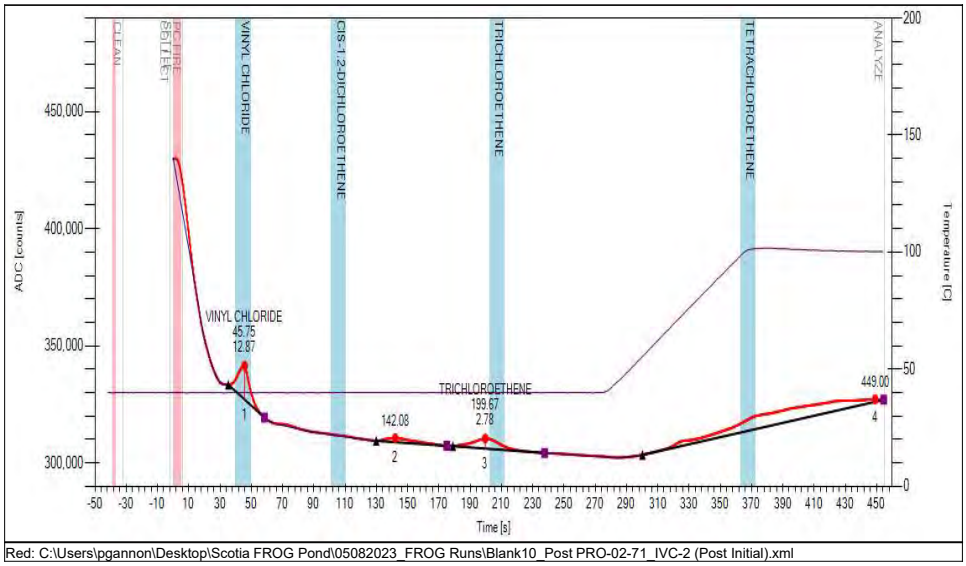
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.75	14444	127282	12.87	12.87
2		142.08	1726	39240		
3	TRICHLOROETHENE	199.67	4305	88028	2.78	2.78
4		449	1057	457763		



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2023-05-09 07:37:50Z
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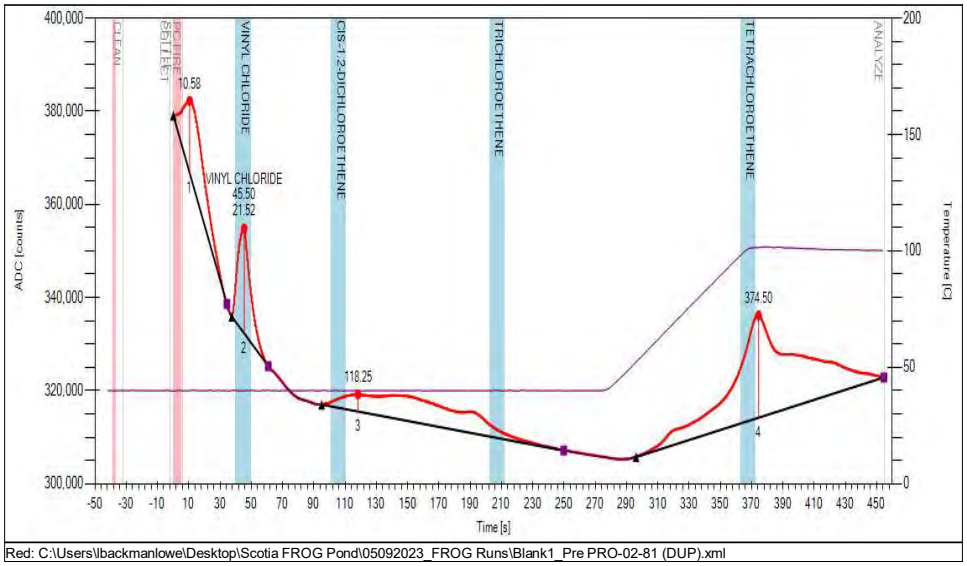
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		10.58	15427	275229		
2	VINYL CHLORIDE	45.5	22496	212724	21.52	21.52
3		118.25	3666	453105		
4		374.5	21969	1100920		



Red: C:\Users\lbackmanlowe\Desktop\Scotia FROG Pond\05092023_FROG Runs\Blank1_Pre PRO-02-81 (DUP).xml

2023-05-09 07:50:06Z
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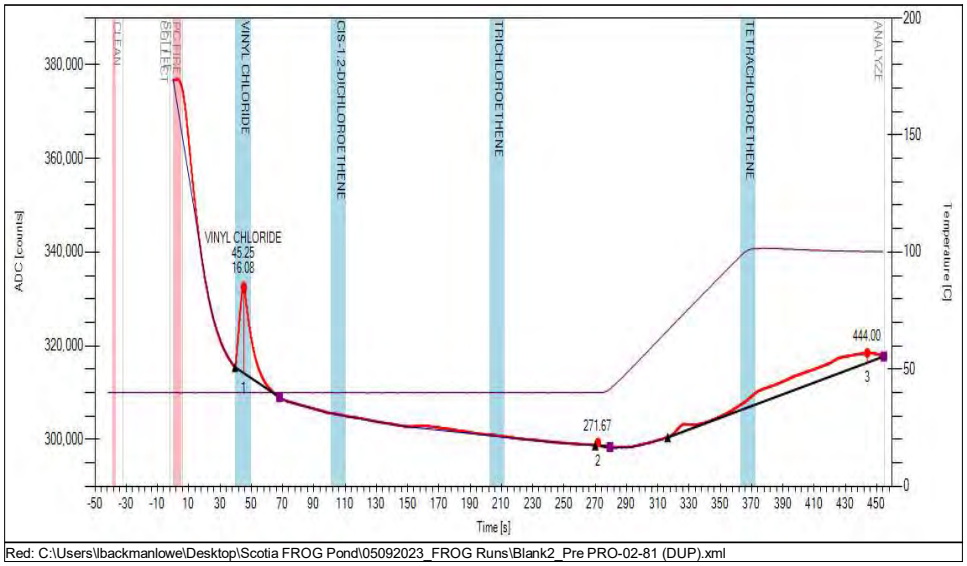
Pump=15%, 51%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	18399	158963	16.08	16.08
2		271.67	665	1817		
3		444	2075	251952		



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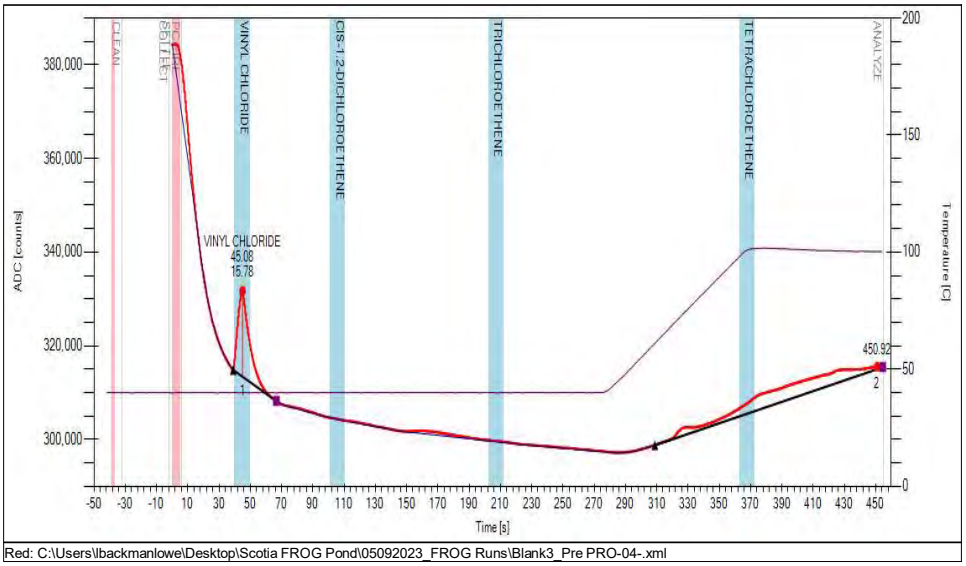
2023-05-09 08:02:37Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 51%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.08	18305	156024	15.78	15.78
2		450.92	528	254797		



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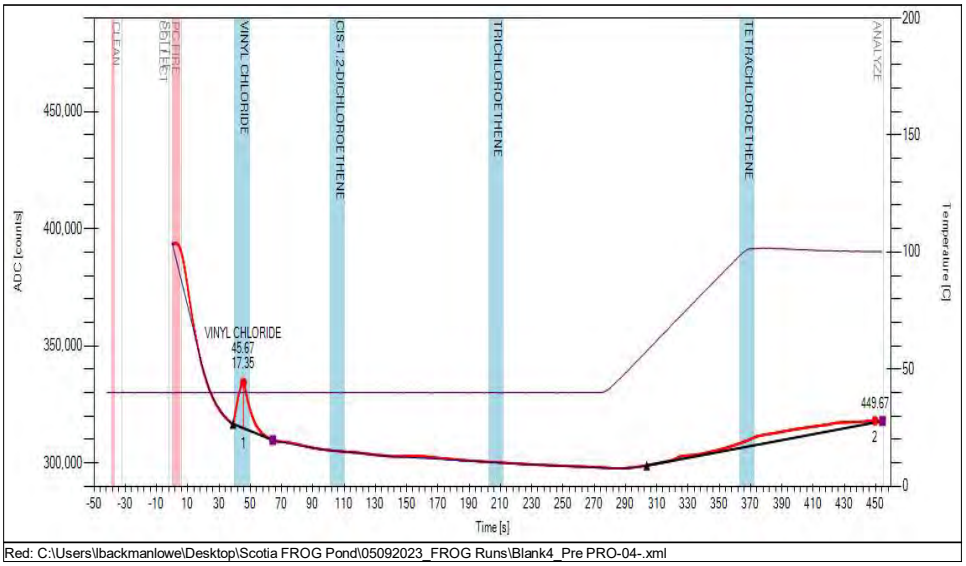
Pump=15%, 52%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.67	19448	171526	17.35	17.35
2		449.67	729	289781		



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2023-05-09 12:48:26Z
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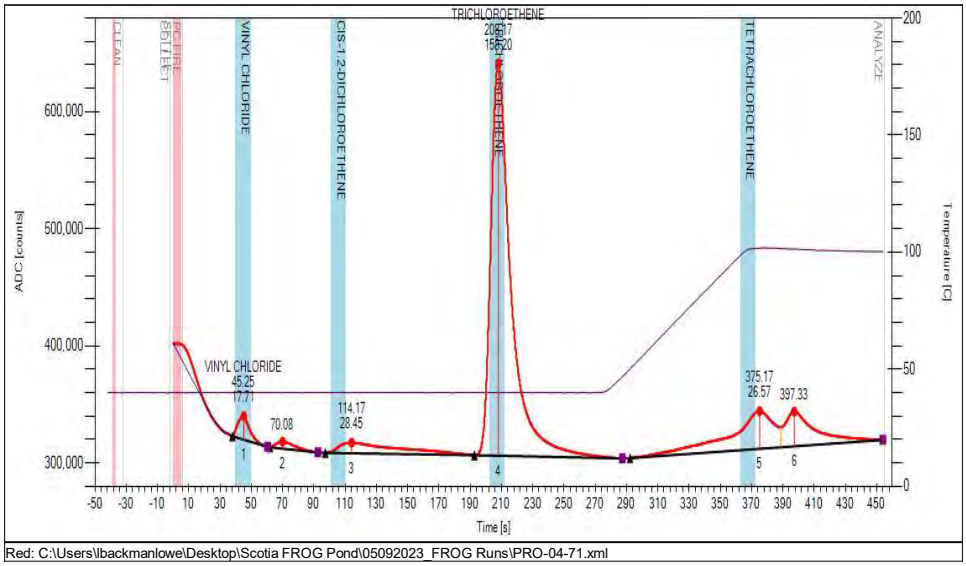
Pump=15%, 53%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.25	20208	175074	17.71	17.71
2		70.08	5973	83474		
3		114.17	9091	410448	28.45	28.45
4	TRICHLOROETHENE	208.17	335137	5015957	158.20	158.2
5		375.17	32236	1049416	26.57	26.57
6		397.33	29764	683108		



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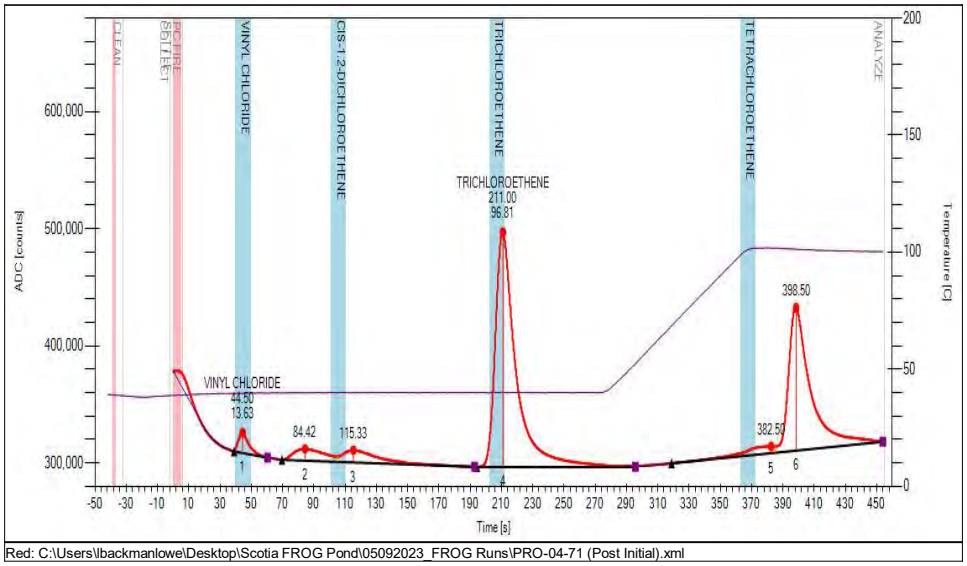
2023-05-09 12:58:22Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 52%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.5	17533	134737	13.63	13.63
2		84.42	10038	232554		
3		115.33	10488	280434		
4	TRICHLOROETHENE	211	200458	3069618	96.81	96.81
5		382.5	5774	142635		
6		398.5	122072	1997765		



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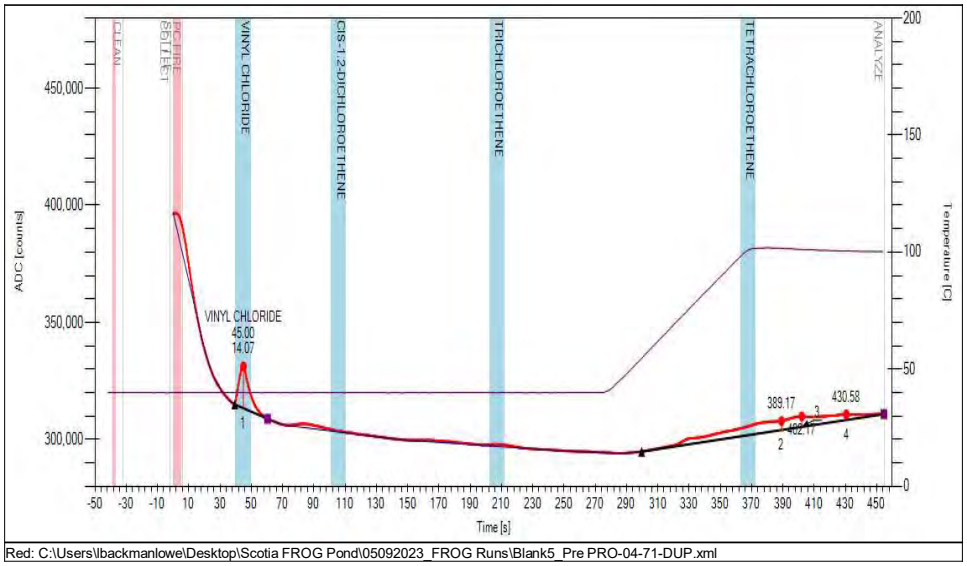
2023-05-09 13:14:48Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	17803	139130	14.07	14.07
2		389.17	3869	211295		
3		402.17	4427	83033		
4		430.58	2415	86255		



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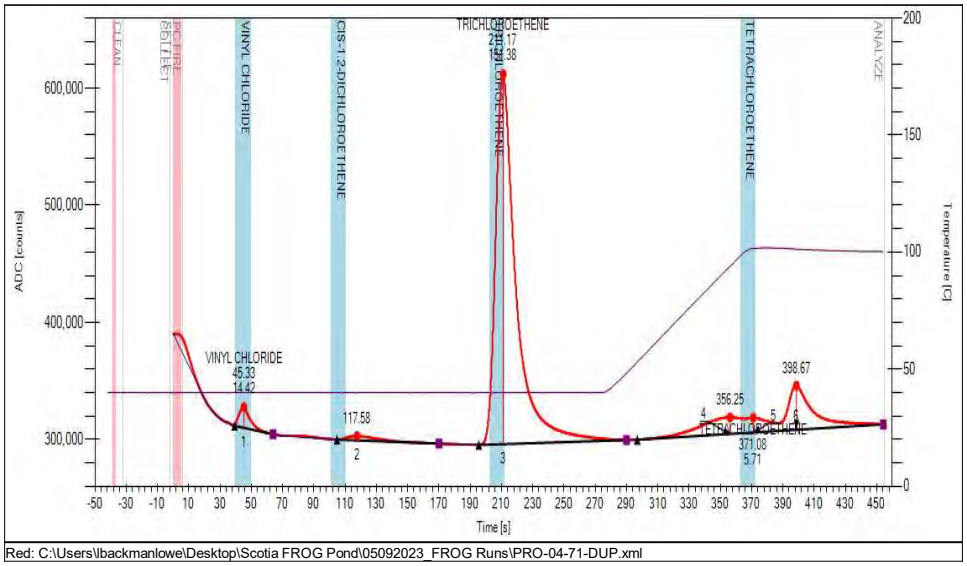
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.33	17737	142531	14.42	14.42
2		117.58	3822	84455		
3	TRICHLOROETHENE	211.17	315941	4799735	151.38	151.38
4		356.25	14164	436790		
5	TETRACHLOROETHENE	371.08	12635	225453	5.71	5.71
6		398.67	37736	700471		



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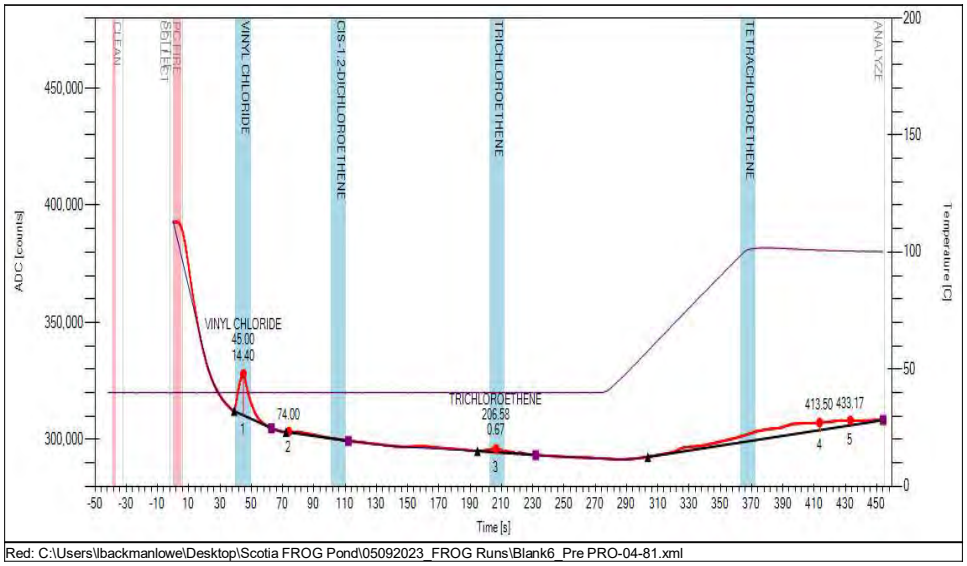
2023-05-09 13:43:17Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	17685	142343	14.40	14.4
2		74	309	14199		
3	TRICHLOROETHENE	206.58	1401	21353	0.67	0.67
4		413.5	3266	254482		
5		433.17	2100	73320		



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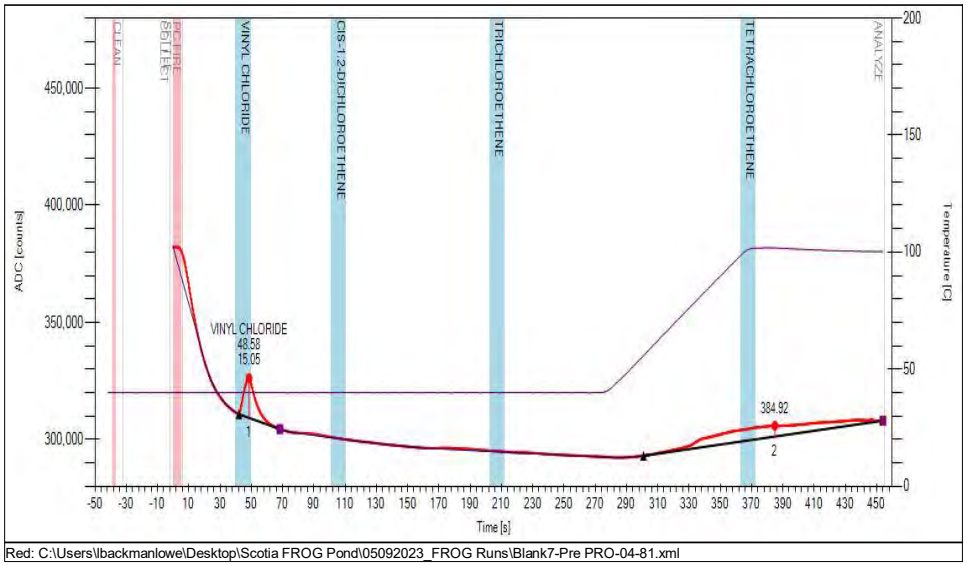
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	48.58	16988	148840	15.05	15.05
2		384.92	4612	424525		



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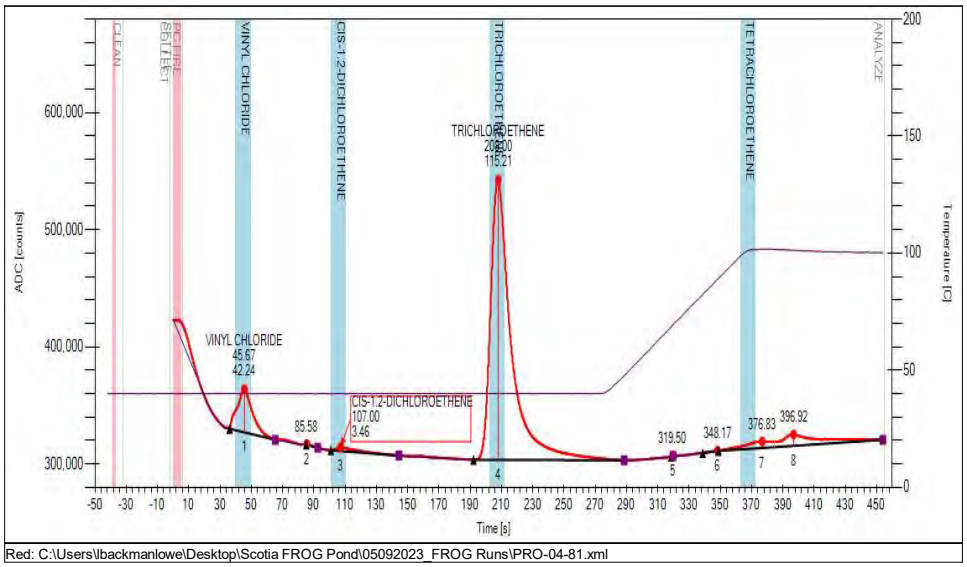
Pump=15%, 53%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.67	36844	417646	42.24	42.24
2		85.58	637	2372		
3	CIS-1.2-DICHLOROETHENE	107	3123	49974	3.46	3.46
4	TRICHLOROETHENE	208	239007	3653013	115.21	115.21
5		319.5	977	458		
6		348.17	398	1715		
7		376.83	5447	114856		
8		396.92	9672	271633		



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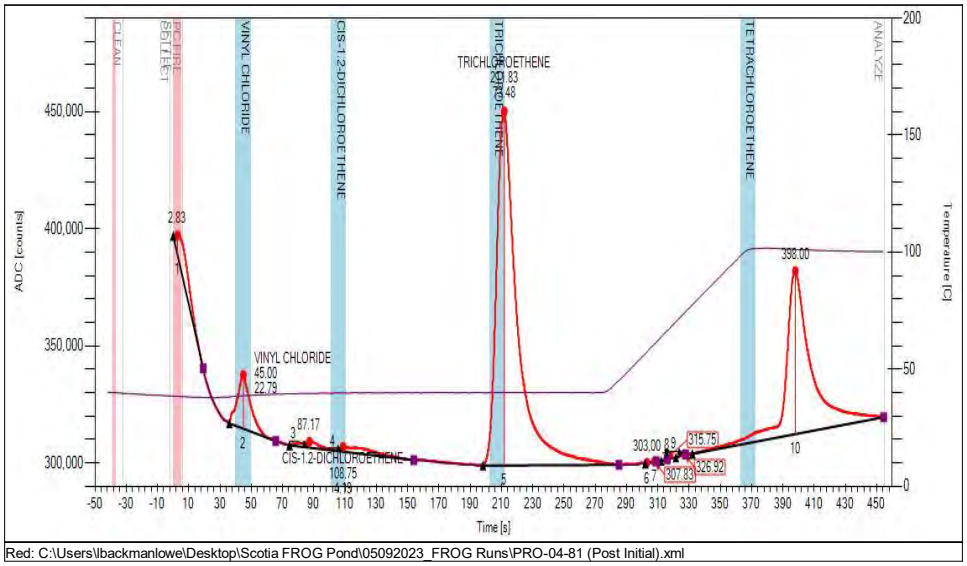
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.83	8407	136242		
2	VINYL CHLORIDE	45	22955	225355	22.79	22.79
3		87.17	2573	38441		
4	CIS-1.2-DICHLOROETHENE	108.75	2101	60468	4.19	4.19
5	TRICHLOROETHENE	211.83	151168	2329786	73.48	73.48
6		303	231	133		
7		307.83	240	865		
8		315.75	353	311		
9		326.92	506	874		
10		398	69653	1300504		



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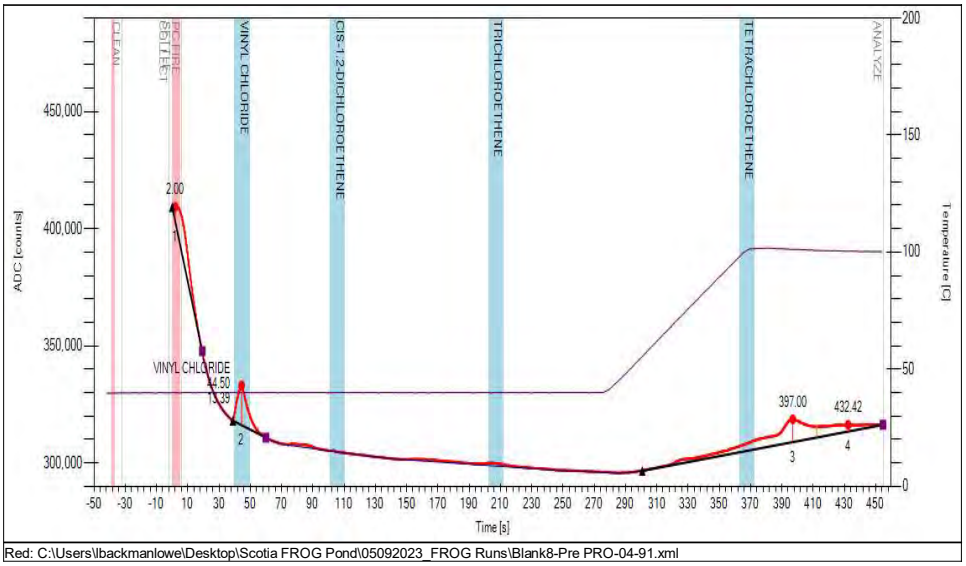
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	6231	155758		
2	VINYL CHLORIDE	44.5	16961	132385	13.39	13.39
3		397	9739	331166		
4		432.42	2842	107037		



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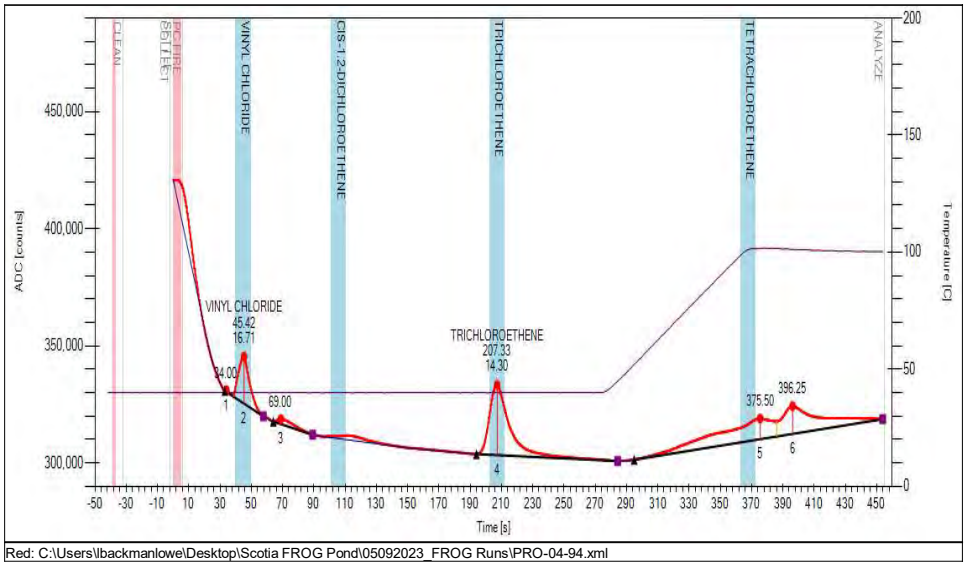
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		34	721	3459		
2	VINYL CHLORIDE	45.42	20110	165207	16.71	16.71
3		69	2178	31242		
4	TRICHLOROETHENE	207.33	29974	453521	14.30	14.3
5		375.5	8860	386425		
6		396.25	11898	332827		



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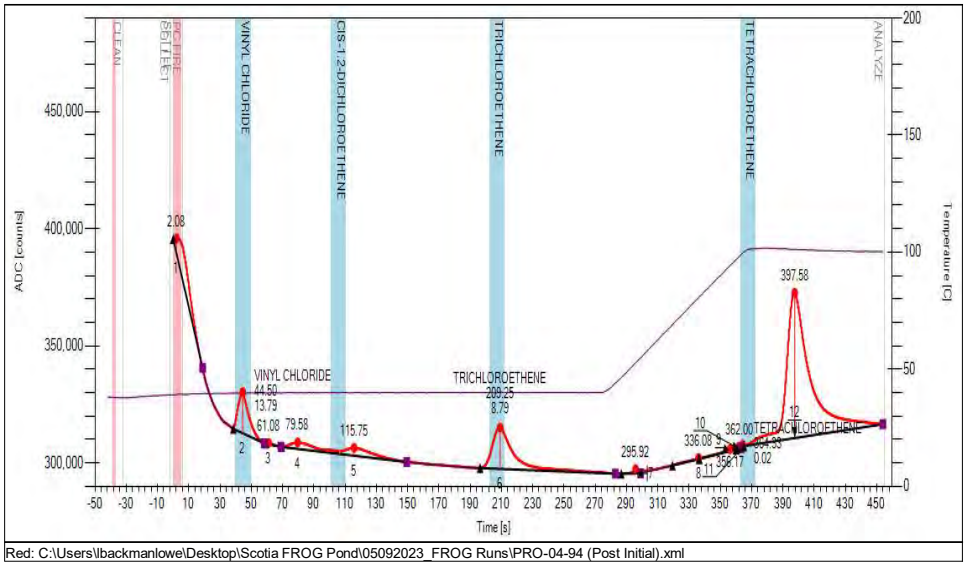
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.08	6129	138188		
2	VINYL CHLORIDE	44.5	17516	136364	13.79	13.79
3		61.08	524	2462		
4		79.58	2786	58231		
5		115.75	3312	69147		
6	TRICHLOROETHENE	209.25	17576	278773	8.79	8.79
7		295.92	1811	6241		
8		336.08	509	3210		
9		356.17	807	6078		
10		362	912	1780		
11	TETRACHLOROETHENE	364.33	865	740	0.02	0.02
12		397.58	62025	1097662		



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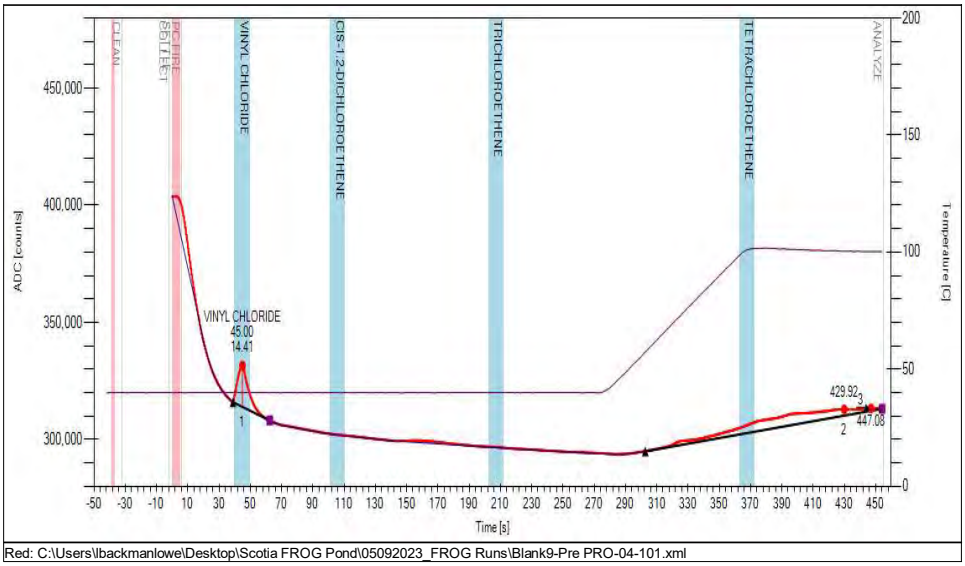
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	17638	142473	14.41	14.41
2		429.92	2690	335638		
3		447.08	1035	24424		



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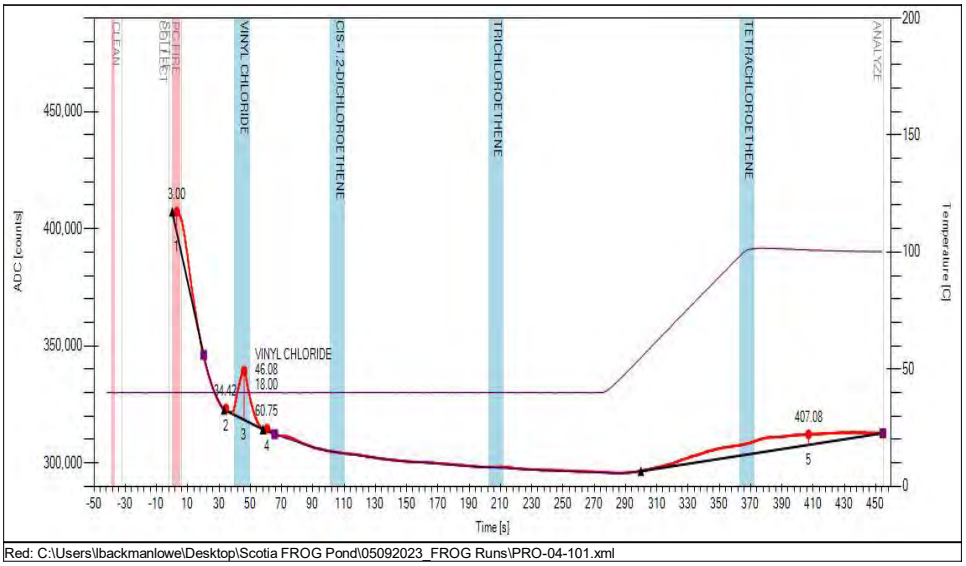
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		3	8882	148053		
2		34.42	899	3074		
3	VINYL CHLORIDE	46.08	20925	178005	18.00	18
4		60.75	1037	4433		
5		407.08	4482	504293		



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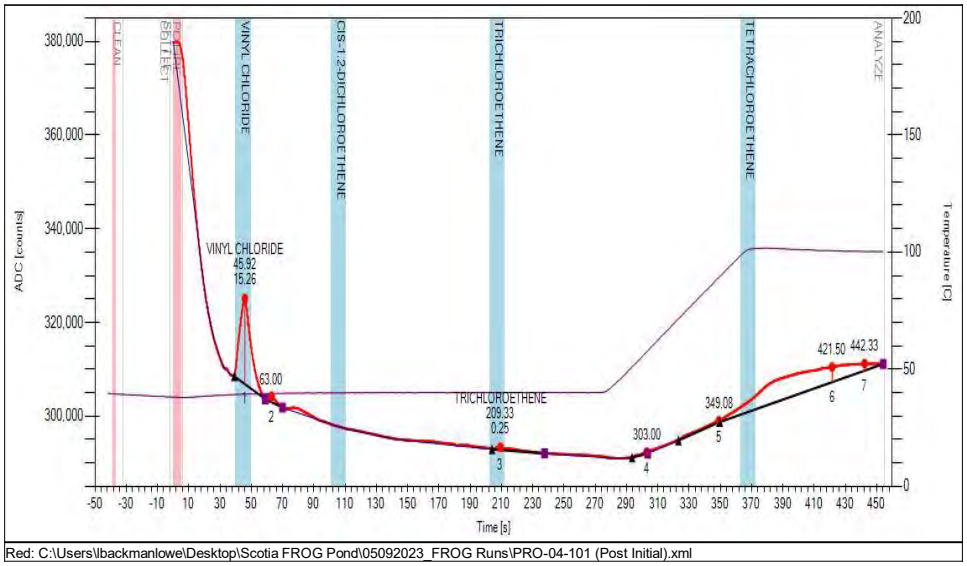
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.92	18254	150916	15.26	15.26
2		63	1271	6745		
3	TRICHLOROETHENE	209.33	569	7808	0.25	0.25
4		303	390	1946		
5		349.08	341	6783		
6		421.5	3249	231361		
7		442.33	1496	58048		



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2023-05-09 17:13:25Z
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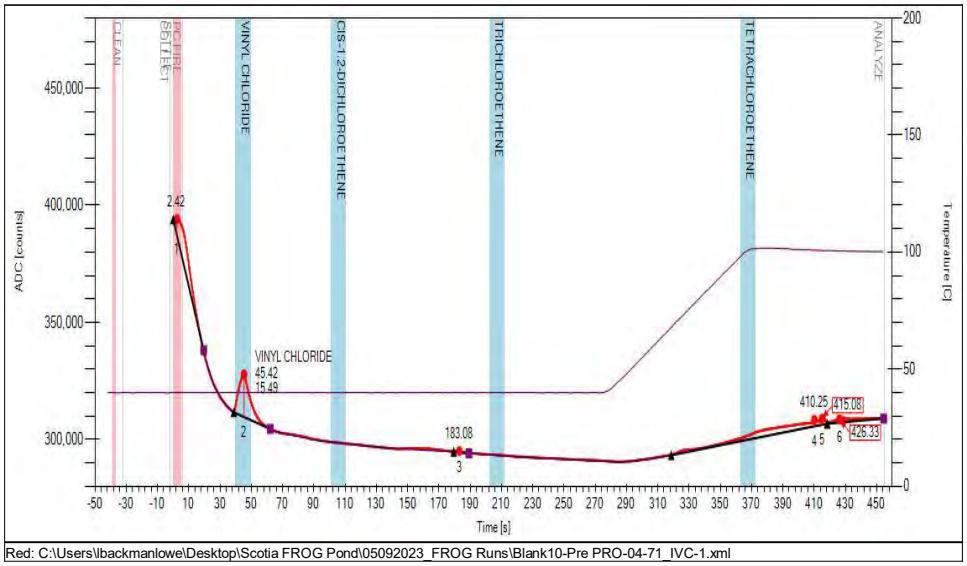
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	6827	136475		
2	VINYL CHLORIDE	45.42	18168	153135	15.49	15.49
3		183.08	500	1473		
4		410.25	2748	137918		
5		415.08	2565	7291		
6		426.33	1391	27167		



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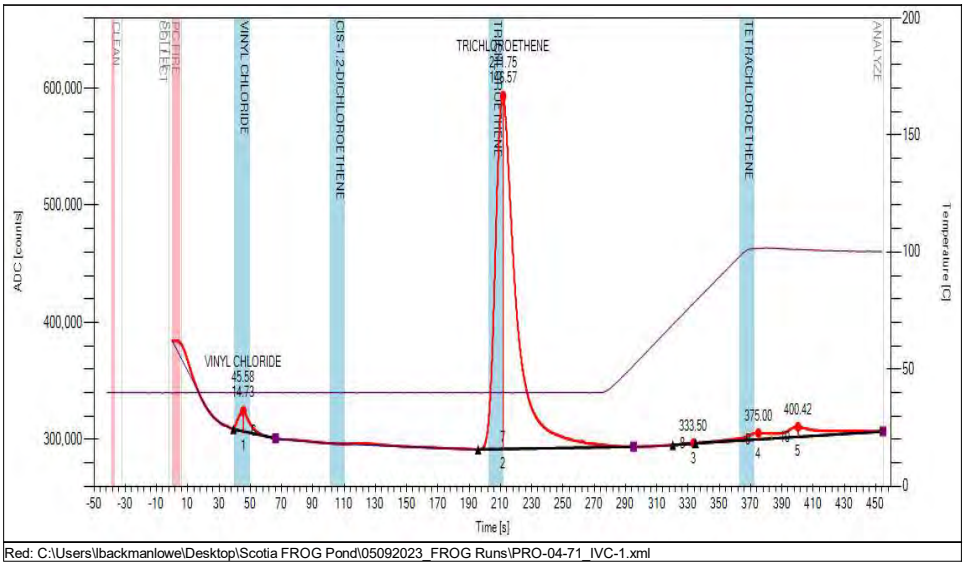
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.58	17391	145610	14.73	14.73
2	TRICHLOROETHENE	211.75	301619	4647352	146.57	146.57
3		333.5	163	2426		
4		375	5362	103006		
5		400.42	8558	259770		
6	VINYL CHLORIDE	45.58	17391	145610	14.73	14.73
7	TRICHLOROETHENE	211.75	301619	4647352	146.57	146.57
8		333.5	163	2426		
9		375	5362	103006		
10		400.42	8558	259770		



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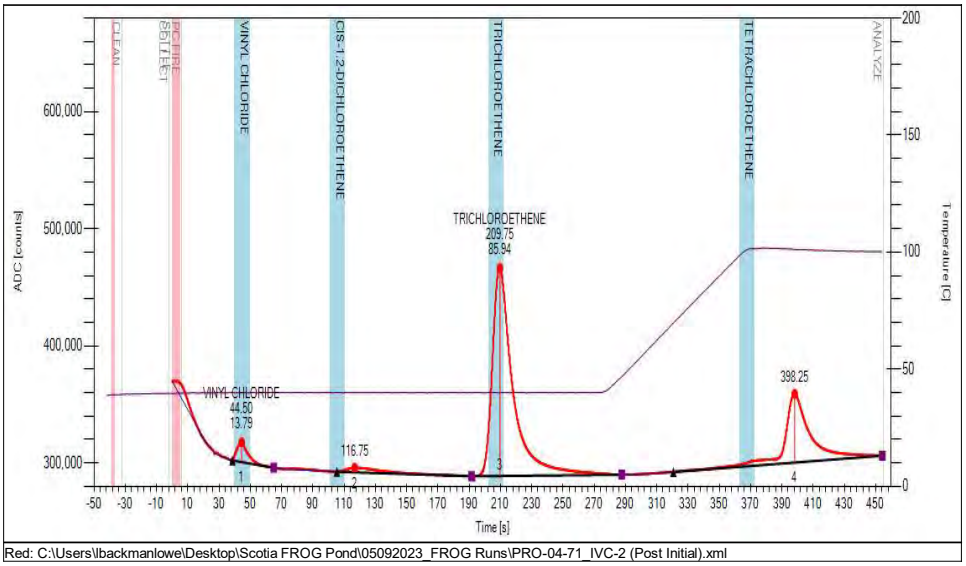
Pump=15%, 55%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.5	16995	136307	13.79	13.79
2		116.75	3982	110024		
3	TRICHLOROETHENE	209.75	177732	2724877	85.94	85.94
4		398.25	58725	1100622		



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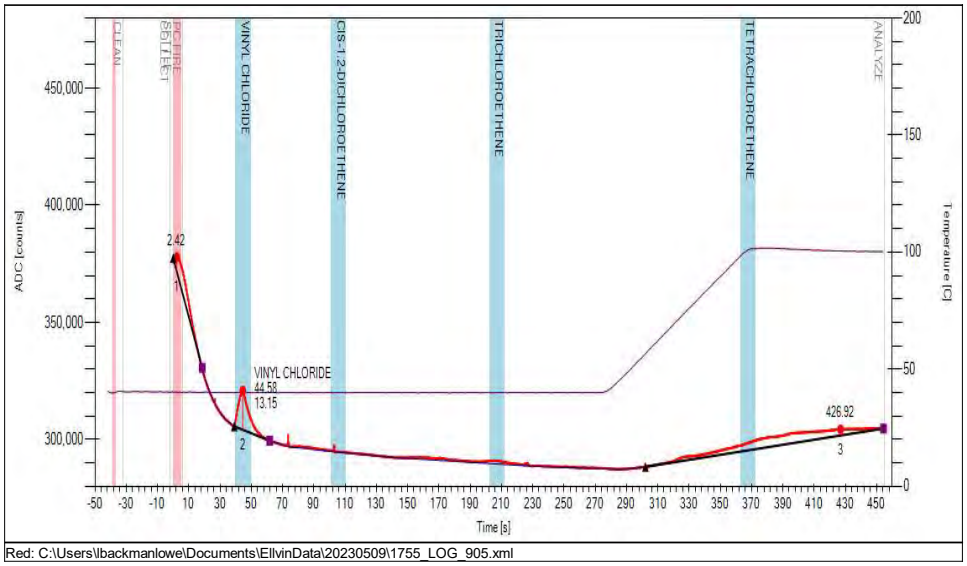
Pump=15%, 54%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	6258	97659		
2	VINYL CHLORIDE	44.58	16749	130053	13.15	13.15
3		426.92	2608	334147		



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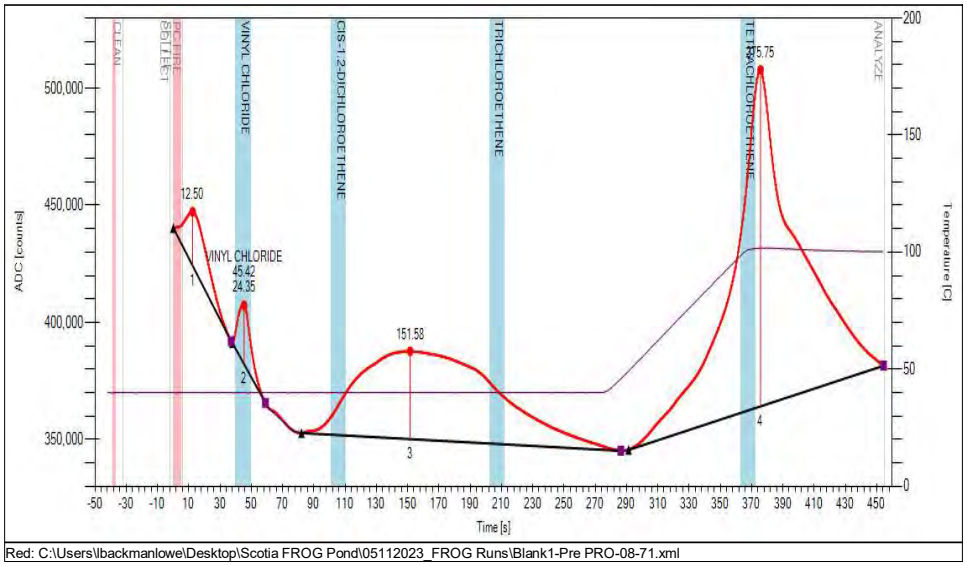
Pump=15%, 53%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		12.5	23053	420012		
2	VINYL CHLORIDE	45.42	25134	240705	24.35	24.35
3		151.58	37495	3978575		
4		375.75	143685	6824359		



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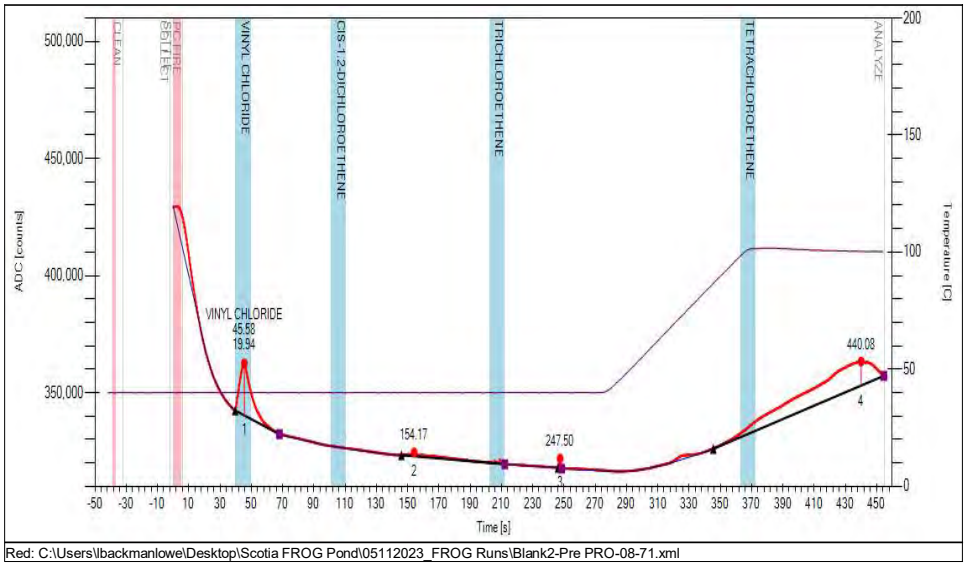
Pump=15%, 51%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.58	22208	197178	19.94	19.94
2		154.17	1654	30200		
3		247.5	4083	1808		
4		440.08	10272	629731		



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2023-05-11 07:05:04Z
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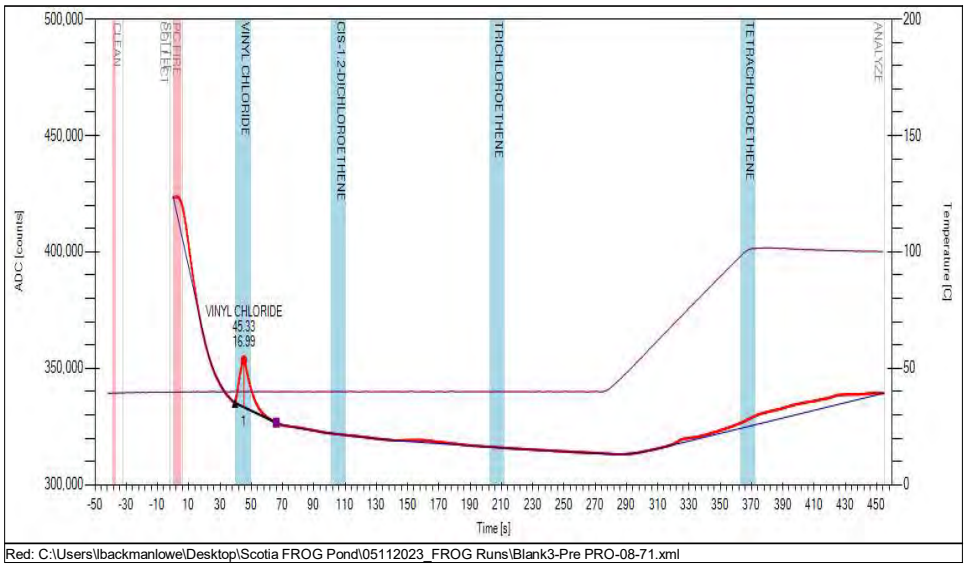
Pump=15%, 52%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.33	20127	167984	16.99	16.99



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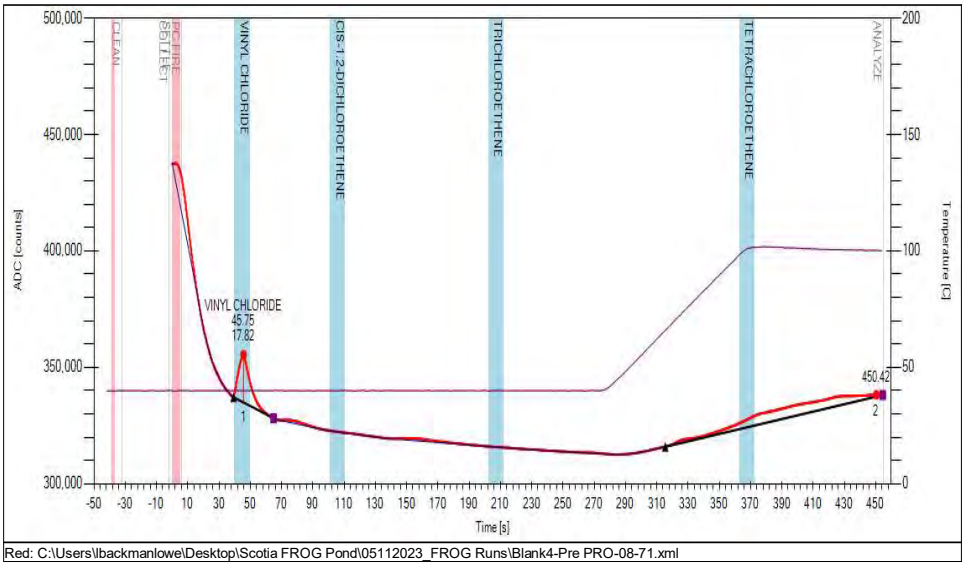
Pump=15%, 52%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.75	20470	176198	17.82	17.82
2		450.42	739	363460		



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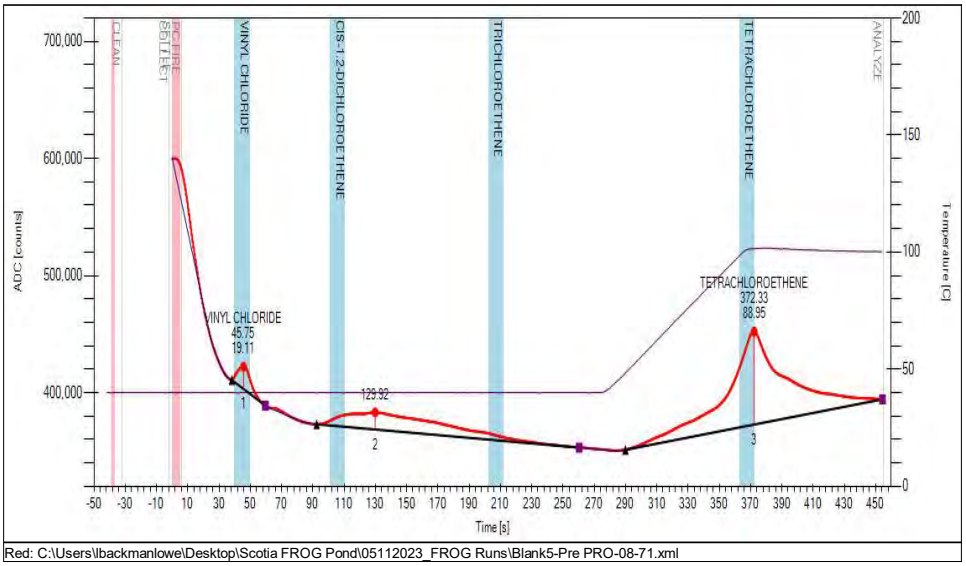
Pump=15%, 53%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.75	18881	188961	19.11	19.11
2		129.92	14573	1149067		
3	TETRACHLOROETHENE	372.33	79339	3512577	88.95	88.95



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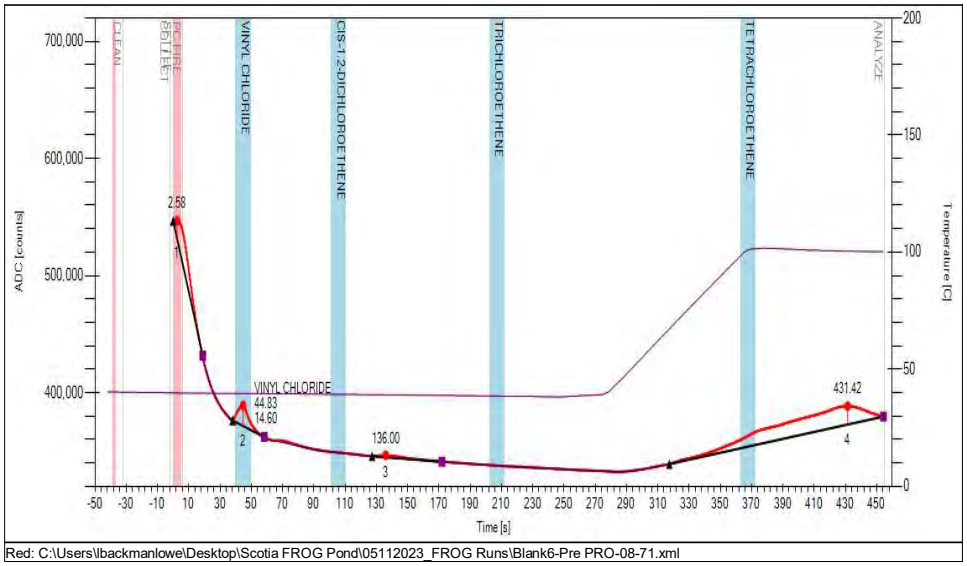
Pump=15%, 57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.58	15465	275364		
2	VINYL CHLORIDE	44.83	17628	144318	14.60	14.6
3		136	1717	33452		
4		431.42	15714	1197403		



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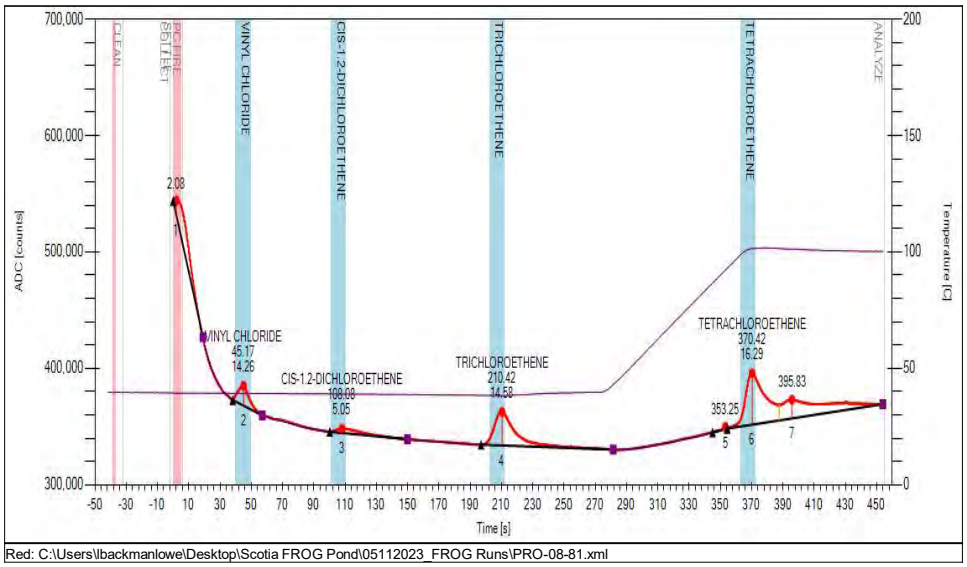
Pump=15%, 57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.08	12405	276807		
2	VINYL CHLORIDE	45.17	17172	140959	14.26	14.26
3	CIS-1.2-DICHLOROETHENE	108.08	3706	72919	5.05	5.05
4	TRICHLOROETHENE	210.42	28847	462208	14.58	14.58
5		353.25	1968	2699		
6	TETRACHLOROETHENE	370.42	44139	643424	16.29	16.29
7		395.83	16110	517992		



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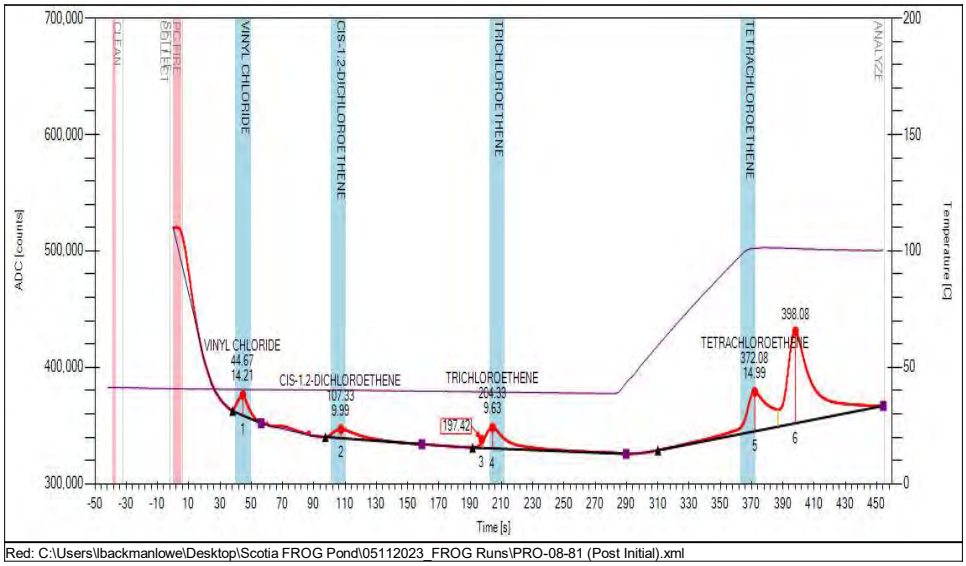
Pump=15%, 57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.67	17441	140448	14.21	14.21
2	CIS-1.2-DICHLOROETHENE	107.33	7564	144123	9.99	9.99
3		197.42	7229	13276		
4	TRICHLOROETHENE	204.33	17810	305308	9.63	9.63
5	TETRACHLOROETHENE	372.08	33688	592018	14.99	14.99
6		398.08	78917	1472953		



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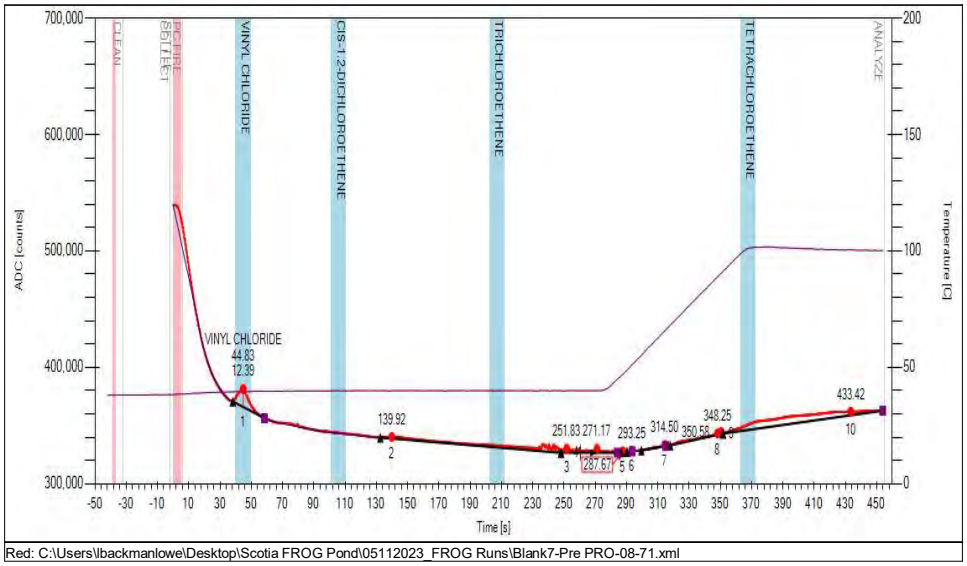
2023-05-11 13:30:47Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.83	15392	122539	12.39	12.39
2		139.92	1398	171943		
3		251.83	3561	41797		
4		271.17	3359	14781		
5		287.67	967	1462		
6		293.25	825	778		
7		314.5	1114	4127		
8		348.25	1189	18503		
9		350.58	1682	1945		
10		433.42	3019	413169		



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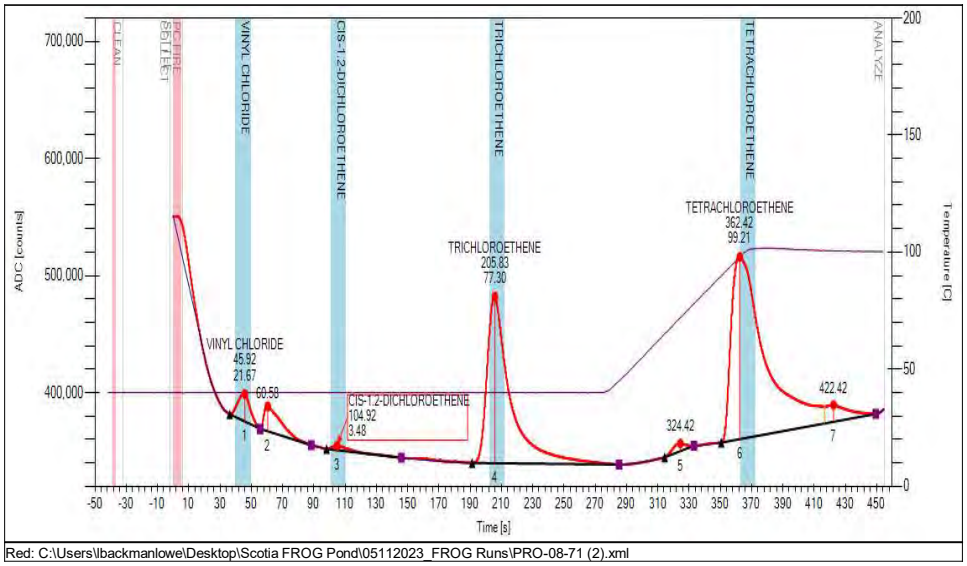
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.92	23445	214279	21.67	21.67
2		60.58	21335	265941		
3	CIS-1.2-DICHLOROETHENE	104.92	3814	50279	3.48	3.48
4	TRICHLOROETHENE	205.83	142335	2451009	77.30	77.3
5		324.42	6553	64244		
6	TETRACHLOROETHENE	362.42	155734	3918084	99.21	99.21
7		422.42	14308	246919		



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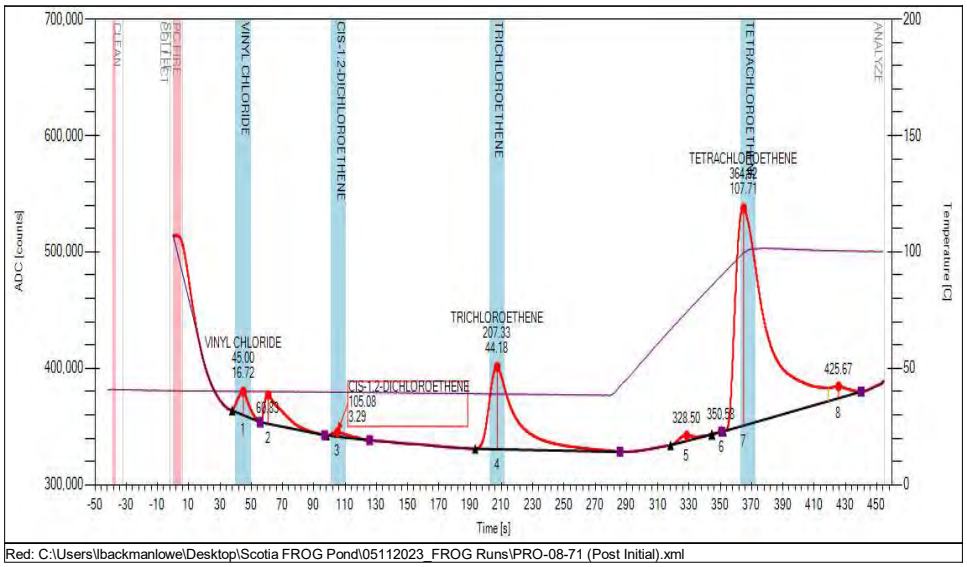
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45	20299	165320	16.72	16.72
2		60.83	24851	330946		
3	CIS-1.2-DICHLOROETHENE	105.08	3738	47409	3.29	3.29
4	TRICHLOROETHENE	207.33	70741	1400881	44.18	44.18
5		328.5	4795	51004		
6		350.58	753	515		
7	TETRACHLOROETHENE	364.92	186598	4253464	107.71	107.71
8		425.67	10157	140463		



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2023-05-11 14:24:35Z
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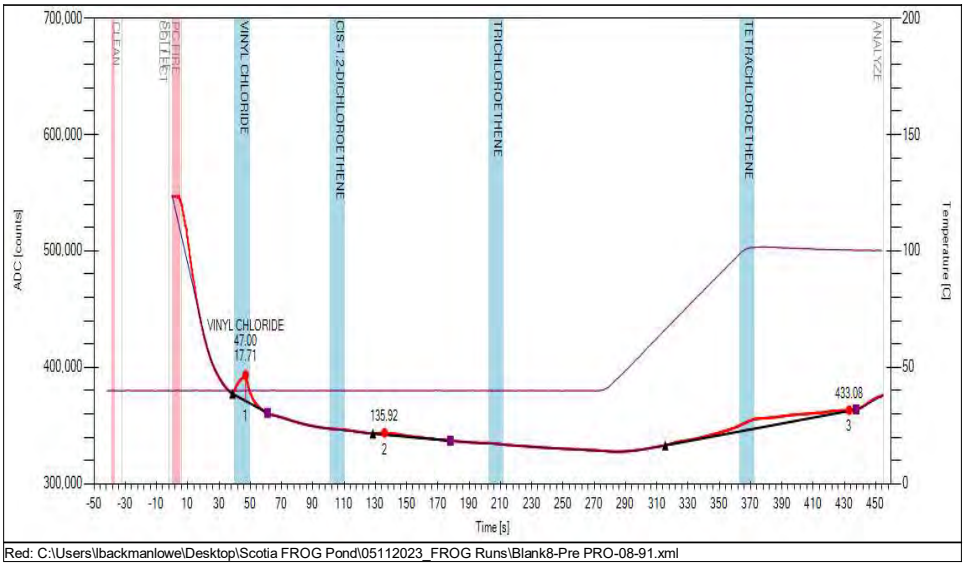
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	47	22179	175121	17.71	17.71
2		135.92	1567	34650		
3		433.08	584	420373		



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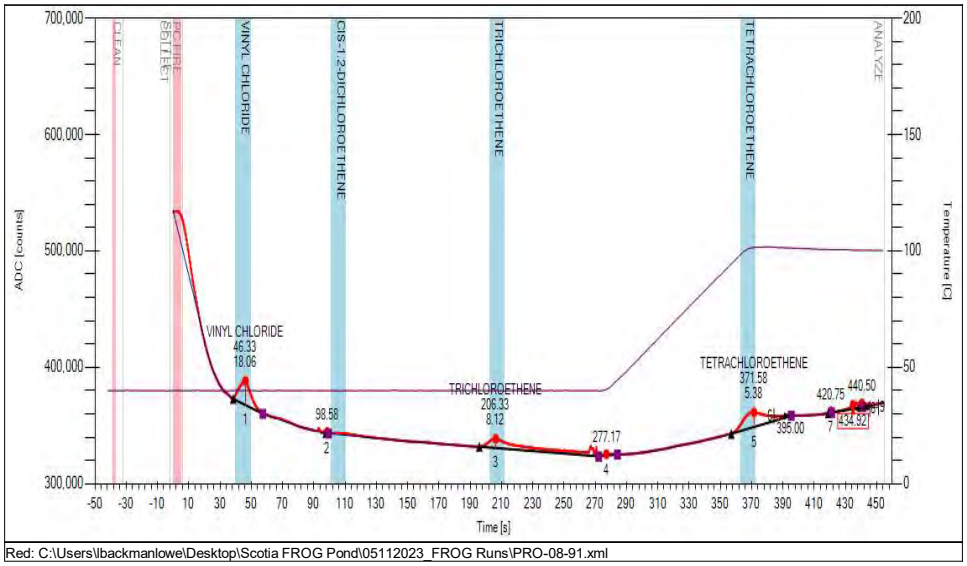
2023-05-11 14:46:58Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.33	20650	178523	18.06	18.06
2		98.58	1153	863		
3	TRICHLOROETHENE	206.33	7838	257541	8.12	8.12
4		277.17	1143	8513		
5	TETRACHLOROETHENE	371.58	12411	212291	5.38	5.38
6		395	216	11348		
7		420.75	1332	928		
8		434.92	3461	21134		
9		440.5	3340	3484		



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2023-05-11 14:58:02Z
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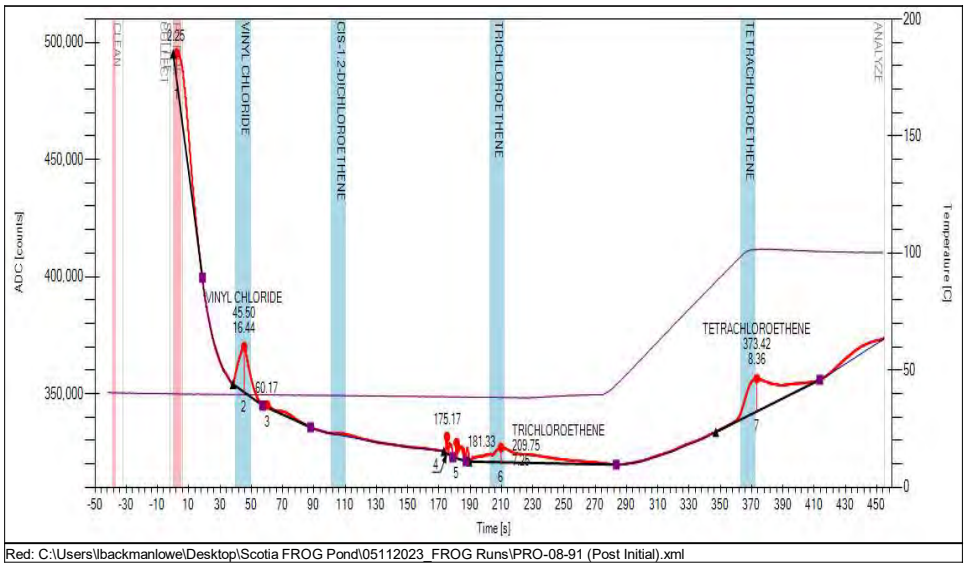
Pump=15%, 57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.25	11310	228532		
2	VINYL CHLORIDE	45.5	19468	162499	16.44	16.44
3		60.17	1114	23732		
4		175.17	7119	19760		
5		181.33	6713	27935		
6	TRICHLOROETHENE	209.75	6310	229910	7.25	7.25
7	TETRACHLOROETHENE	373.42	13996	330203	8.36	8.36



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2023-05-11 15:10:24Z
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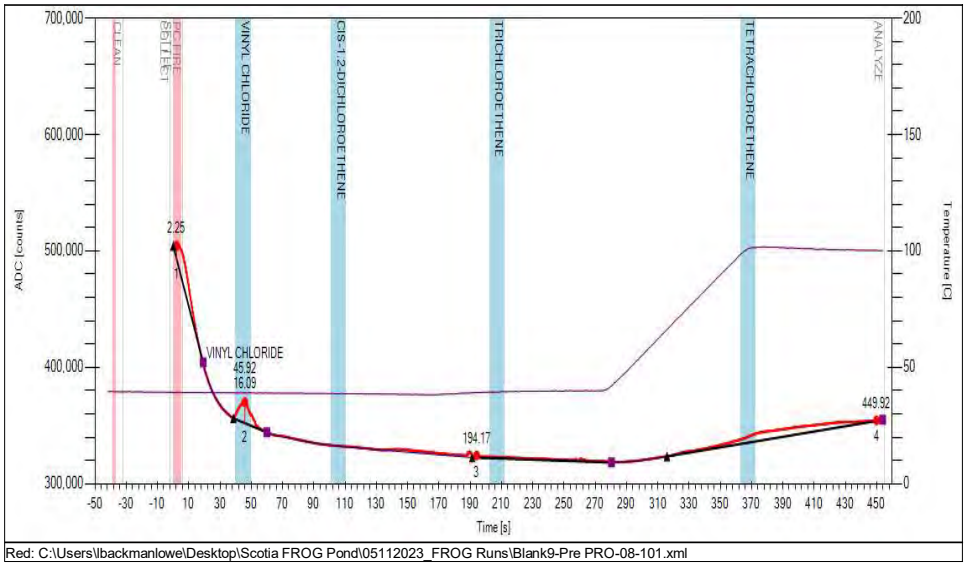
Pump=15%, 57%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.25	11450	243388		
2	VINYL CHLORIDE	45.92	18050	159088	16.09	16.09
3		194.17	1923	85654		
4		449.92	511	482877		



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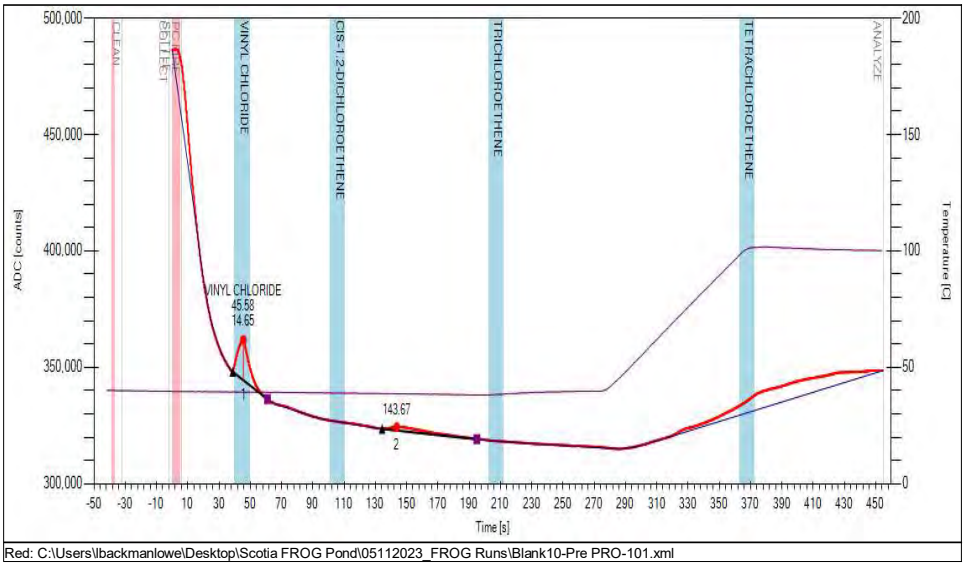
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.58	17229	144790	14.65	14.65
2		143.67	1521	50706		



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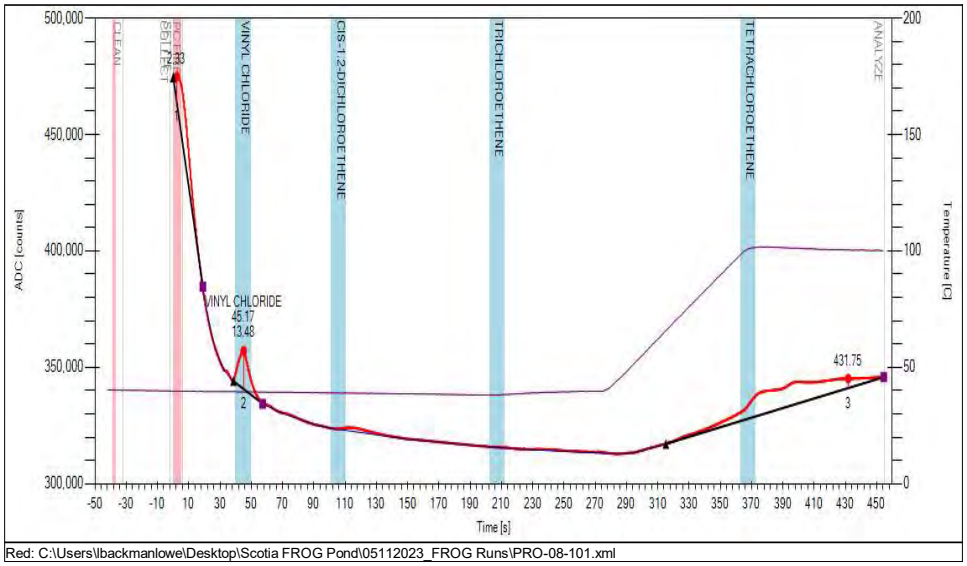
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.33	10954	212293		
2	VINYL CHLORIDE	45.17	16384	133297	13.48	13.48
3		431.75	4087	613142		



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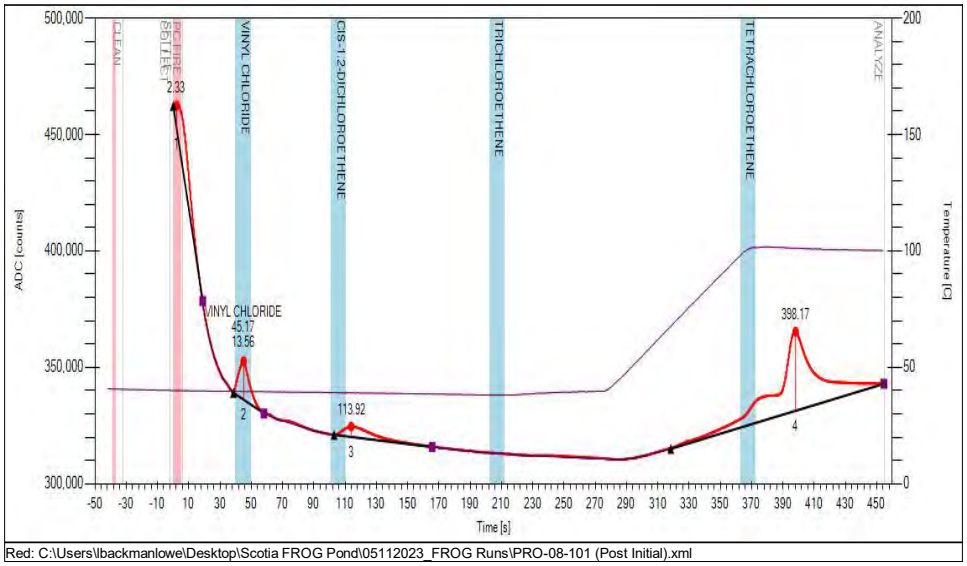
Pump=15%, 55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.33	10183	203291		
2	VINYL CHLORIDE	45.17	16513	134042	13.56	13.56
3		113.92	4434	102552		
4		398.17	33961	1000517		



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2023-05-11 16:01:08Z
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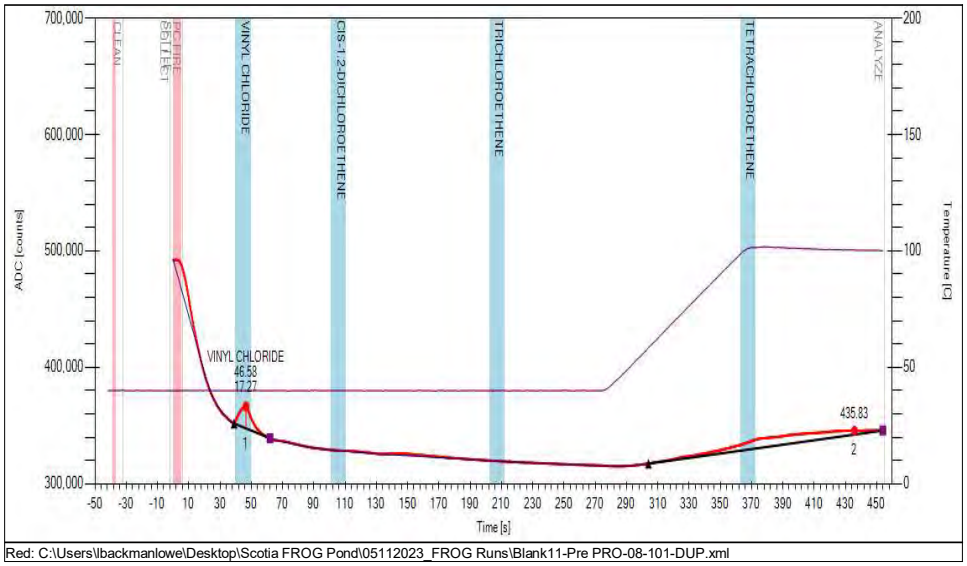
Pump=15%, 55%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.58	18764	170730	17.27	17.27
2		435.83	3285	592352		



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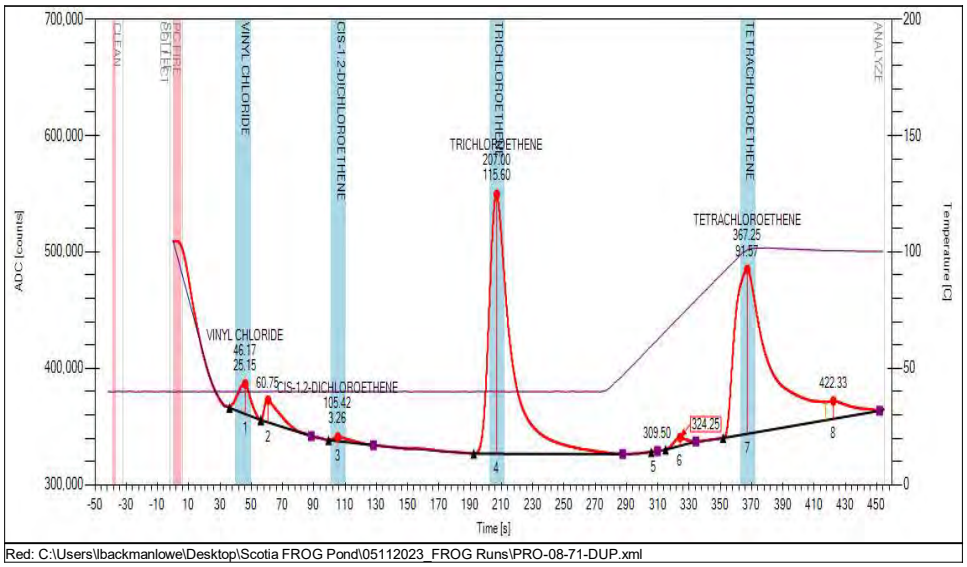
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.17	25824	248603	25.15	25.15
2		60.75	19105	220165		
3	CIS-1.2-DICHLOROETHENE	105.42	3488	47070	3.26	3.26
4	TRICHLOROETHENE	207	222646	3665166	115.60	115.6
5		307.08	323	1013		
6		324.25	7055	62837		
7	TETRACHLOROETHENE	367.25	140958	3616031	91.57	91.57
8		422.33	15364	280856		



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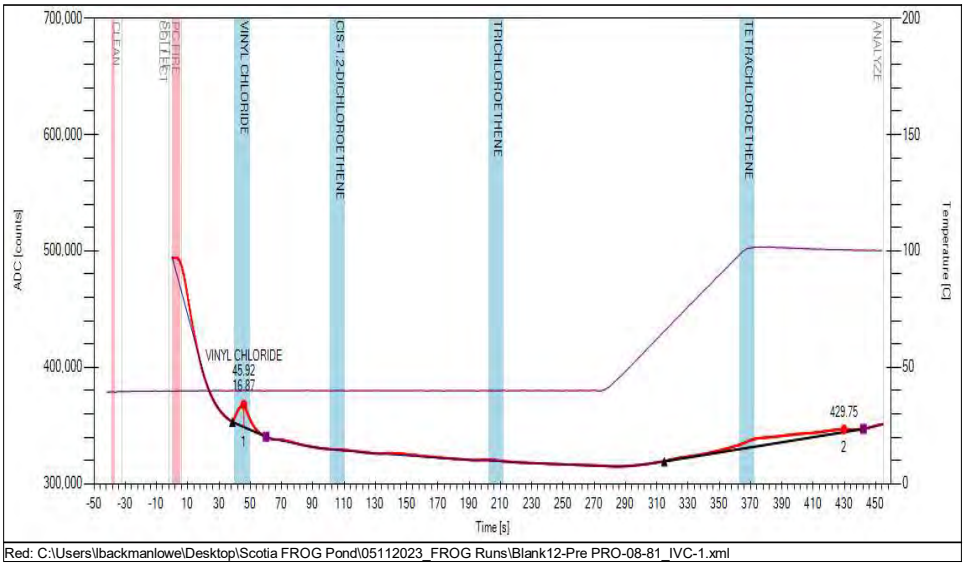
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.92	19177	166819	16.87	16.87
2		429.75	2338	382858		



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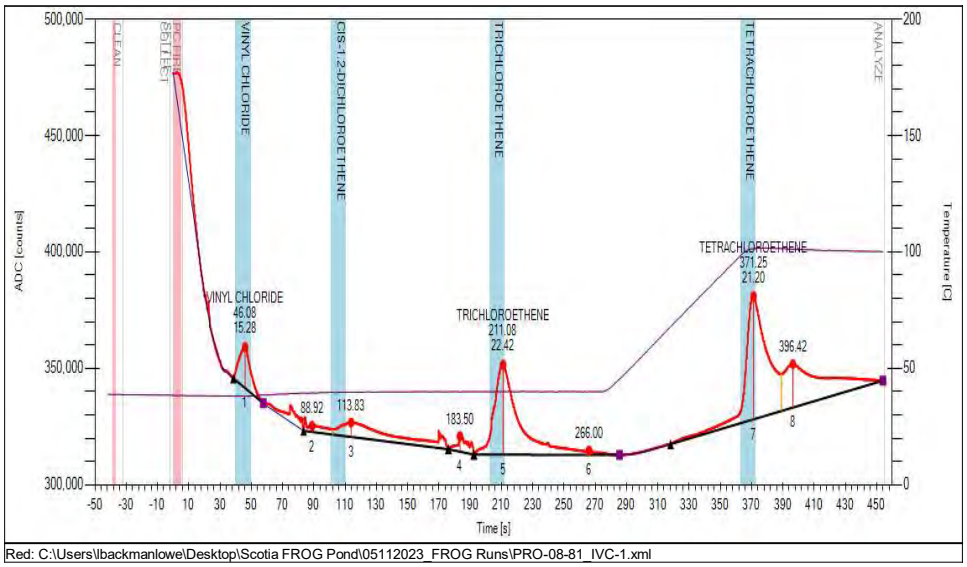
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	46.08	17597	151039	15.28	15.28
2		88.92	2652	47537		
3		113.83	6170	264185		
4		183.5	6666	54881		
5	TRICHLOROETHENE	211.08	38600	710908	22.42	22.42
6		266	1880	16292		
7	TETRACHLOROETHENE	371.25	52864	837282	21.20	21.2
8		396.42	18690	553733		



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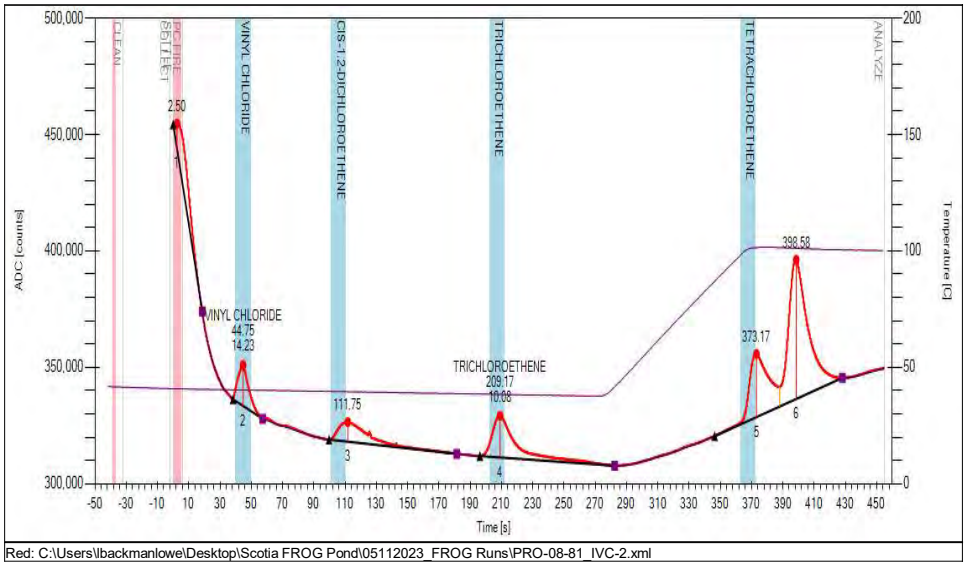
2023-05-11 17:06:59Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 56%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.5	10748	194799		
2	VINYL CHLORIDE	44.75	17604	140733	14.23	14.23
3		111.75	8399	185700		
4	TRICHLOROETHENE	209.17	17907	319738	10.08	10.08
5		373.17	27132	378091		
6		398.58	59732	866396		



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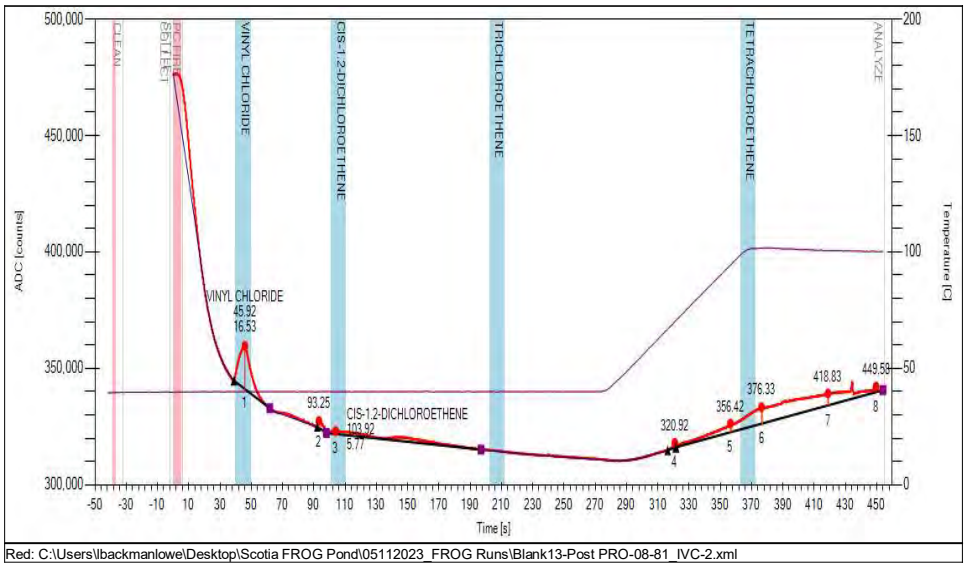
2023-05-11 17:21:55Z
FROG-0230:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=15%, 54%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	45.92	18546	163447	16.53	16.53
2		93.25	2903	11677		
3	CIS-1.2-DICHLOROETHENE	103.92	1252	83283	5.77	5.77
4		320.92	2138	3066		
5		356.42	3721	54186		
6		376.33	7091	96399		
7		418.83	5090	248830		
8		449.58	2416	92684		



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2023-05-12 12:01:40Z
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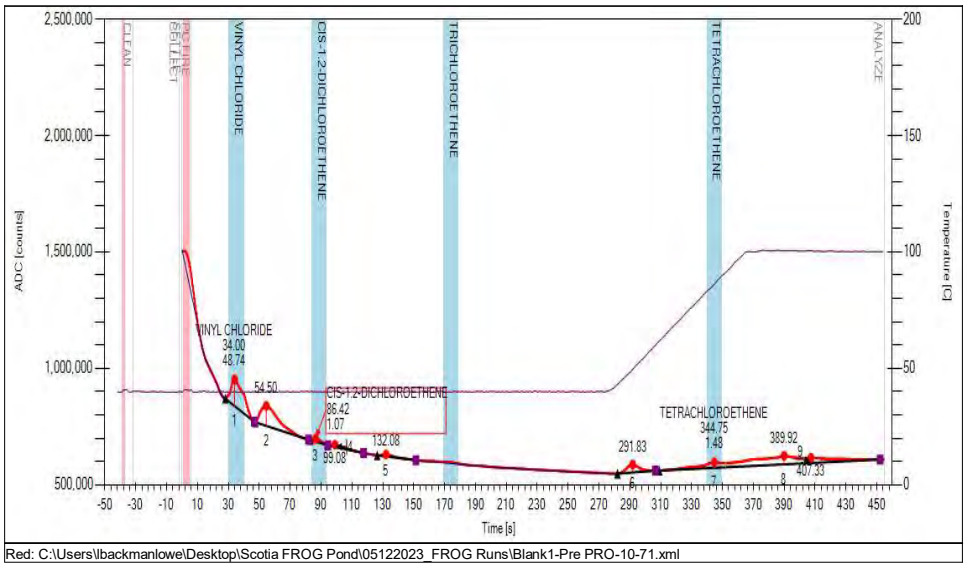
Pump=30%, 6%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	34	114269	1123847	48.74	48.74
2		54.5	85300	1151753		
3	CIS-1.2-DICHLOROETHENE	86.42	11523	77994	1.07	1.07
4		99.08	9165	90071		
5		132.08	8421	69687		
6		291.83	34060	323628		
7	TETRACHLOROETHENE	344.75	24129	417132	1.48	1.48
8		389.92	36756	1341790		
9		407.33	22943	554247		



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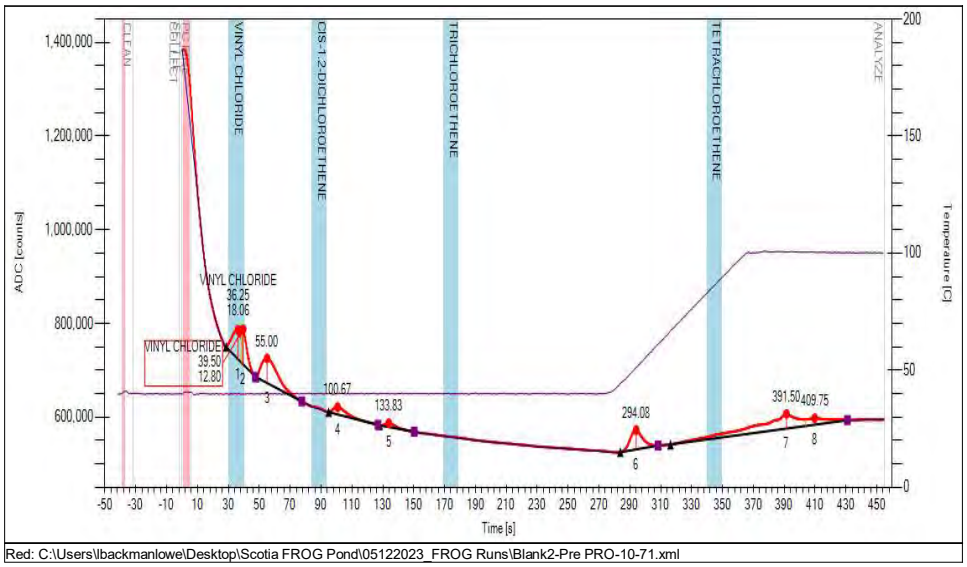
2023-05-12 12:16:45Z
FROG-0157:Ta=275, Tb=90, Tc=90, Ct=40, Ht=100, collect=30, clean=6, presettle=4, settle=2, fire=6;
Pump=30%, 6%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.25	63122	416460	18.06	18.06
2	VINYL CHLORIDE	39.5	75087	295107	12.80	12.8
3		55	52469	663881		
4		100.67	15613	160999		
5		133.83	8277	64803		
6		294.08	41319	388562		
7		391.5	31290	995385		
8		409.75	13892	221795		



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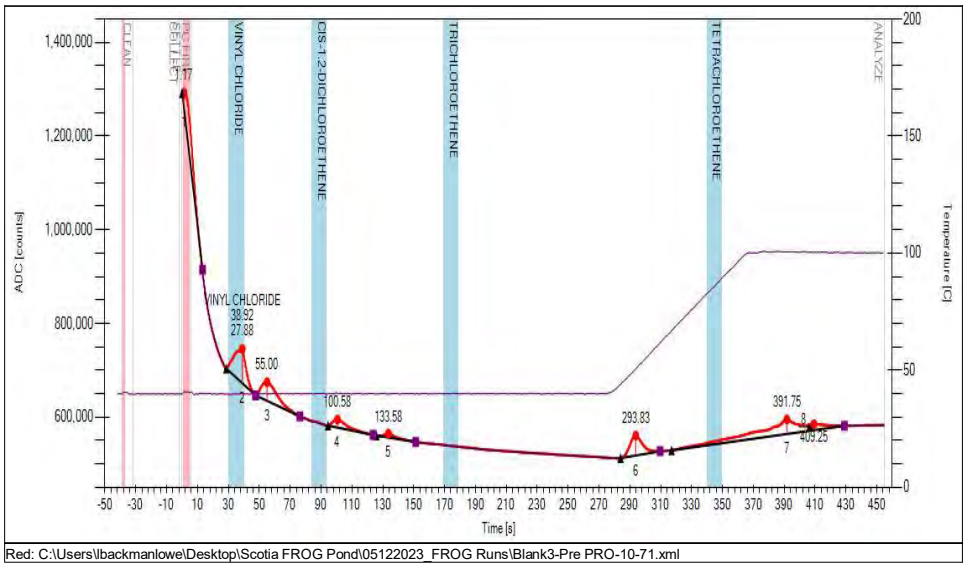
Pump=30%, 6%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.17	32218	568180		
2	VINYL CHLORIDE	38.92	72891	642822	27.88	27.88
3		55	39718	489485		
4		100.58	17077	181717		
5		133.58	8305	69948		
6		293.83	42612	403528		
7		391.75	31209	931273		
8		409.25	13165	193191		



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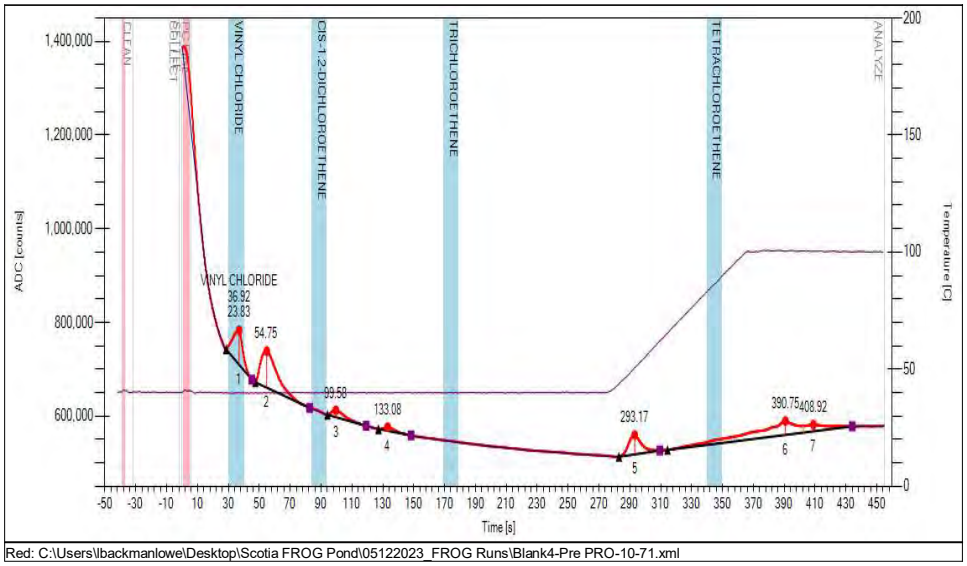
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.92	73780	549453	23.83	23.83
2		54.75	78237	969987		
3		99.58	14685	147824		
4		133.08	7966	64372		
5		293.17	41407	400868		
6		390.75	29590	991402		
7		408.92	14311	245753		



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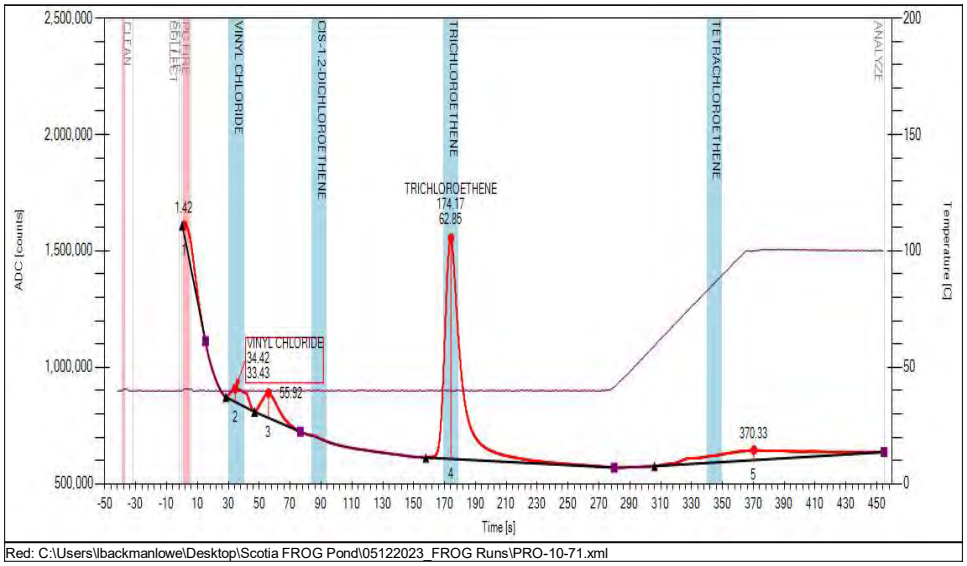
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.42	44713	901683		
2	VINYL CHLORIDE	34.42	57553	770762	33.43	33.43
3		55.92	106270	1335701		
4	TRICHLOROETHENE	174.17	947328	11990827	62.85	62.85
5		370.33	42568	3257848		



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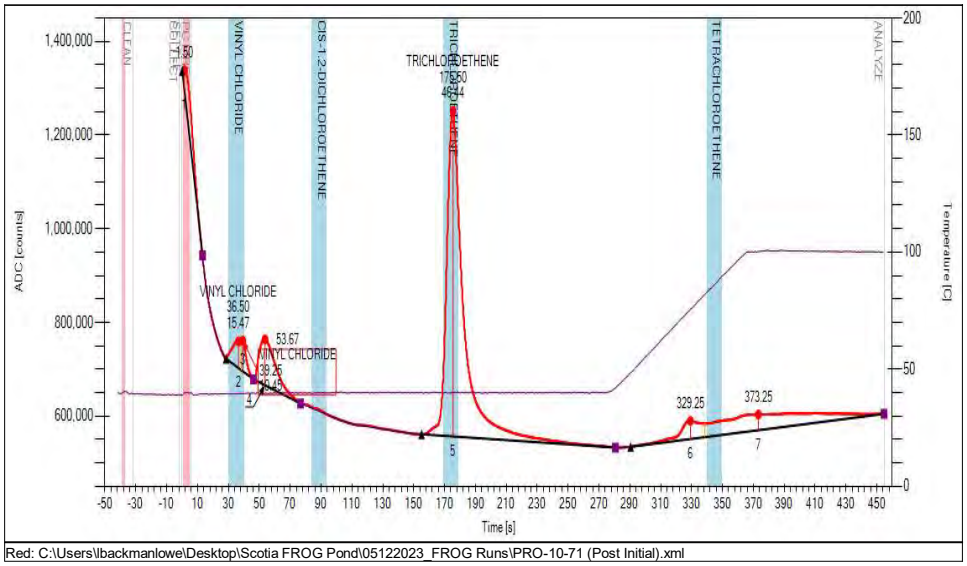
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	43946	621354		
2	VINYL CHLORIDE	36.5	56908	356736	15.47	15.47
3	VINYL CHLORIDE	39.25	65276	240880	10.45	10.45
4		53.67	97775	1231618		
5	TRICHLOROETHENE	175.5	695071	8858885	46.44	46.44
6		329.25	38754	625896		
7		373.25	33559	2521064		



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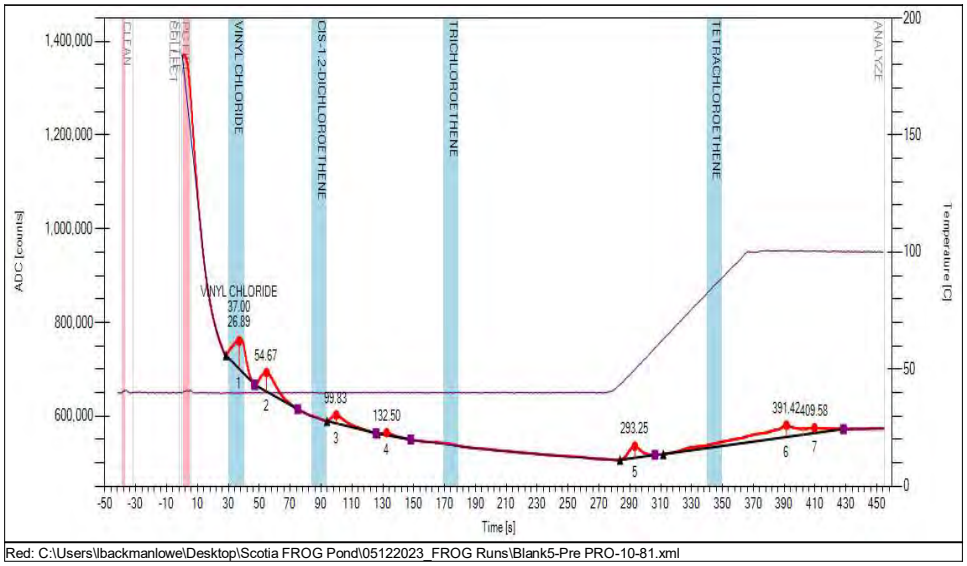
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	37	59521	620107	26.89	26.89
2		54.67	40247	478342		
3		99.83	17667	197810		
4		132.5	5142	42251		
5		293.25	24732	229026		
6		391.42	25082	958435		
7		409.58	11076	181388		



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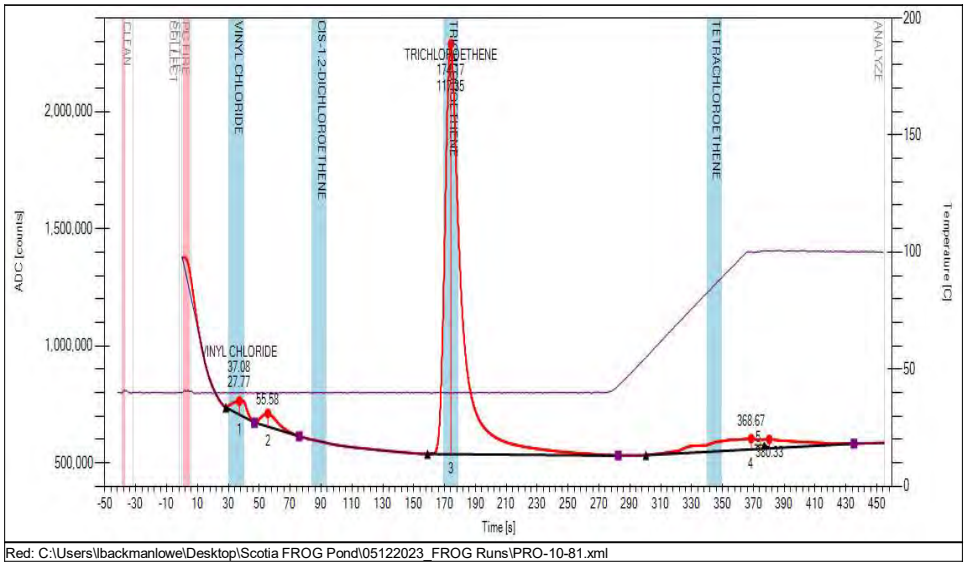
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	37.08	57797	640261	27.77	27.77
2		55.58	56853	696229		
3	TRICHLOROETHENE	174.17	1751859	22386633	117.35	117.35
4		368.67	46127	2005175		
5		380.33	38687	1134808		



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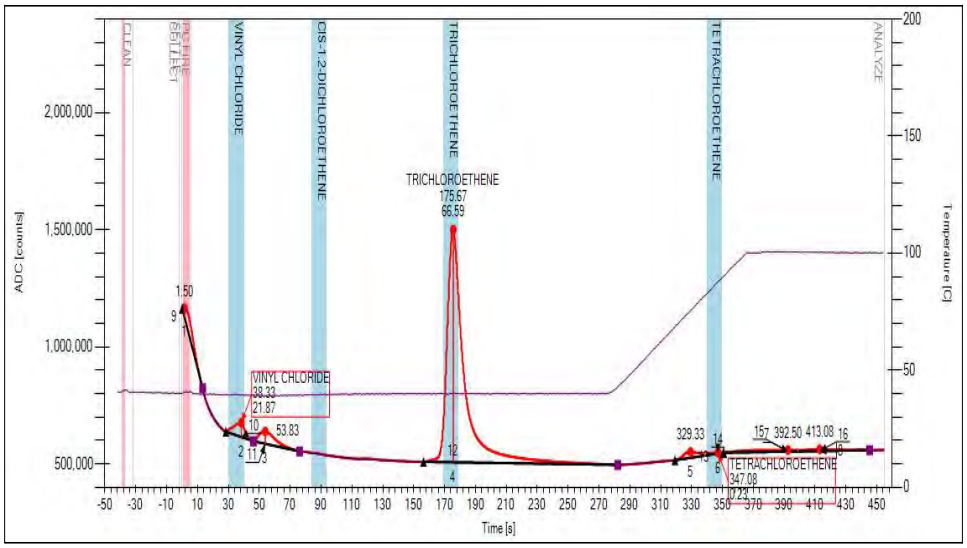
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	37614	541808		
2	VINYL CHLORIDE	38.33	60618	504206	21.87	21.87
3		53.83	52414	653085		
4	TRICHLOROETHENE	175.67	992987	12704404	66.59	66.59
5		329.33	25182	282979		
6	TETRACHLOROETHENE	347.08	4635	65298	0.23	0.23
7		392.5	6460	283026		
8		413.08	7186	177180		
9		1.5	37614	541808		
10	VINYL CHLORIDE	38.33	60618	504206	21.87	21.87
11		53.83	52414	653085		
12	TRICHLOROETHENE	175.67	992987	12704404	66.59	66.59
13		329.33	25182	282979		
14	TETRACHLOROETHENE	347.08	4635	65298	0.23	0.23
15		392.5	6460	283026		
16		413.08	7186	177180		



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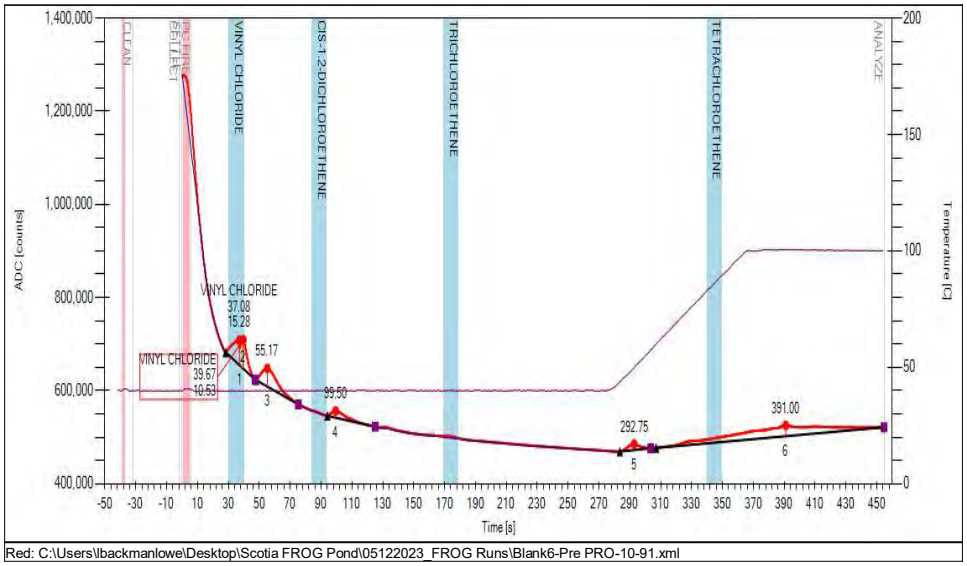
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	37.08	53425	352322	15.28	15.28
2	VINYL CHLORIDE	39.67	62080	242783	10.53	10.53
3		55.17	39082	471688		
4		99.5	14700	161015		
5		292.75	12931	115499		
6		391	23271	1528957		



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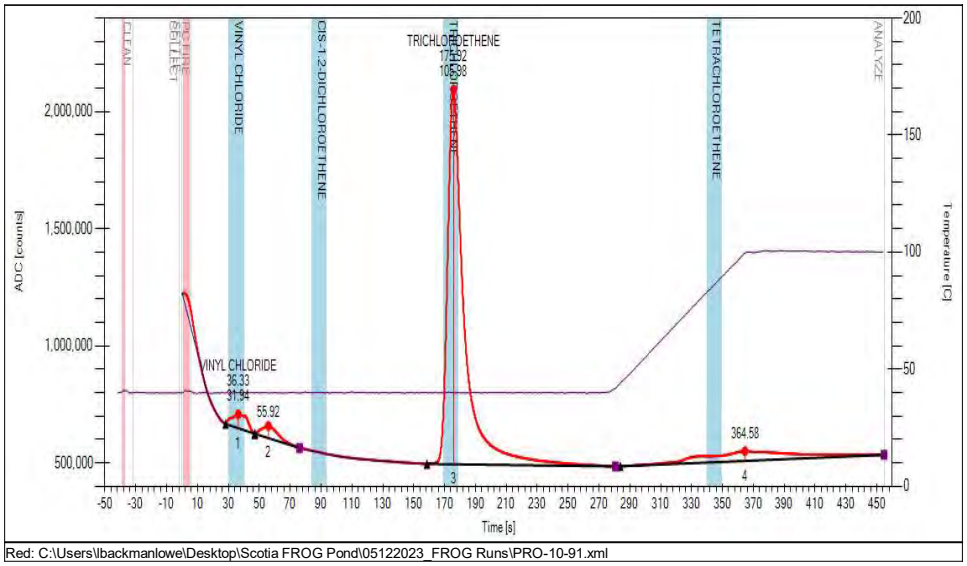
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.33	59286	736564	31.94	31.94
2		55.92	52004	656882		
3	TRICHLOROETHENE	175.92	1599434	20218960	105.98	105.98
4		364.58	41486	2851060		



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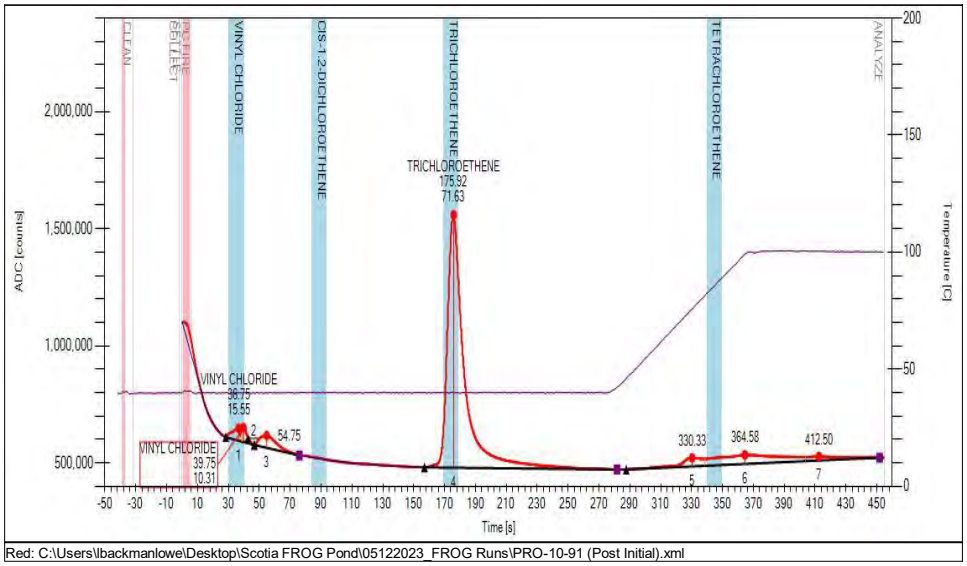
Pump=30%, 7%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.75	53515	358660	15.55	15.55
2	VINYL CHLORIDE	39.75	61175	237732	10.31	10.31
3		54.75	52237	680967		
4	TRICHLOROETHENE	175.92	1079120	13664550	71.63	71.63
5		330.33	36504	564446		
6		364.58	38342	1901094		
7		412.5	17395	452071		



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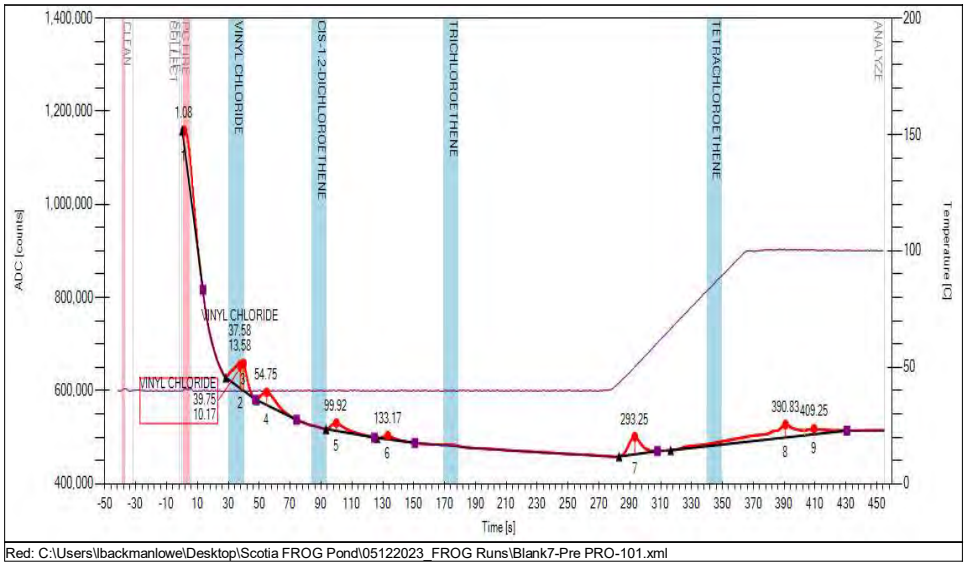
Pump=30%, 7%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.08	26203	531046		
2	VINYL CHLORIDE	37.58	50339	313057	13.58	13.58
3	VINYL CHLORIDE	39.75	57990	234593	10.17	10.17
4		54.75	27097	313472		
5		99.92	16788	188596		
6		133.17	7726	61235		
7		293.25	37850	357516		
8		390.83	27787	836000		
9		409.25	11845	181166		



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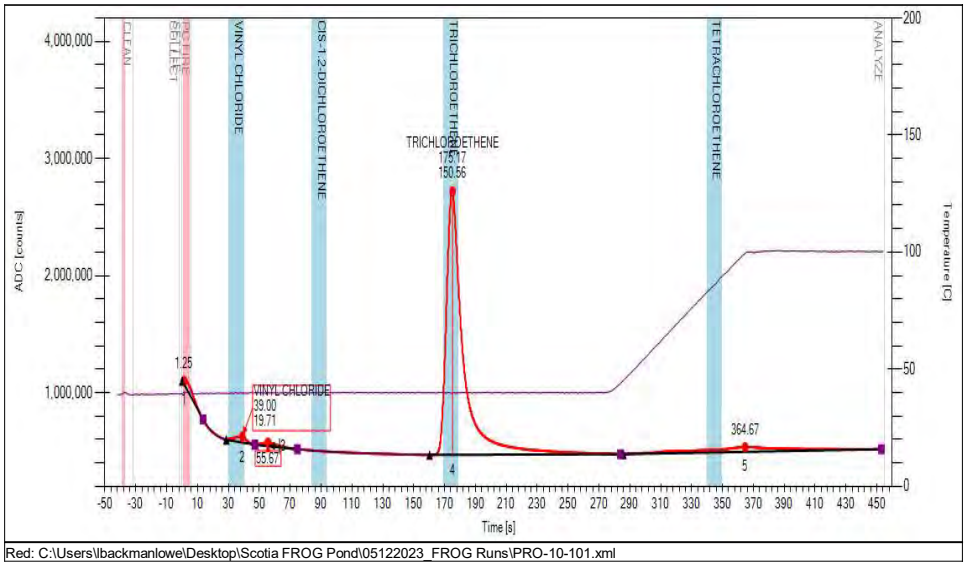
Pump=30%, 7%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.25	29003	522026		
2	VINYL CHLORIDE	39	51935	454463	19.71	19.71
3		55.67	32109	360037		
4	TRICHLOROETHENE	175.17	2251768	28722069	150.56	150.56
5		364.67	41771	2625996		



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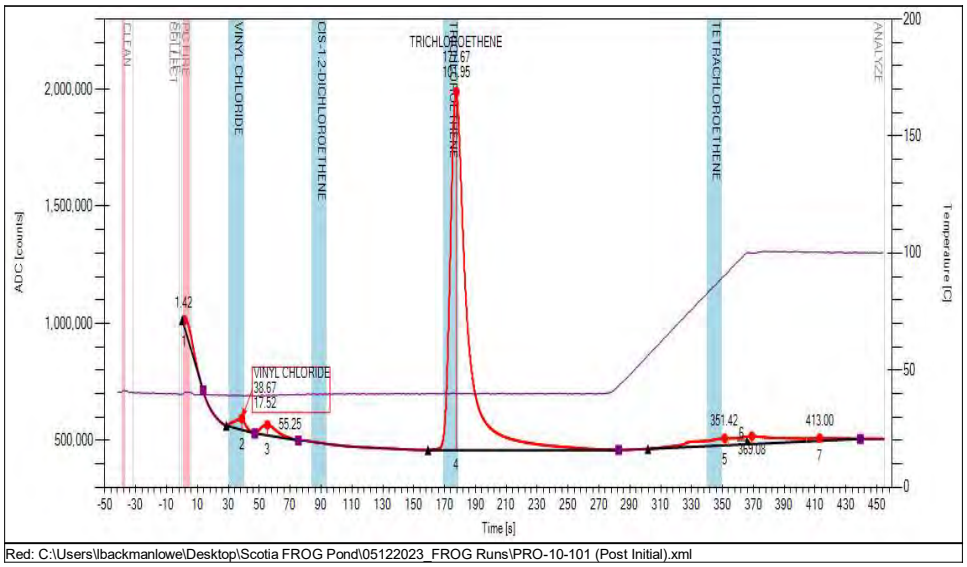
Pump=30%, 7%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.42	30153	469991		
2	VINYL CHLORIDE	38.67	48743	404036	17.52	17.52
3		55.25	45174	549738		
4	TRICHLOROETHENE	177.67	1531257	19449768	101.95	101.95
5		351.42	29700	782999		
6		369.08	33893	1208875		
7		413	11670	254894		



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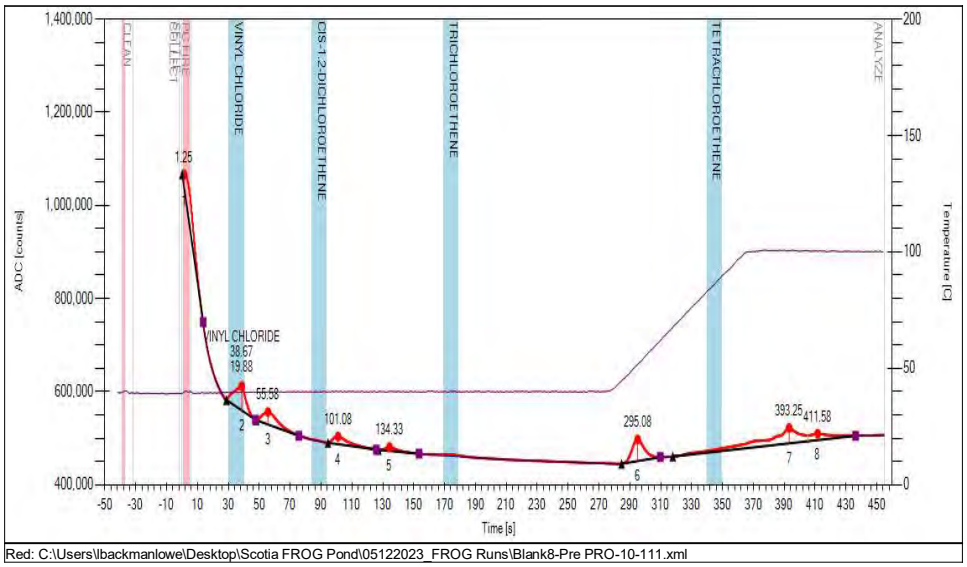
Pump=30%, 7%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.25	27875	529442		
2	VINYL CHLORIDE	38.67	52358	458388	19.88	19.88
3		55.58	26707	316794		
4		101.08	16521	185456		
5		134.33	8412	70887		
6		295.08	46602	434143		
7		393.25	32978	879469		
8		411.58	13608	224413		



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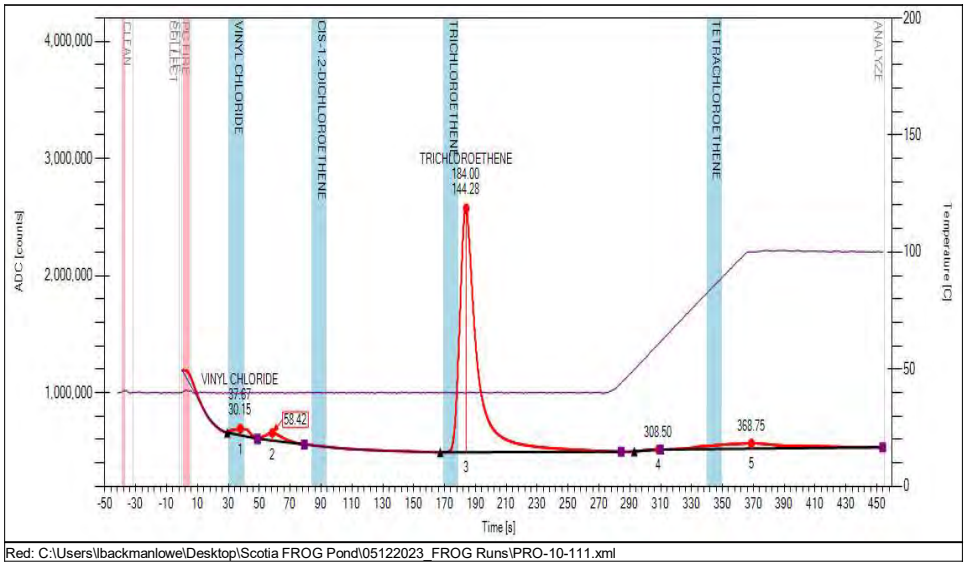
Pump=30%, 4%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	37.67	55212	695234	30.15	30.15
2		58.42	64999	842588		
3	TRICHLOROETHENE	184	2082818	27525220	144.28	144.28
4		308.5	1435	41648		
5		368.75	45788	2730083		



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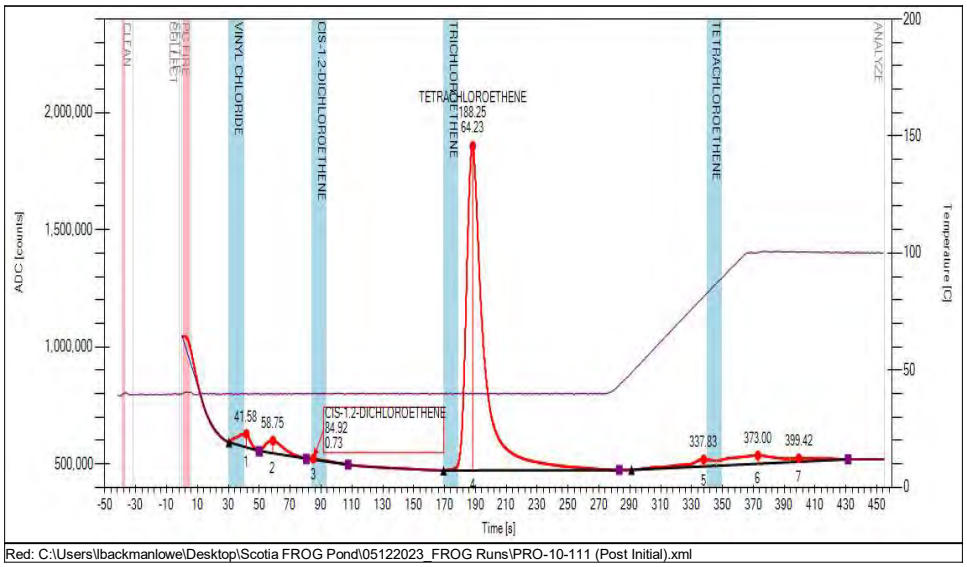
Pump=30%, 1%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		41.58	57207	553664		
2		58.75	53524	728381		
3	CIS-1.2-DICHLOROETHENE	84.92	4340	53681	0.73	0.73
4	TETRACHLOROETHENE	188.25	1385214	18084827	64.23	64.23
5		337.83	29901	639773		
6		373	35281	1325604		
7		399.42	14562	336002		



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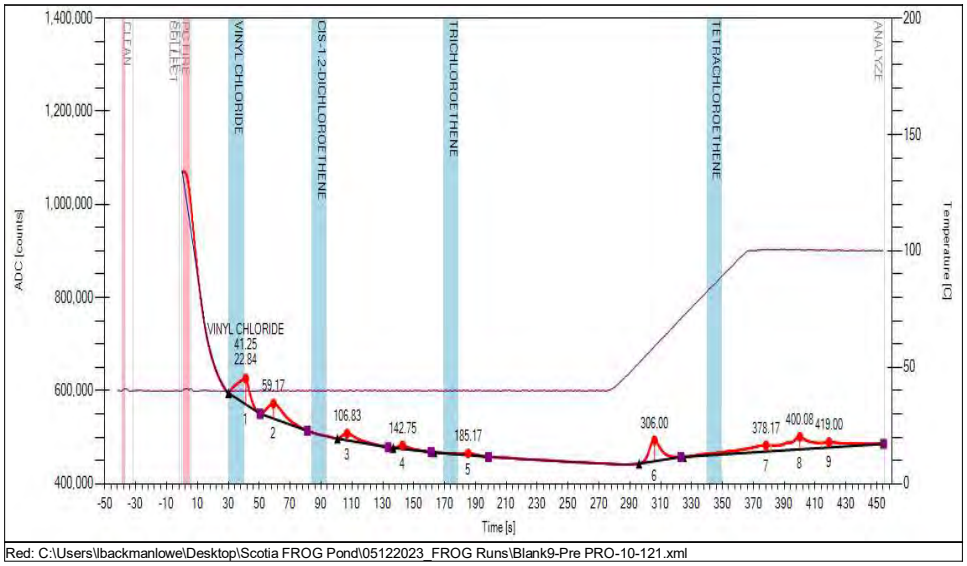
Pump=30%, 2%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.25	55633	526608	22.84	22.84
2		59.17	31942	417997		
3		106.83	14437	174473		
4		142.75	7645	68468		
5		185.17	3803	49430		
6		306	44859	411778		
7		378.17	13349	342524		
8		400.08	26979	524222		
9		419	11769	230834		



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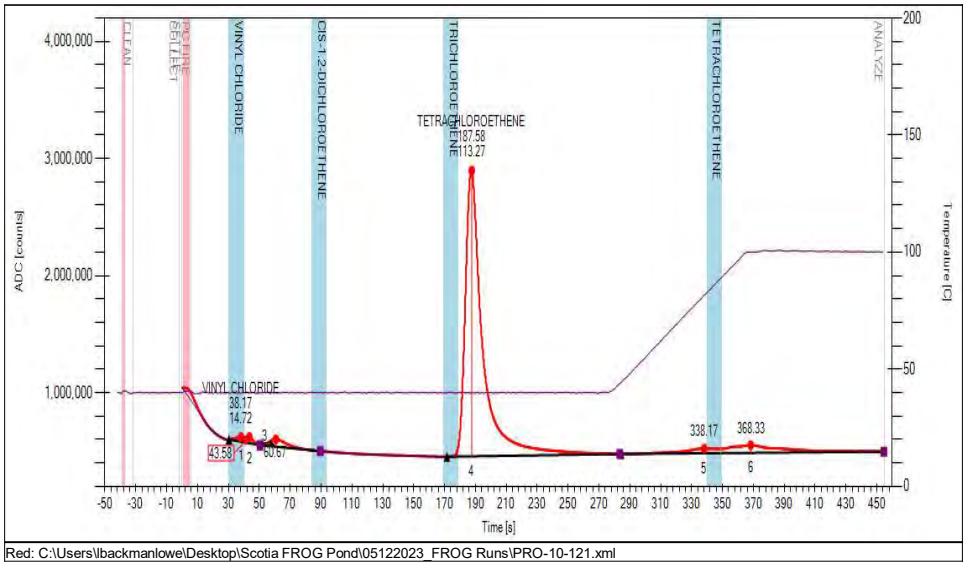
Pump=30%, 1%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	38.17	39786	339529	14.72	14.72
2		43.58	53217	215392		
3		60.67	63680	860976		
4	TETRACHLOROETHENE	187.58	2440688	31894308	113.27	113.27
5		338.17	39626	1031742		
6		368.33	65269	2680337		



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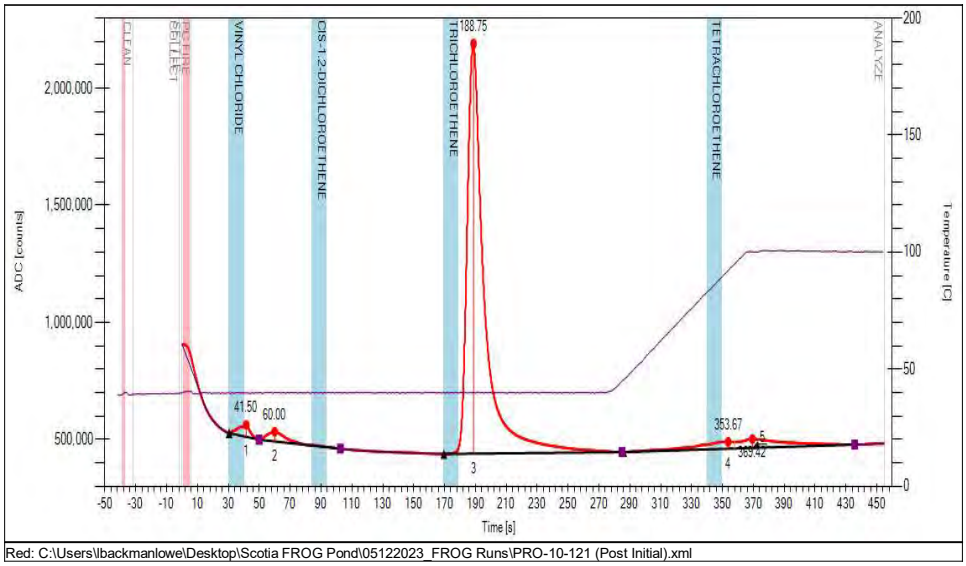
Pump=30%, 1%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		41.5	50608	443039		
2		60	41228	599356		
3		188.75	1750900	22664572		
4		353.67	29541	849579		
5		369.42	38136	1365319		



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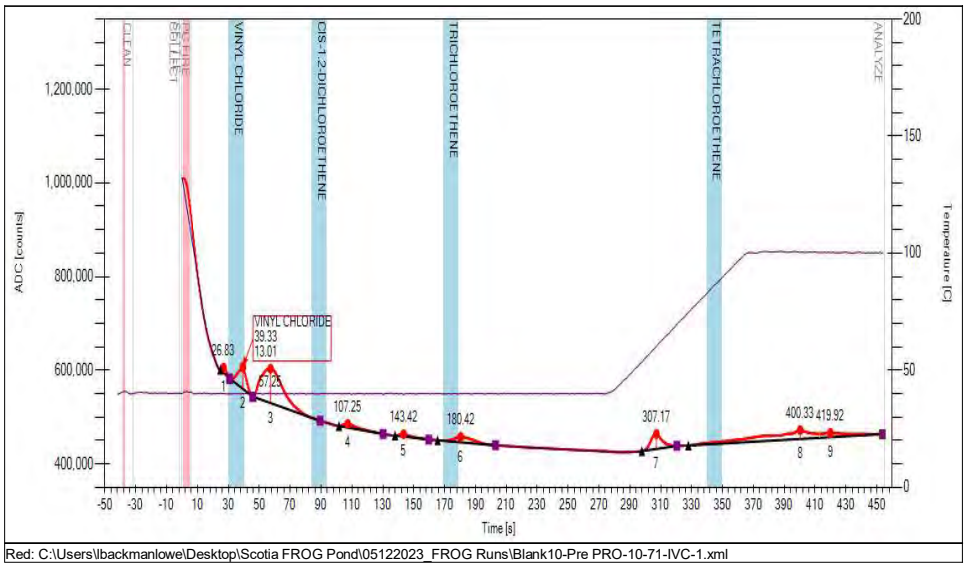
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		26.83	10832	40791		
2	VINYL CHLORIDE	39.33	46922	299977	13.01	13.01
3		57.25	73406	1229151		
4		107.25	7865	86980		
5		143.42	5070	42081		
6		180.42	11609	171628		
7		307.17	31797	276167		
8		400.33	18571	684474		
9		419.92	9165	194661		



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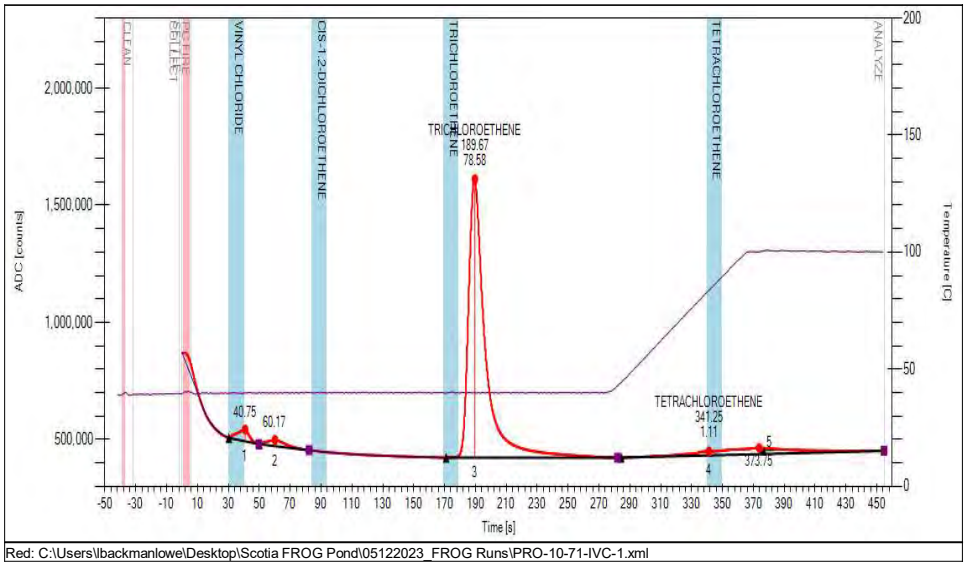
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		40.75	50383	445129		
2		60.17	26620	369994		
3	TRICHLOROETHENE	189.67	1189608	14990394	78.58	78.58
4	TETRACHLOROETHENE	341.25	17030	312446	1.11	1.11
5		373.75	26875	1489591		



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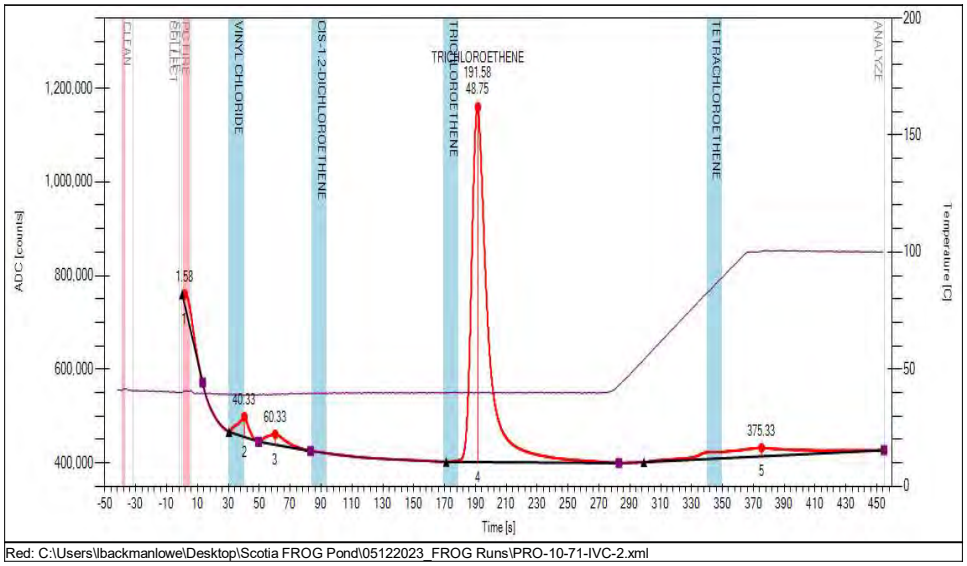
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.58	22083	303054		
2		40.33	43046	352393		
3		60.33	22354	329644		
4	TRICHLOROETHENE	191.58	758051	9301138	48.75	48.75
5		375.33	18045	1282899		



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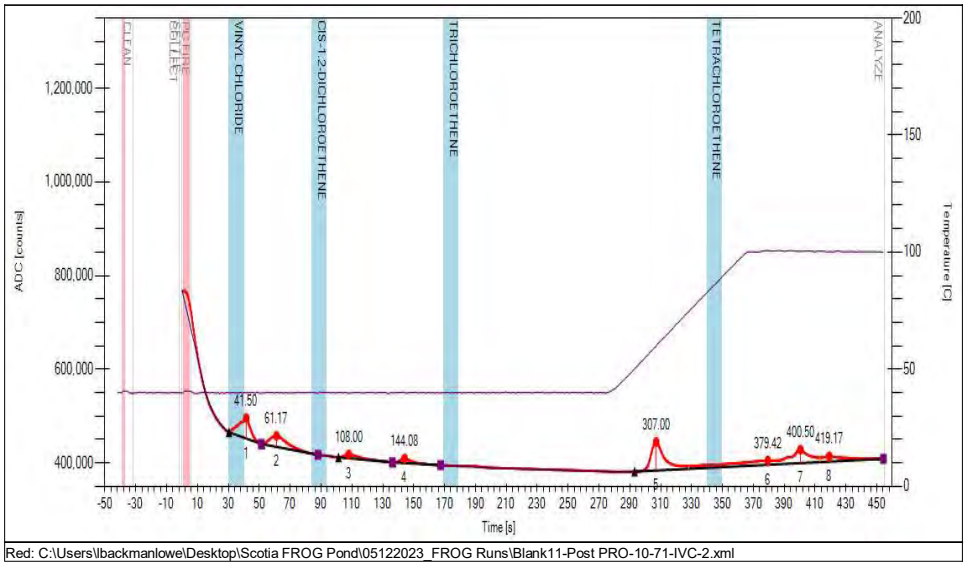
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!
RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		41.5	43769	387186		
2		61.17	23605	318058		
3		108	8162	101632		
4		144.08	9556	81561		
5		307	60945	635480		
6		379.42	8655	348698		
7		400.5	28628	476694		
8		419.17	11268	217355		



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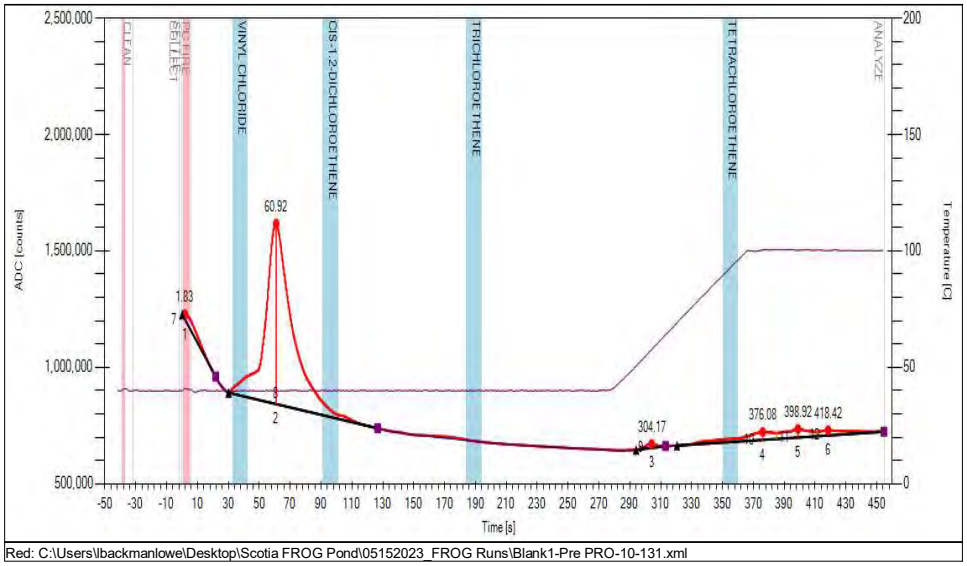
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.83	22596	472858		
2		60.92	775319	16093812		
3		304.17	17198	147171		
4		376.08	33401	958100		
5		398.92	36114	731336		
6		418.42	22528	496638		
7		1.83	22596	472858		
8		60.92	775319	16093812		
9		304.17	17198	147171		
10		376.08	33401	958100		
11		398.92	36114	731336		
12		418.42	22528	496638		



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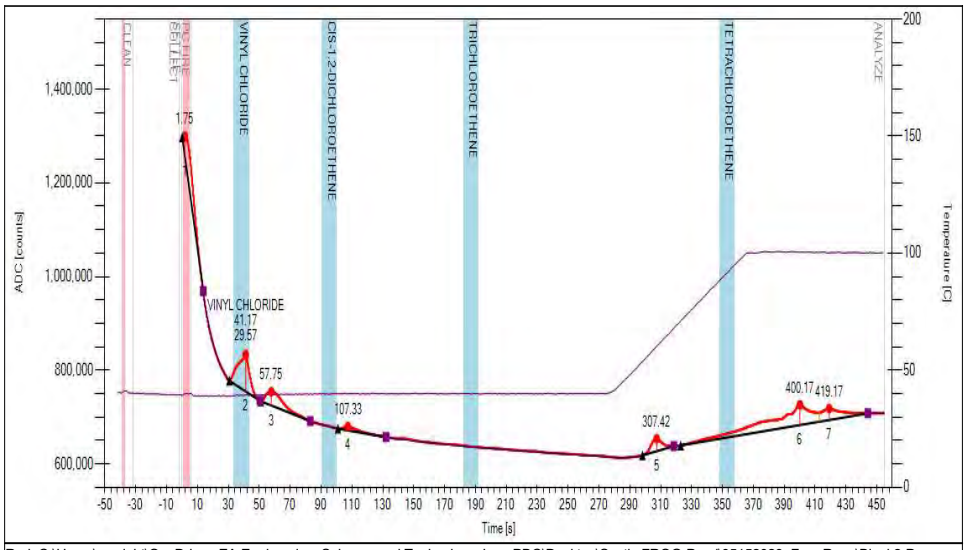
Pump=30%, 0%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.75	42329	573891		
2	VINYL CHLORIDE	41.17	78910	681930	29.57	29.57
3		57.75	29360	394183		
4		107.33	8169	89708		
5		307.42	26572	224111		
6		400.17	43038	1374206		
7		419.17	24516	389132		



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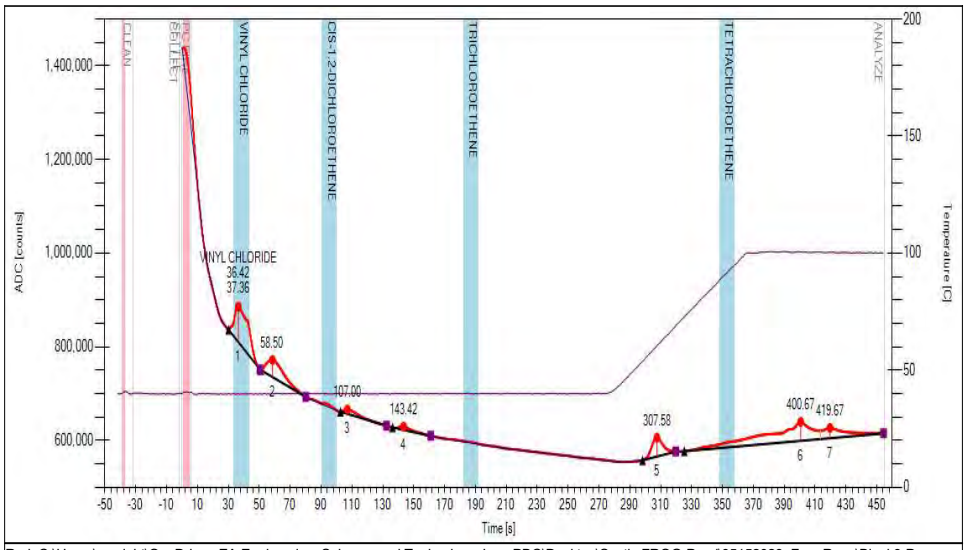
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.42	75486	861547	37.36	37.36
2		58.5	36444	491925		
3		107	9340	104794		
4		143.42	7110	66916		
5		307.58	40433	343931		
6		400.67	40428	1391860		
7		419.67	22101	401353		



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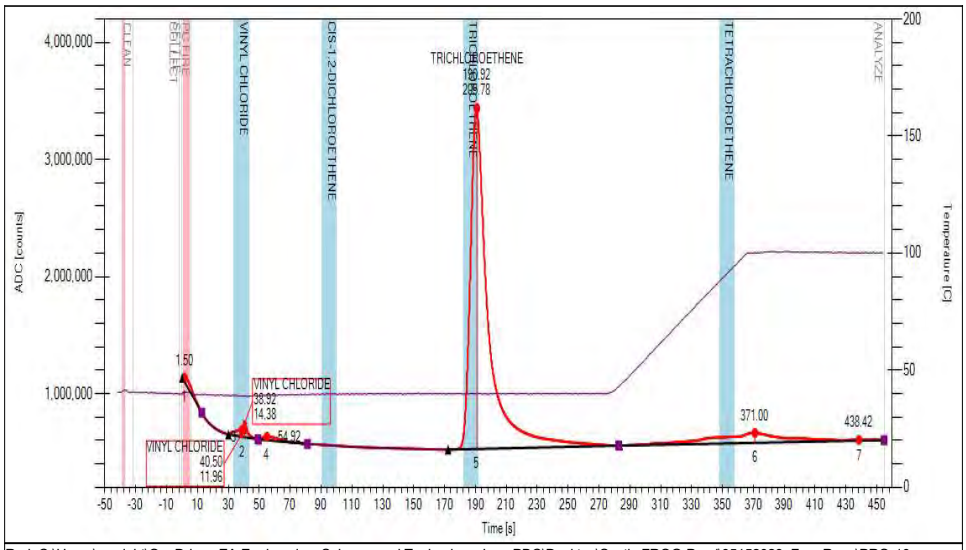
Pump=30%, 0%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	34573	435157		
2	VINYL CHLORIDE	38.92	58006	331584	14.38	14.38
3	VINYL CHLORIDE	40.5	65483	275740	11.96	11.96
4		54.92	30468	399817		
5	TRICHLOROETHENE	190.92	2910855	39256869	205.78	205.78
6		371	84950	4650281		
7		438.42	7062	128881		



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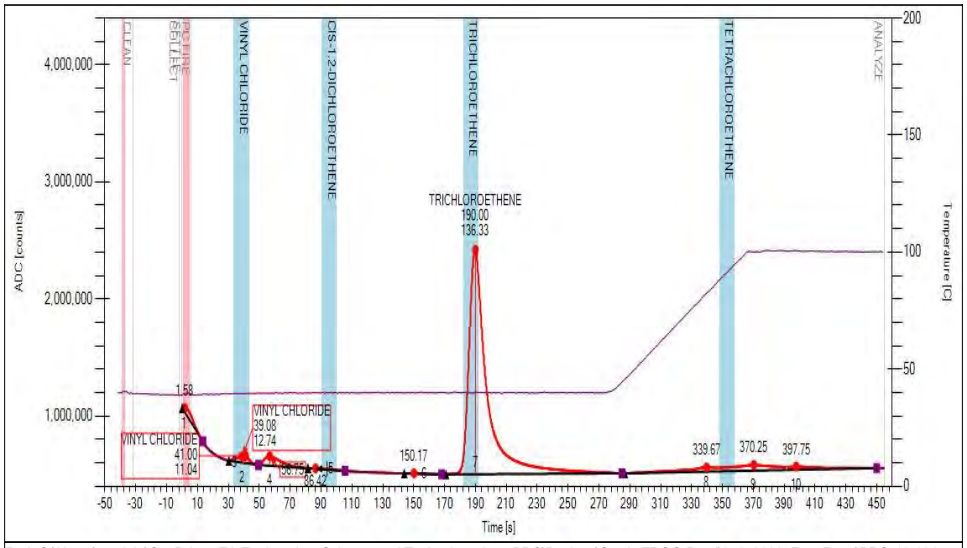
Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.58	33274	466928		
2	VINYL CHLORIDE	39.08	53674	293657	12.74	12.74
3	VINYL CHLORIDE	41	61149	254611	11.04	11.04
4		56.75	81180	1021672		
5		86.42	4613	72152		
6		150.17	4304	40216		
7	TRICHLOROETHENE	190	1916638	26008303	136.33	136.33
8		339.67	36881	899684		
9		370.25	48064	1622513		
10		397.75	28452	706448		



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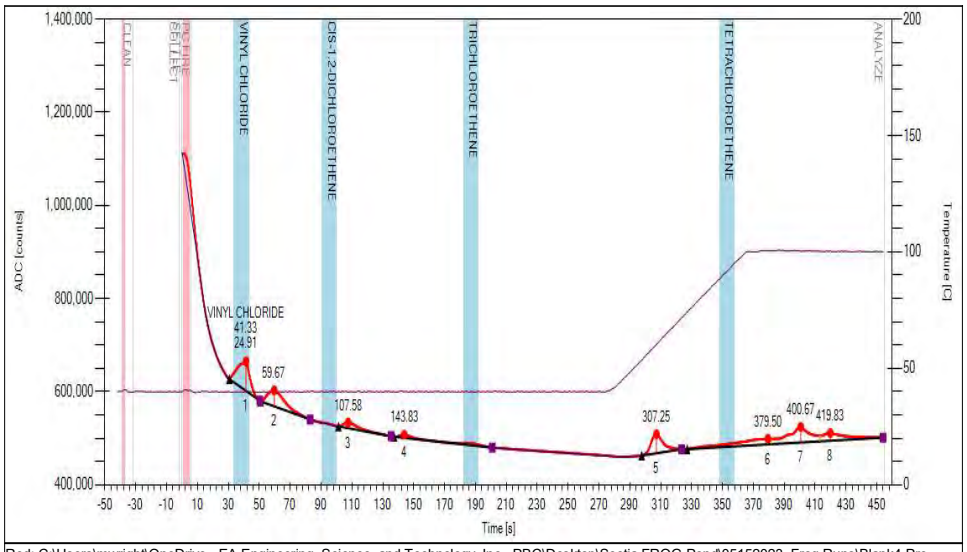
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.33	63356	574433	24.91	24.91
2		59.67	34164	449148		
3		107.58	12211	142092		
4		143.83	6861	120914		
5		307.25	41061	380276		
6		379.5	12251	358186		
7		400.67	33327	573363		
8		419.83	16579	300363		



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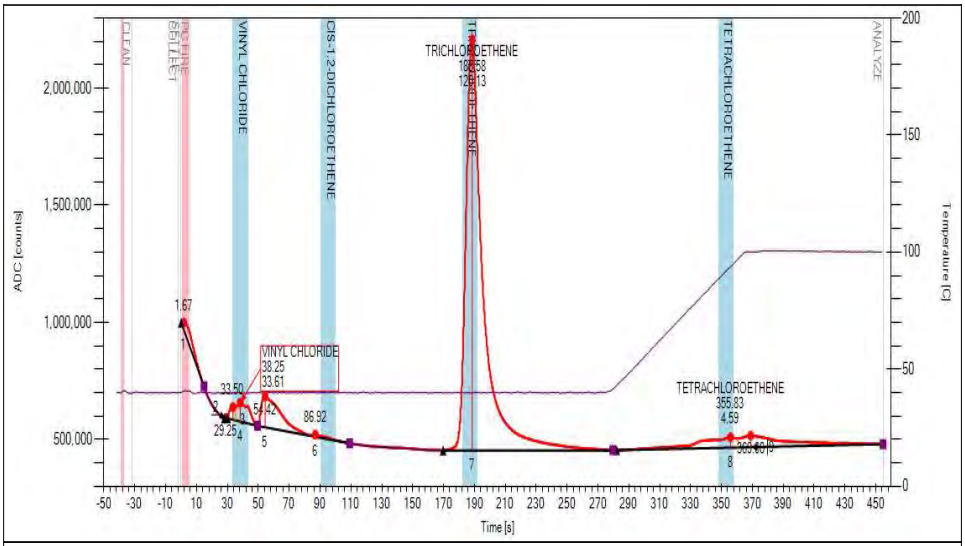
Pump=30%, 0%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.67	29807	477737		
2		29.25	2016	2484		
3		33.5	53607	208902		
4	VINYL CHLORIDE	38.25	79950	774944	33.61	33.61
5		54.42	131255	1940590		
6		86.92	9011	113752		
7	TRICHLOROETHENE	188.58	1754304	22917038	120.13	120.13
8	TETRACHLOROETHENE	355.83	44637	1291639	4.59	4.59
9		369	49282	1796583		



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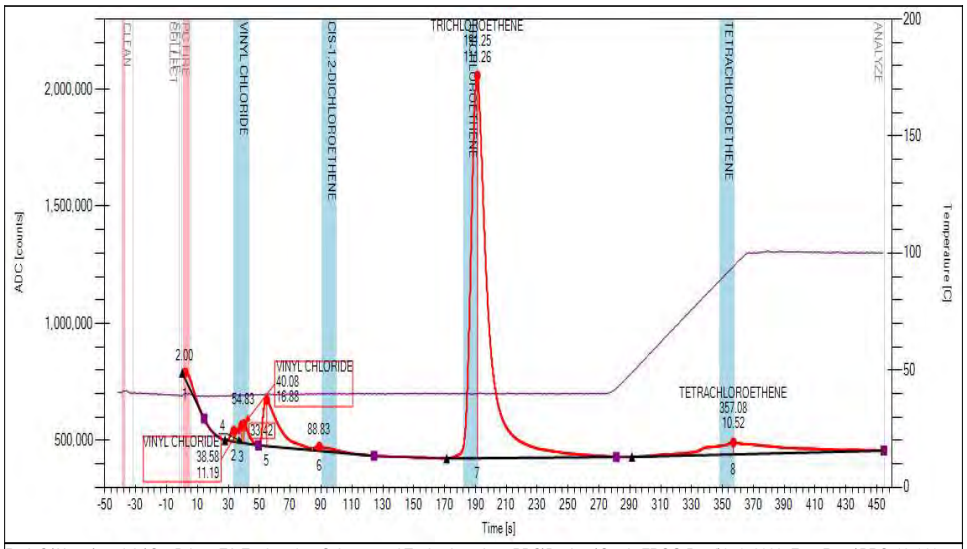
Pump=30%, 0%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	28245	328914		
2		33.42	46930	176391		
3	VINYL CHLORIDE	38.58	75629	258092	11.19	11.19
4	VINYL CHLORIDE	40.08	82362	389299	16.88	16.88
5		54.83	196716	2355501		
6		88.83	18951	279909		
7	TRICHLOROETHENE	191.25	1634284	21225769	111.26	111.26
8	TETRACHLOROETHENE	357.08	51572	2961218	10.52	10.52



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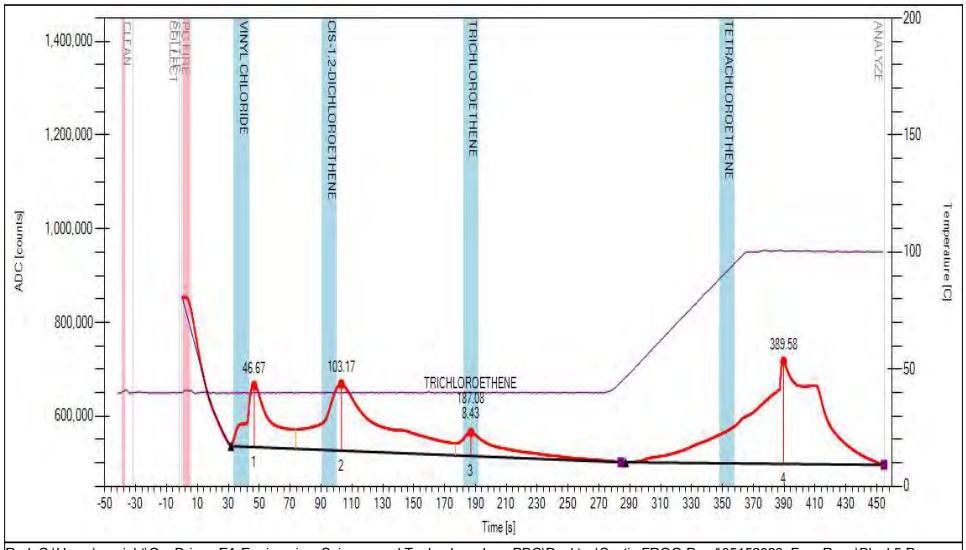
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		46.67	131429	2549314		
2		103.17	142190	6336768		
3	TRICHLOROETHENE	187.08	50006	1607567	8.43	8.43
4		389.58	219066	12005340		



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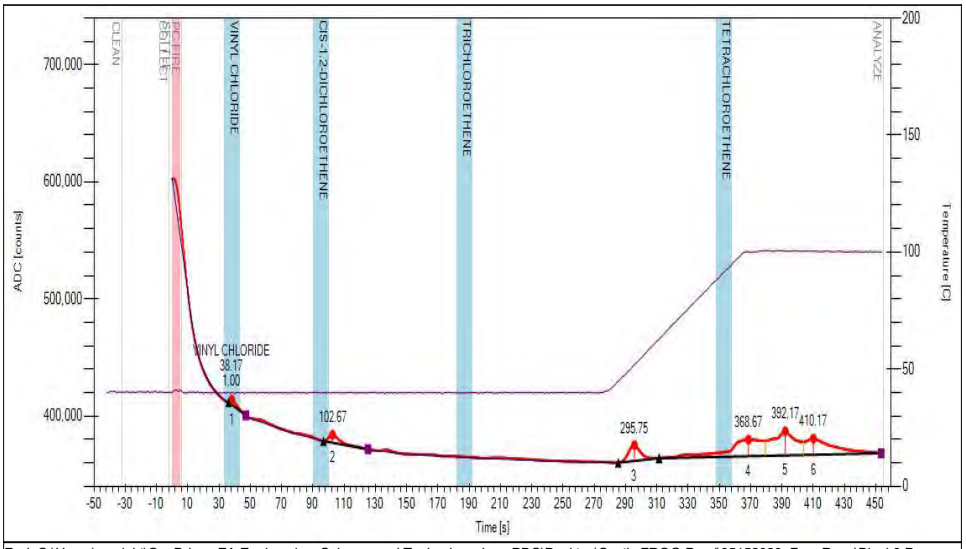
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	38.17	4152	23001	1.00	1
2		102.67	6774	58253		
3		295.75	13485	122489		
4		368.67	14062	375510		
5		392.17	20611	366554		
6		410.17	13838	293569		



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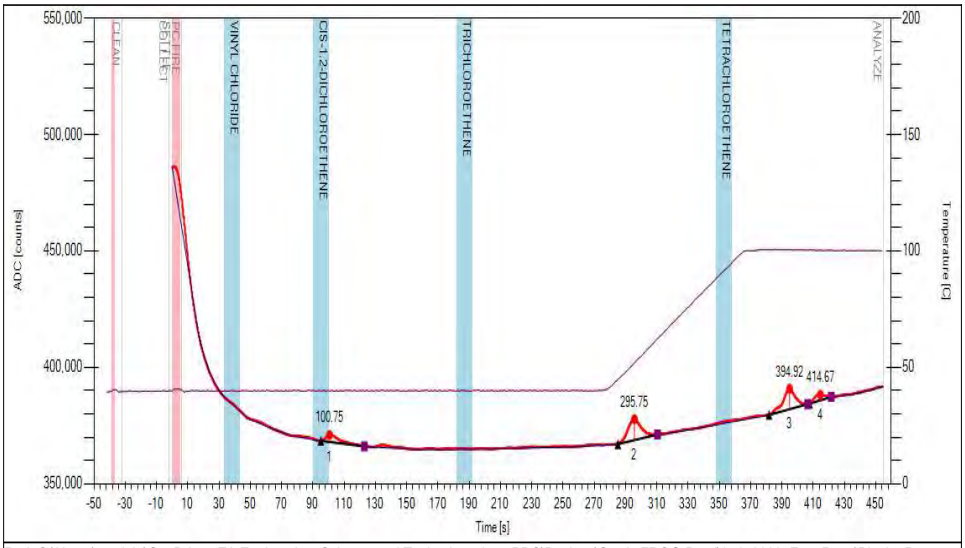
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		100.75	2979	32387		
2		295.75	8951	89404		
3		394.92	8789	80669		
4		414.67	2413	19019		



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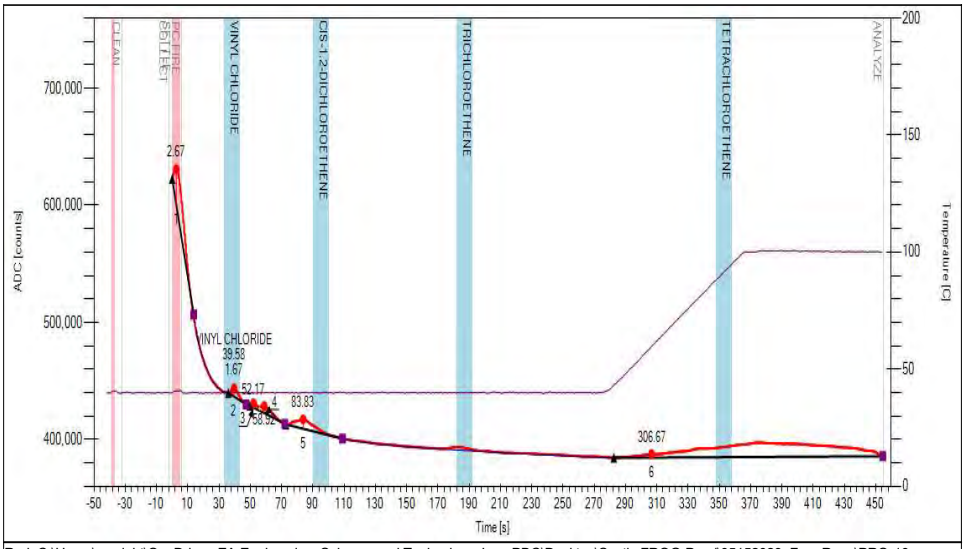
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.67	30099	272071		
2	VINYL CHLORIDE	39.58	6906	38469	1.67	1.67
3		52.17	3687	16387		
4		58.92	5974	52743		
5		83.83	7953	113847		
6		306.67	3000	1220183		



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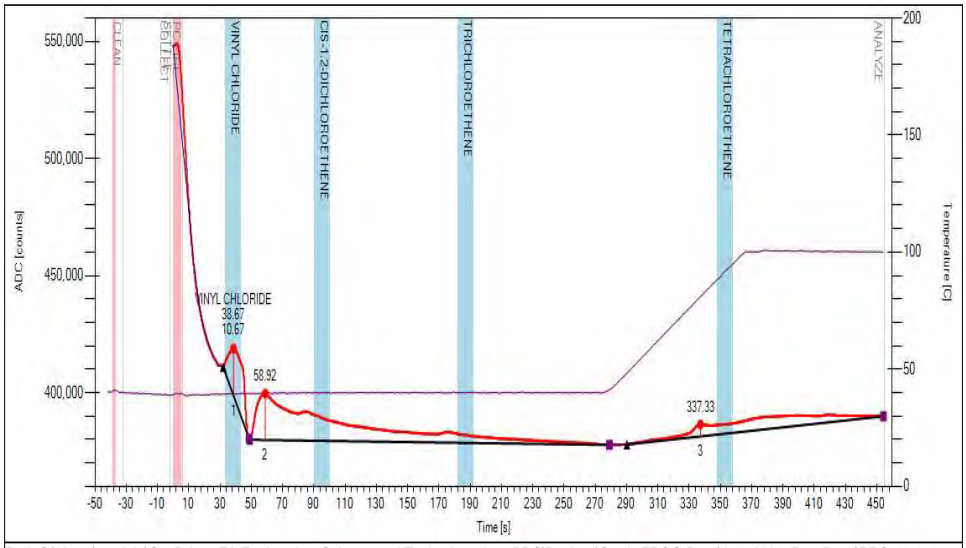
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	38.67	20008	245975	10.67	10.67
2		58.92	19814	1219983		
3		337.33	5086	463273		



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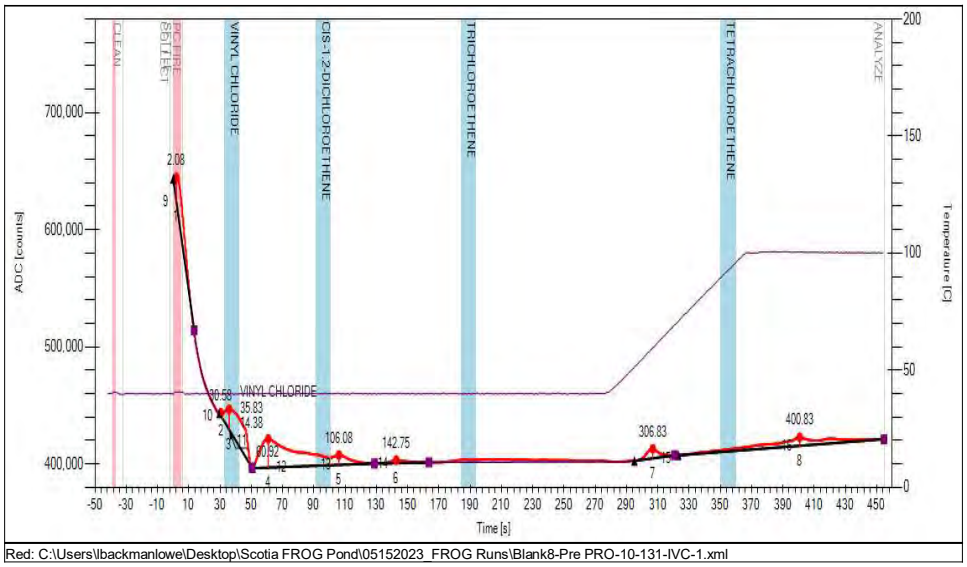
Pump=30%,0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.08	20658	233004		
2		30.58	2570	6223		
3	VINYL CHLORIDE	35.83	17272	331664	14.38	14.38
4		60.92	24451	670657		
5		106.08	8405	112259		
6		142.75	2531	31704		
7		306.83	8082	74150		
8		400.83	7246	320644		
9		2.08	20658	233004		
10		30.58	2570	6223		
11	VINYL CHLORIDE	35.83	17272	331664	14.38	14.38
12		60.92	24451	670657		
13		106.08	8405	112259		
14		142.75	2531	31704		
15		306.83	8082	74150		
16		400.83	7246	320644		



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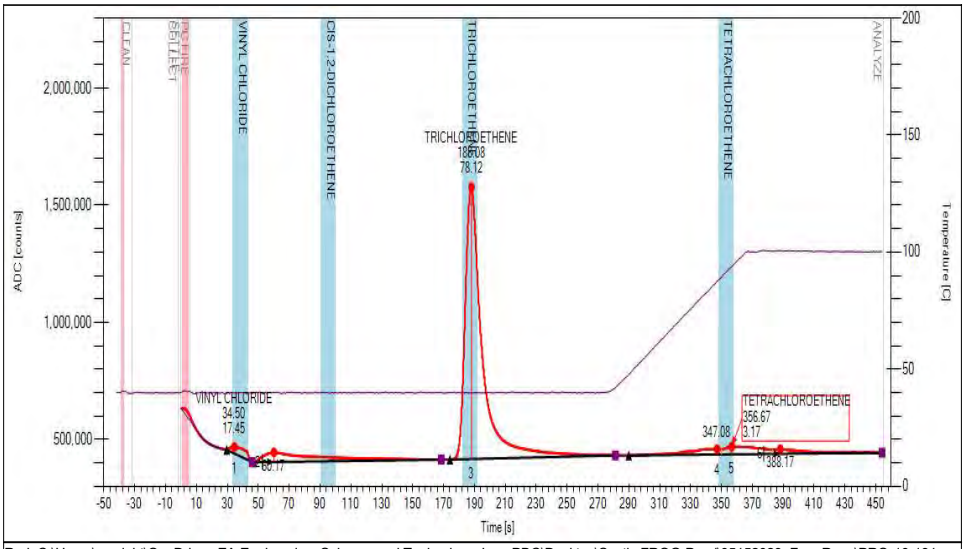
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	34.5	27885	402301	17.45	17.45
2		60.17	40787	1738161		
3	TRICHLOROETHENE	188.08	1161048	14904110	78.12	78.12
4		347.08	22905	589991		
5	TETRACHLOROETHENE	356.67	32778	892707	3.17	3.17
6		388.17	19954	515939		



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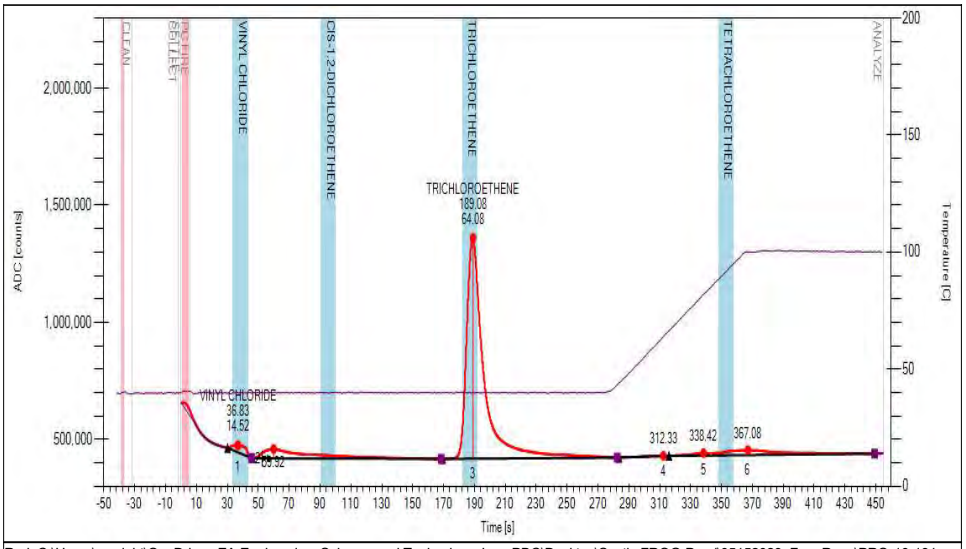
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.83	30561	334726	14.52	14.52
2		59.92	40035	1447209		
3	TRICHLOROETHENE	189.08	941796	12224658	64.08	64.08
4		312.33	1249	36353		
5		338.42	10332	140431		
6		367.08	21151	960886		



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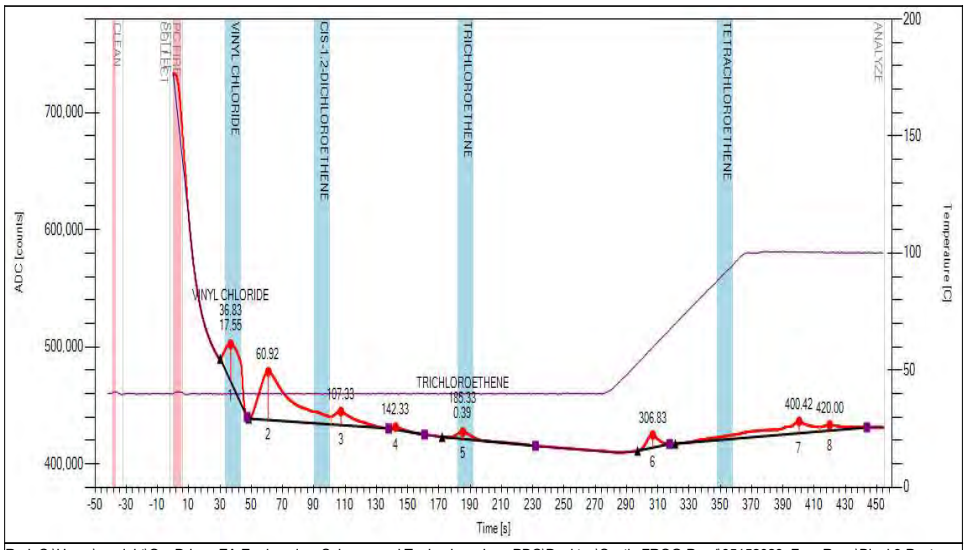
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	36.83	31710	404718	17.55	17.55
2		60.92	41212	962237		
3		107.33	11564	185049		
4		142.33	2186	19285		
5	TRICHLOROETHENE	185.33	5948	74699	0.39	0.39
6		306.83	10883	94416		
7		400.42	10150	362045		
8		420	4934	77977		



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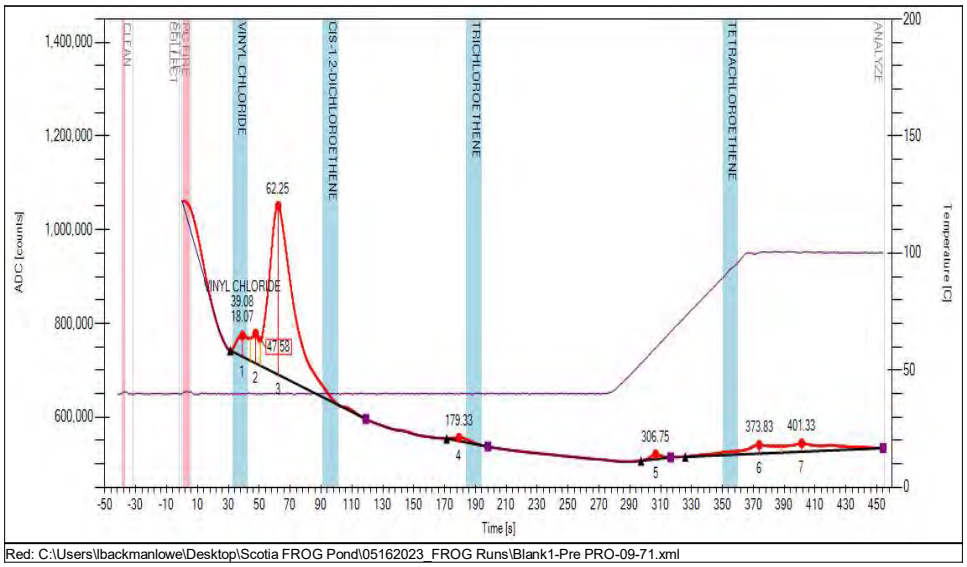
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	39.08	45034	416634	18.07	18.07
2		47.58	63383	360224		
3		62.25	360417	6589298		
4		179.33	6953	94333		
5		306.75	10310	85669		
6		373.83	18680	520395		
7		401.33	18128	609138		



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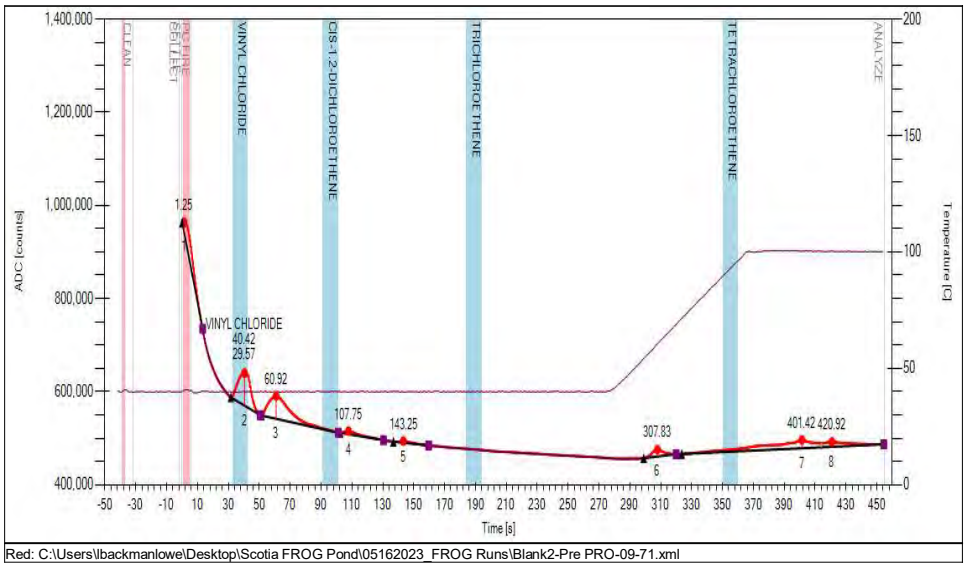
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.25	21013	360019		
2	VINYL CHLORIDE	40.42	69717	681753	29.57	29.57
3		60.92	48917	797244		
4		107.75	6638	72547		
5		143.25	3399	33095		
6		307.83	14734	127759		
7		401.42	17878	649282		
8		420.92	10528	207769		



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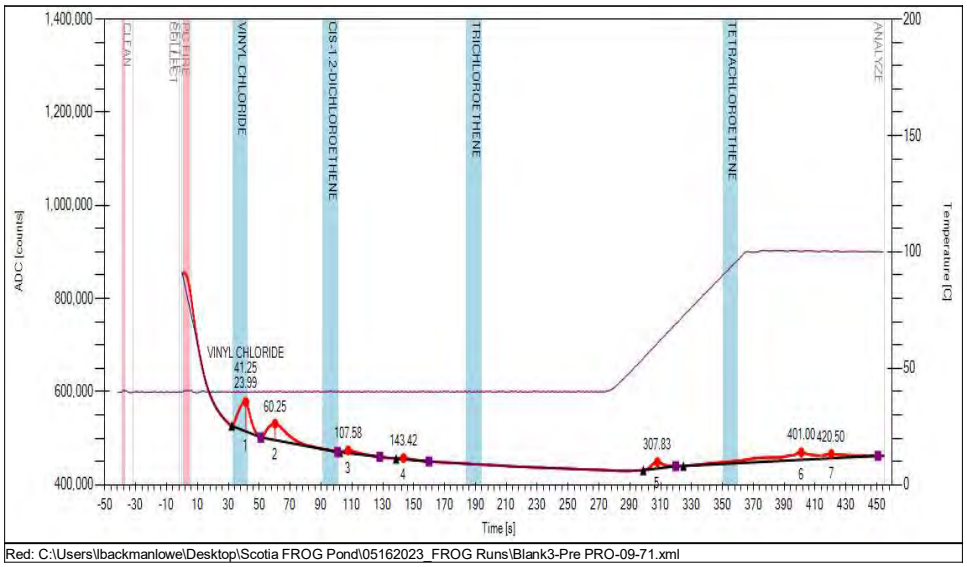
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.25	63306	553220	23.99	23.99
2		60.25	35043	528404		
3		107.58	5717	62867		
4		143.42	2744	23725		
5		307.83	13579	116461		
6		401	16306	569604		
7		420.5	9241	172758		



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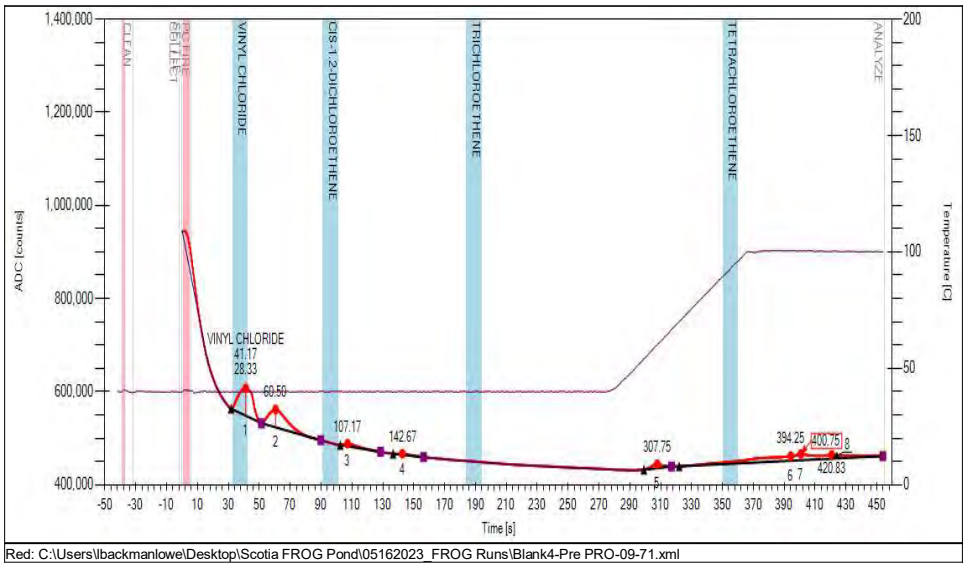
Pump=30%, 1%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.17	58849	653168	28.33	28.33
2		60.5	38175	535837		
3		107.17	5529	64028		
4		142.67	2190	19628		
5		307.75	8679	70451		
6		394.25	9996	360899		
7		400.75	13193	197646		
8		420.83	8043	161789		



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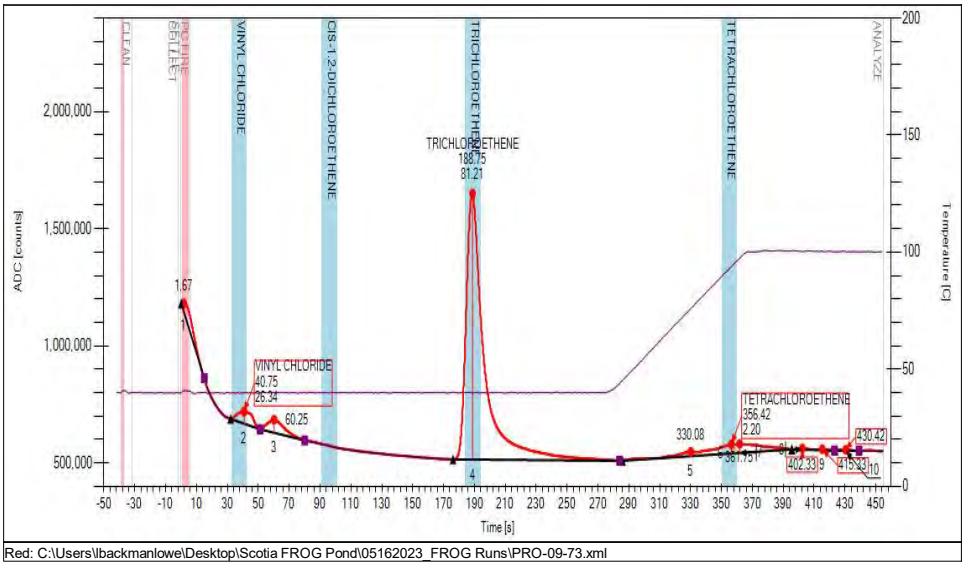
Pump=30%, 1%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.67	34728	557784		
2	VINYL CHLORIDE	40.75	51517	607237	26.34	26.34
3		60.25	55446	721543		
4	TRICHLOROETHENE	188.75	1136383	15493151	81.21	81.21
5		330.08	18328	285511		
6	TETRACHLOROETHENE	356.42	38657	619987	2.20	2.2
7		361.75	38436	805667		
8		402.33	5472	45936		
9		415.33	4017	29378		
10		430.42	3142	23785		



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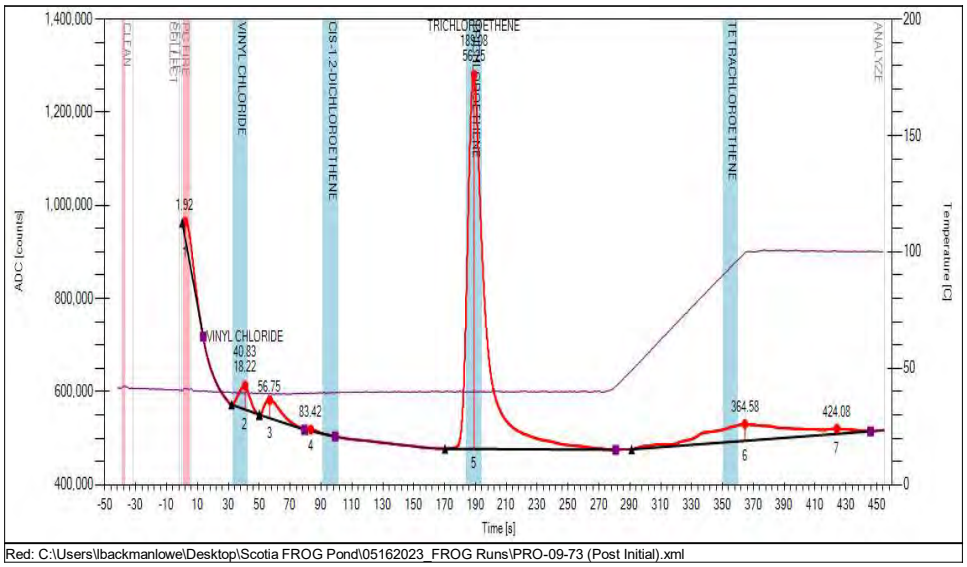
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.92	34825	424965		
2	VINYL CHLORIDE	40.83	51240	420205	18.22	18.22
3		56.75	38561	494459		
4		83.42	3366	26916		
5	TRICHLOROETHENE	189.08	803161	10731888	56.25	56.25
6		364.58	35825	2246487		
7		424.08	11155	225206		



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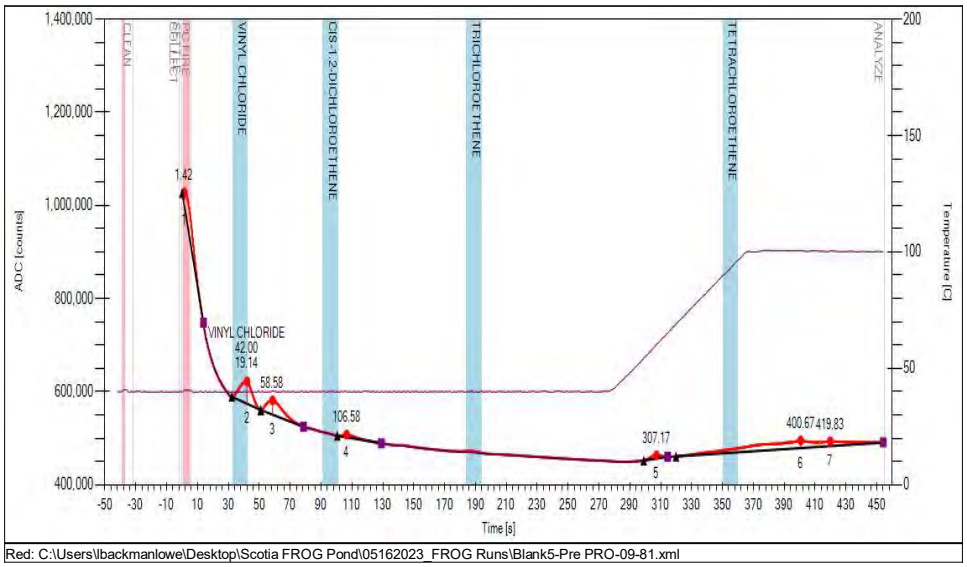
Pump=30%, 2%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.42	28193	422203		
2	VINYL CHLORIDE	42	47859	441325	19.14	19.14
3		58.58	30559	381901		
4		106.58	5817	63087		
5		307.17	7183	54395		
6		400.67	16311	808259		
7		419.83	10230	229007		



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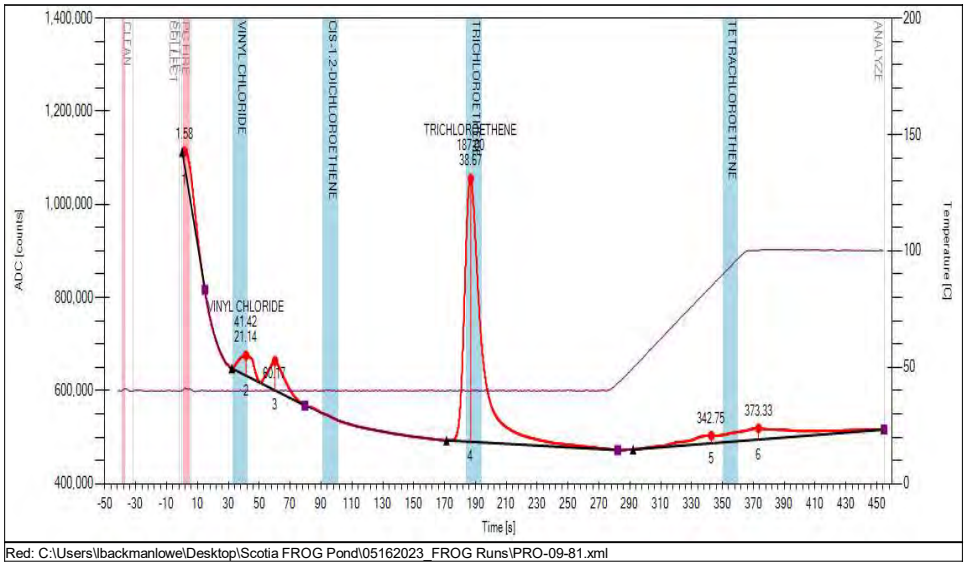
Pump=30%, 2%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.58	31141	528923		
2	VINYL CHLORIDE	41.42	43511	487403	21.14	21.14
3		60.17	63387	777225		
4	TRICHLOROETHENE	187	564471	7377888	38.67	38.67
5		342.75	16480	369132		
6		373.33	24159	1326410		



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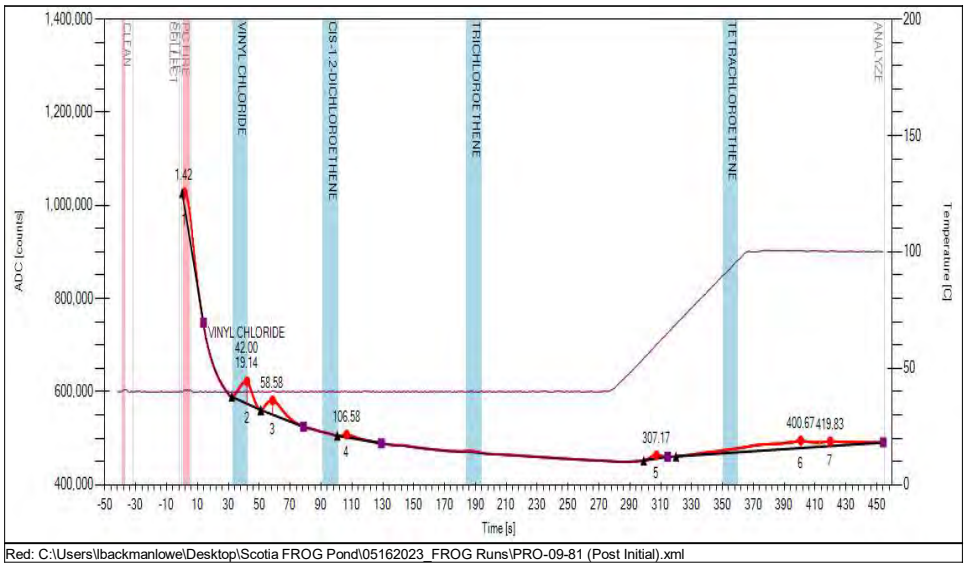
Pump=30%, 2%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.42	28193	422203		
2	VINYL CHLORIDE	42	47859	441325	19.14	19.14
3		58.58	30559	381901		
4		106.58	5817	63087		
5		307.17	7183	54395		
6		400.67	16311	808259		
7		419.83	10230	229007		



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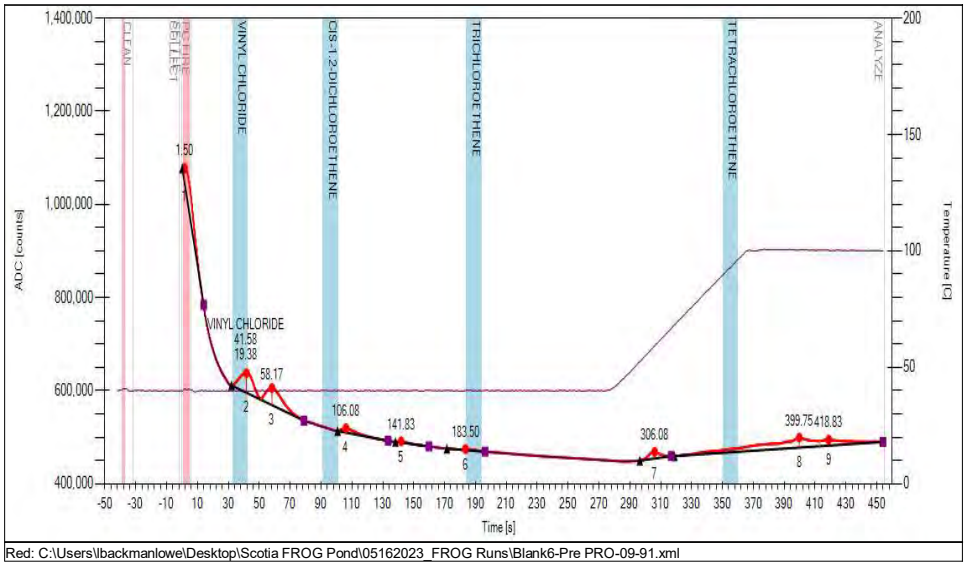
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	30547	475275		
2	VINYL CHLORIDE	41.58	42027	446823	19.38	19.38
3		58.17	36471	461544		
4		106.08	9558	102216		
5		141.83	2492	20688		
6		183.5	2134	25498		
7		306.08	14272	122729		
8		399.75	21399	824419		
9		418.83	12736	252732		



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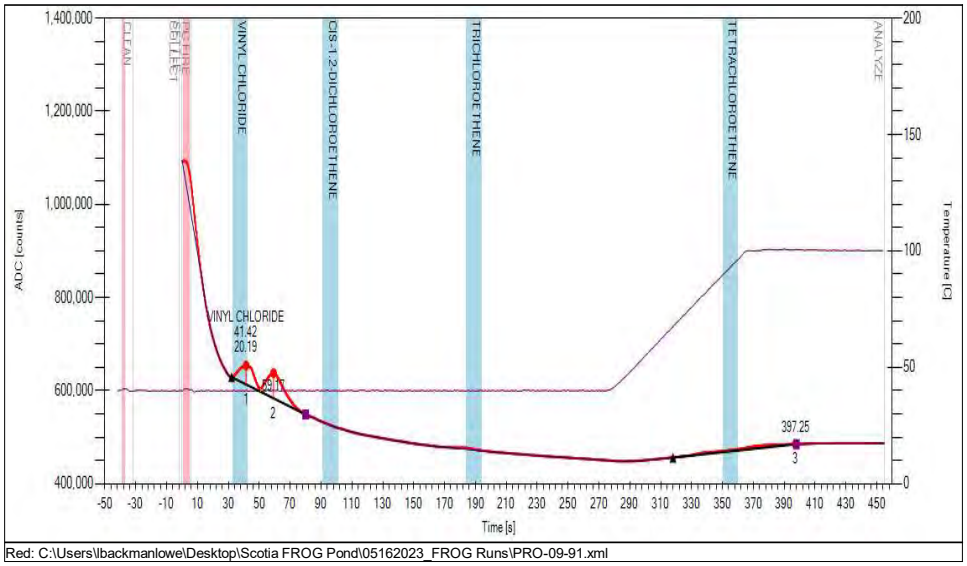
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.42	40410	465481	20.19	20.19
2		59.17	54056	727218		
3		397.25	354	201770		



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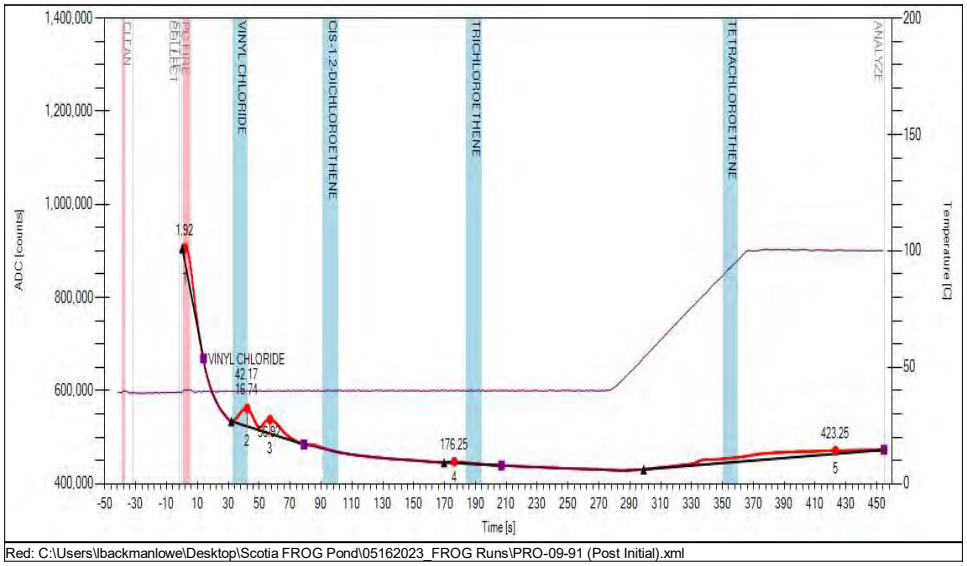
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.92	32984	412847		
2	VINYL CHLORIDE	42.17	38454	385990	16.74	16.74
3		56.92	30014	396845		
4		176.25	2709	47026		
5		423.25	7086	1089742		



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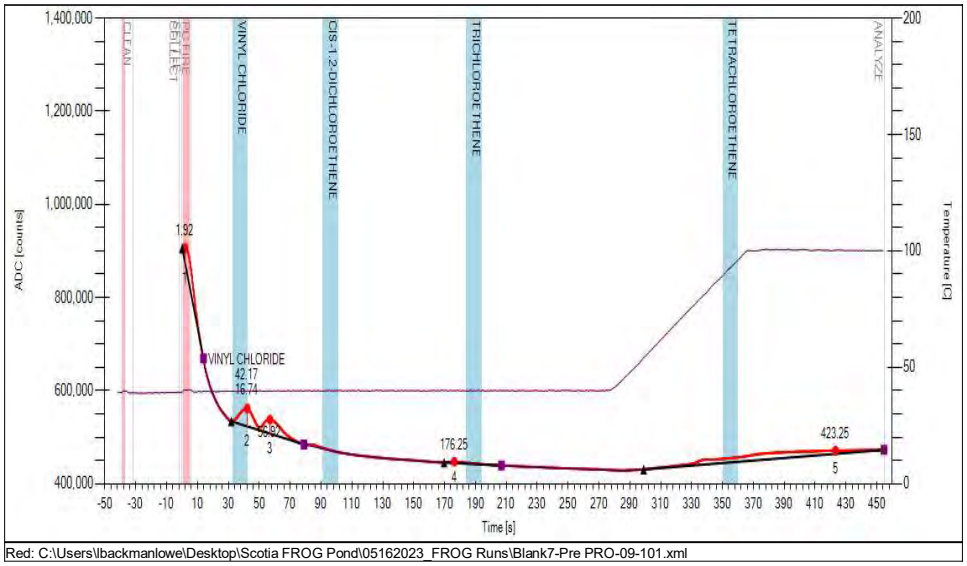
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.92	32984	412847		
2	VINYL CHLORIDE	42.17	38454	385990	16.74	16.74
3		56.92	30014	396845		
4		176.25	2709	47026		
5		423.25	7086	1089742		



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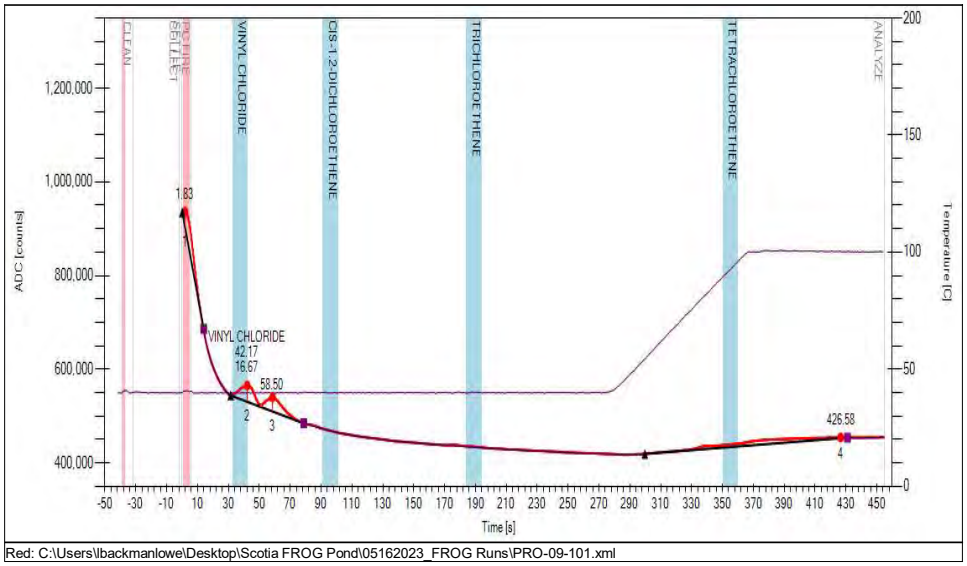
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.83	33011	430595		
2	VINYL CHLORIDE	42.17	34784	384334	16.67	16.67
3		58.5	29357	379530		
4		426.58	1422	595137		



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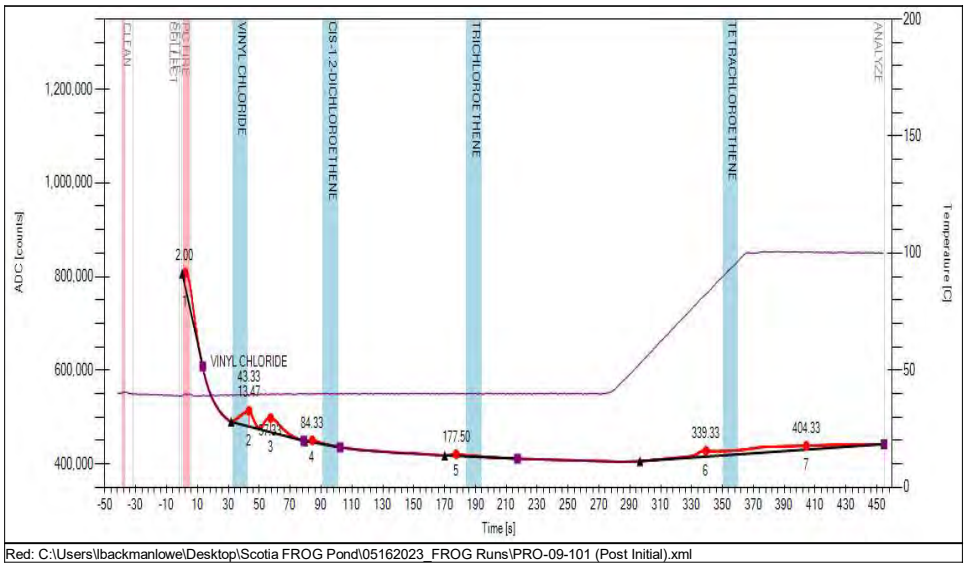
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	30484	360527		
2	VINYL CHLORIDE	43.33	33455	310543	13.47	13.47
3		57.33	30063	383713		
4		84.33	4325	41401		
5		177.5	3668	61309		
6		339.33	12389	203469		
7		404.33	8384	790962		



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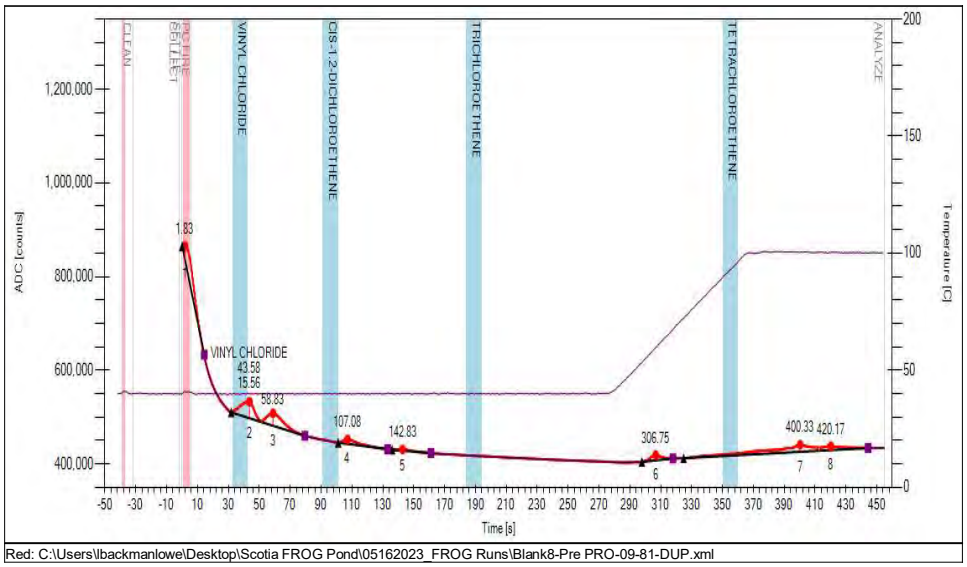
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.83	29771	403410		
2	VINYL CHLORIDE	43.58	35047	358787	15.56	15.56
3		58.83	26554	332503		
4		107.08	9641	109618		
5		142.83	2510	24025		
6		306.75	11336	94926		
7		400.33	14959	494512		
8		420.17	8265	143967		



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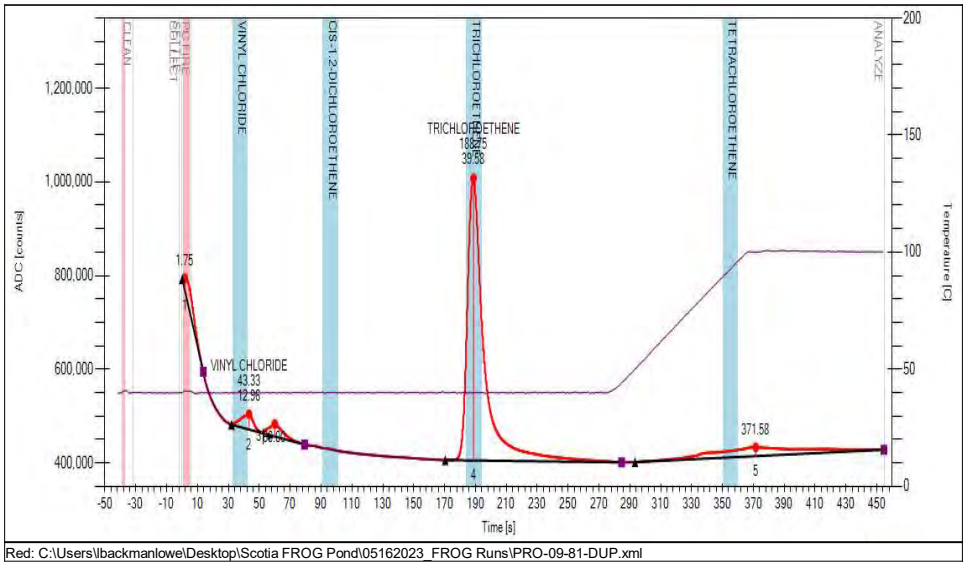
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.75	25642	360346		
2	VINYL CHLORIDE	43.33	32608	298851	12.96	12.96
3		60	26604	292991		
4	TRICHLOROETHENE	188.75	602183	7551763	39.58	39.58
5		371.58	18790	1282122		



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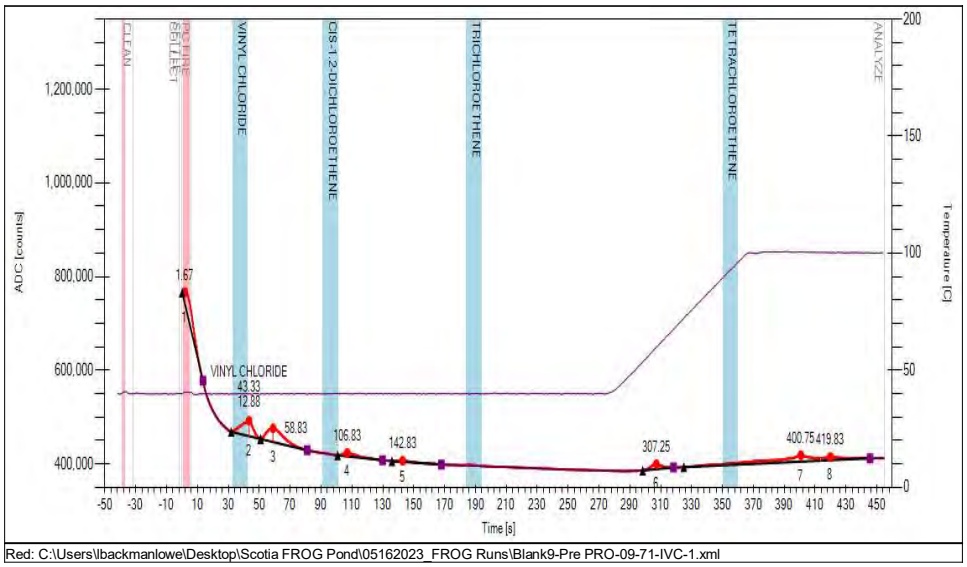
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.67	23513	326688		
2	VINYL CHLORIDE	43.33	33035	296901	12.88	12.88
3		58.83	29326	378374		
4		106.83	7366	81019		
5		142.83	2336	22516		
6		307.25	10659	89594		
7		400.75	13575	425022		
8		419.83	6994	110833		



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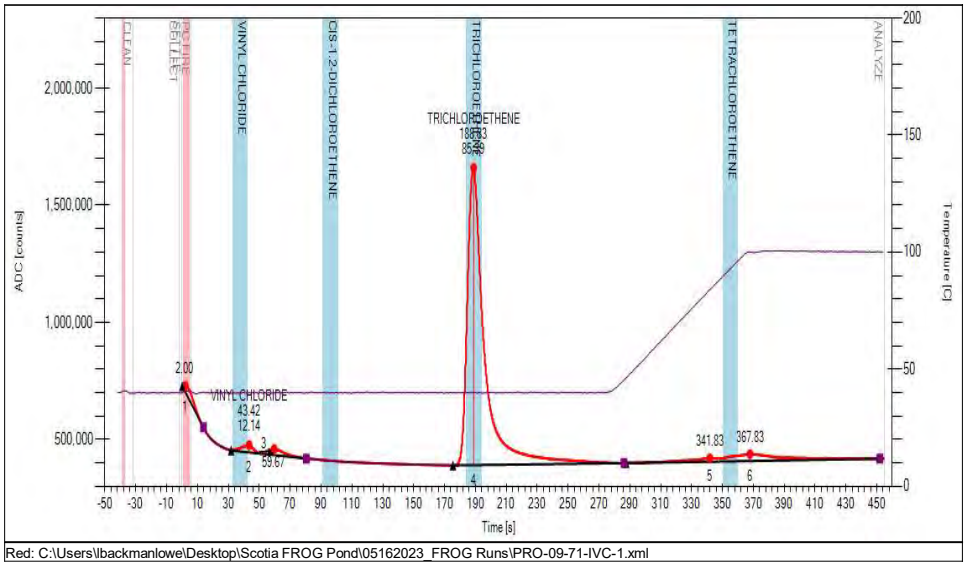
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	25993	310842		
2	VINYL CHLORIDE	43.42	31185	279906	12.14	12.14
3		59.67	26385	335789		
4	TRICHLOROETHENE	188.83	1269200	16289692	85.39	85.39
5		341.83	15103	343934		
6		367.83	29372	1217446		



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2023-05-16 17:05:31Z
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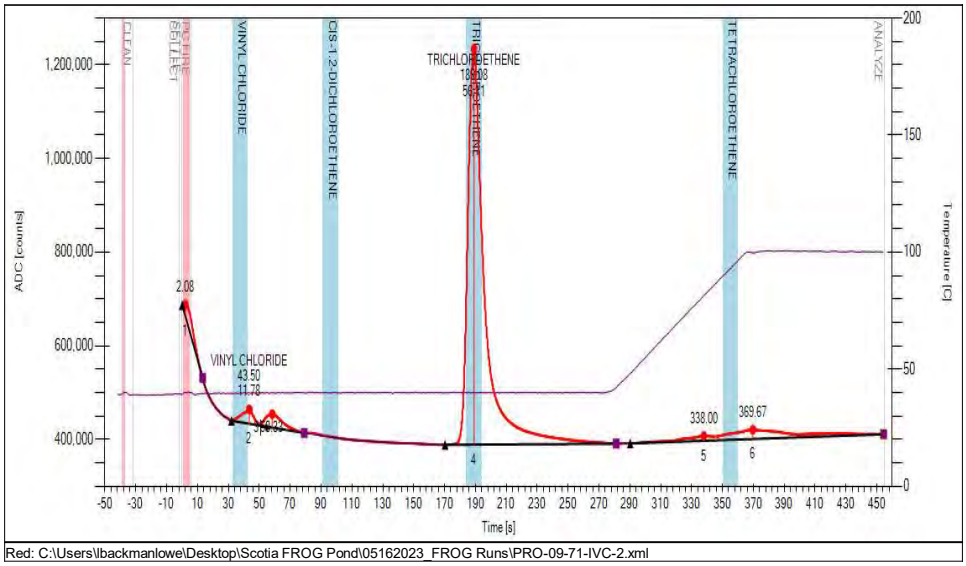
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.08	24422	278063		
2	VINYL CHLORIDE	43.5	30582	271598	11.78	11.78
3		58.33	28667	375500		
4	TRICHLOROETHENE	189.08	844872	10704089	56.11	56.11
5		338	10491	229895		
6		369.67	19772	965914		



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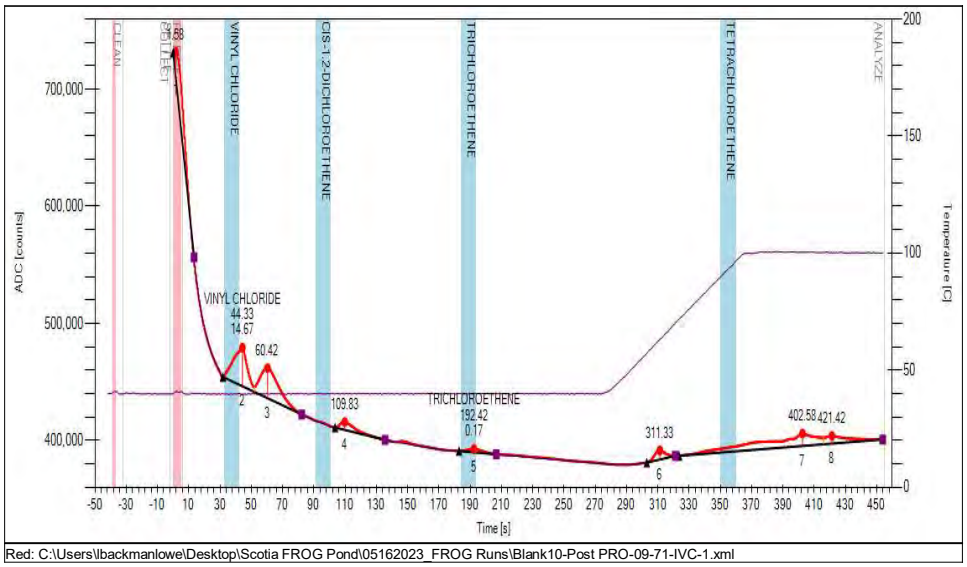
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.58	20341	284436		
2	VINYL CHLORIDE	44.33	32968	338330	14.67	14.67
3		60.42	25744	359973		
4		109.83	6746	75265		
5	TRICHLOROETHENE	192.42	2913	32319	0.17	0.17
6		311.33	7785	62417		
7		402.58	10593	435185		
8		421.42	6466	116504		



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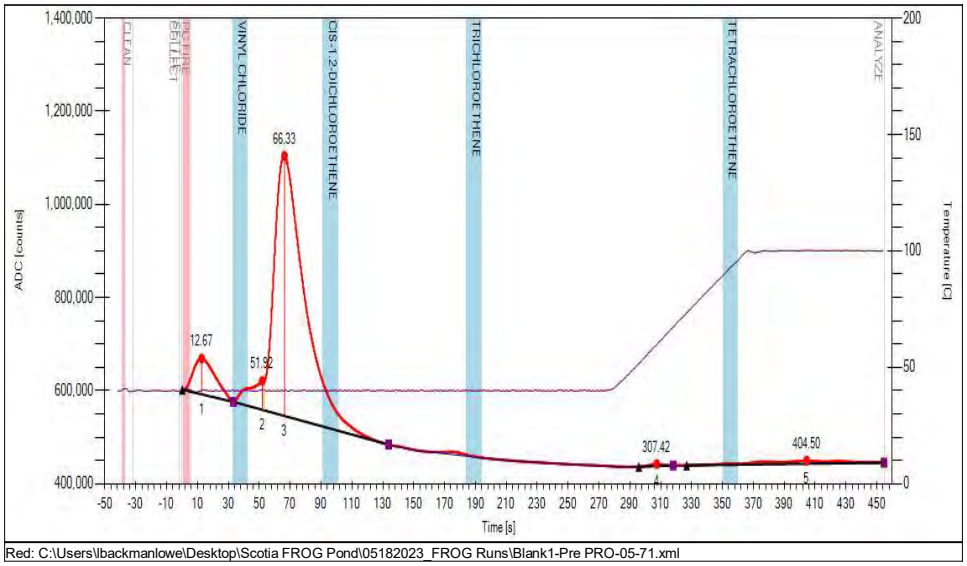
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		12.67	76779	1277294		
2		51.92	62078	695508		
3		66.33	558425	12751526		
4		307.42	4620	41770		
5		404.5	6975	399140		



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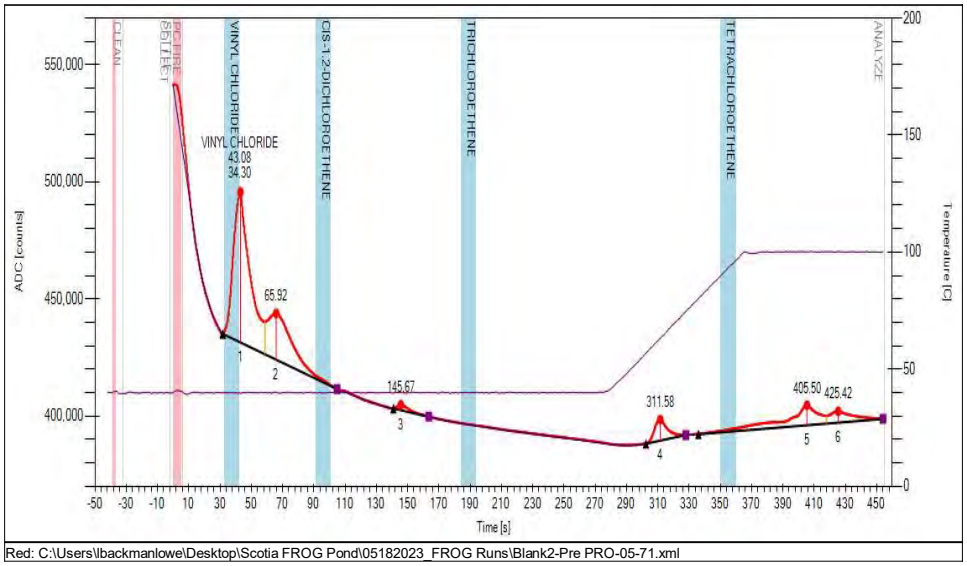
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.08	64332	790870	34.30	34.3
2		65.92	19784	370323		
3		145.67	2331	21164		
4		311.58	8953	86546		
5		405.5	8509	209907		
6		425.42	4862	86050		



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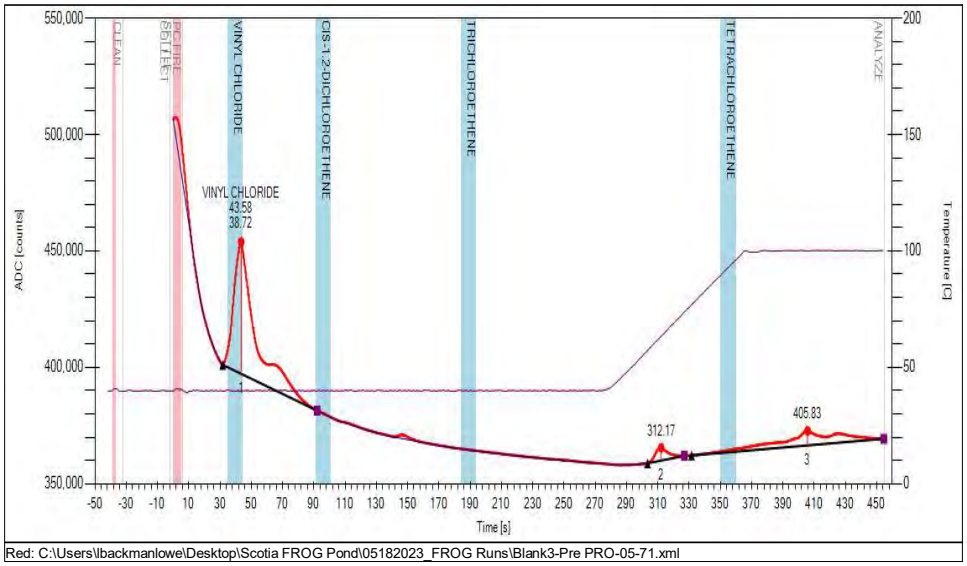
Pump=30%, 3%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.58	56625	892791	38.72	38.72
2		312.17	5504	53219		
3		405.83	6243	255065		



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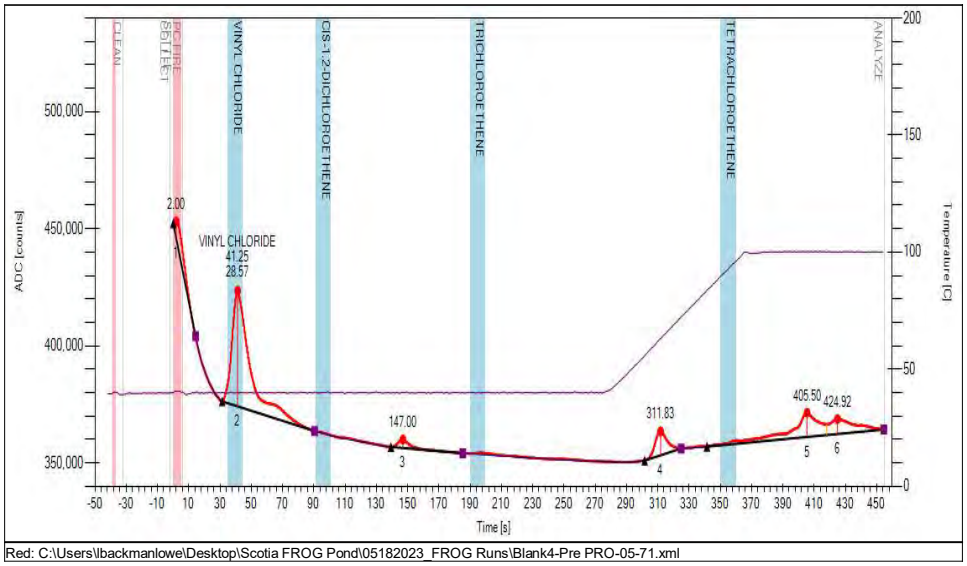
Pump=30%, 2%
Dilution = 1.0

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	7220	77922		
2	VINYL CHLORIDE	41.25	49372	658807	28.57	28.57
3		147	3626	32635		
4		311.83	10268	92254		
5		405.5	10367	217392		
6		424.92	6389	121835		



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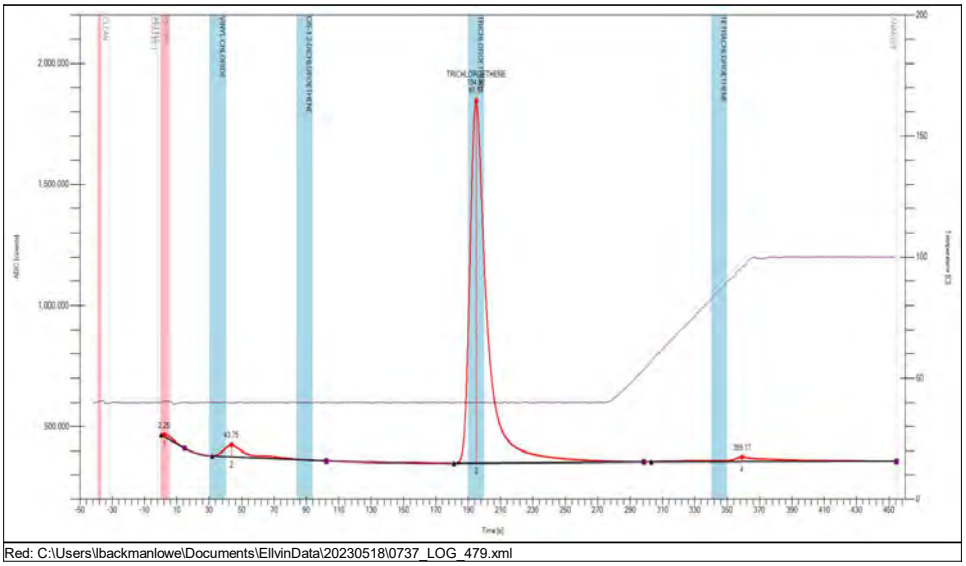
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.25	9130	98418		
2		43.75	51181	820122		
3	TRICHLOROETHENE	194.92	1497871	18569397	97.34	97.34
4		359.17	19304	702276		



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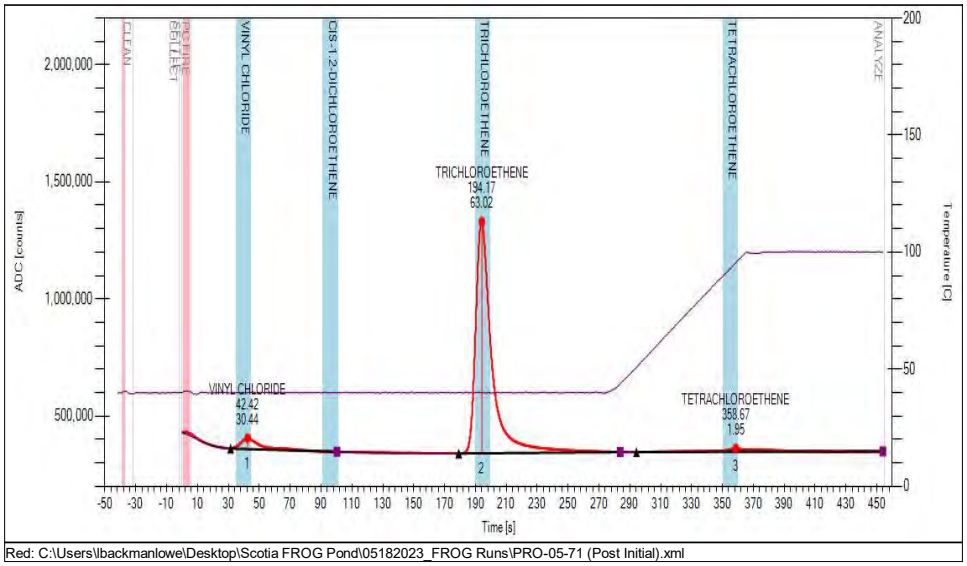
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.42	46858	701802	30.44	30.44
2	TRICHLOROETHENE	194.17	988679	12023013	63.02	63.02
3	TETRACHLOROETHENE	358.67	13702	549544	1.95	1.95



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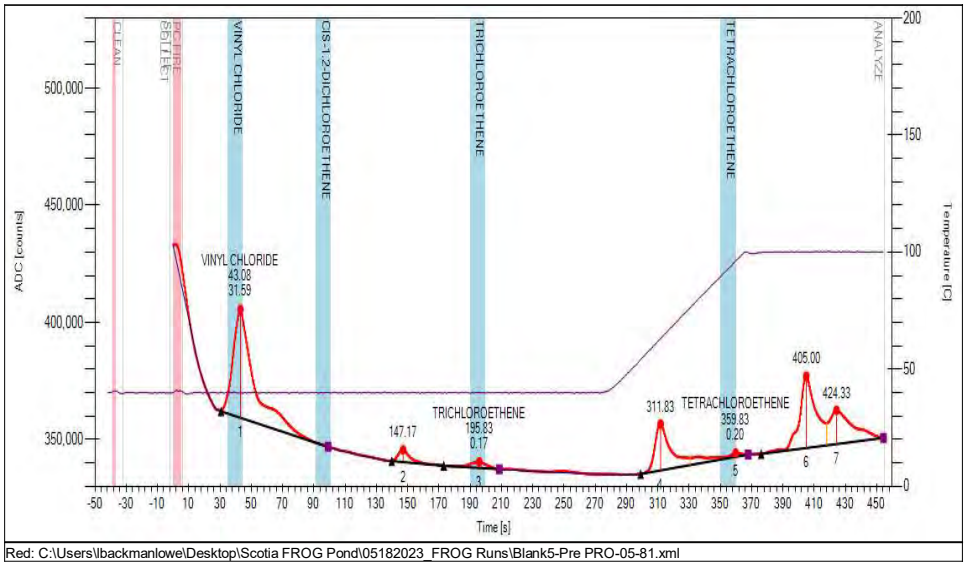
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.08	46243	728415	31.59	31.59
2		147.17	5228	46949		
3	TRICHLOROETHENE	195.83	2554	32538	0.17	0.17
4		311.83	19811	224954		
5	TETRACHLOROETHENE	359.83	1637	56154	0.20	0.2
6		405	30674	374418		
7		424.33	14416	251382		



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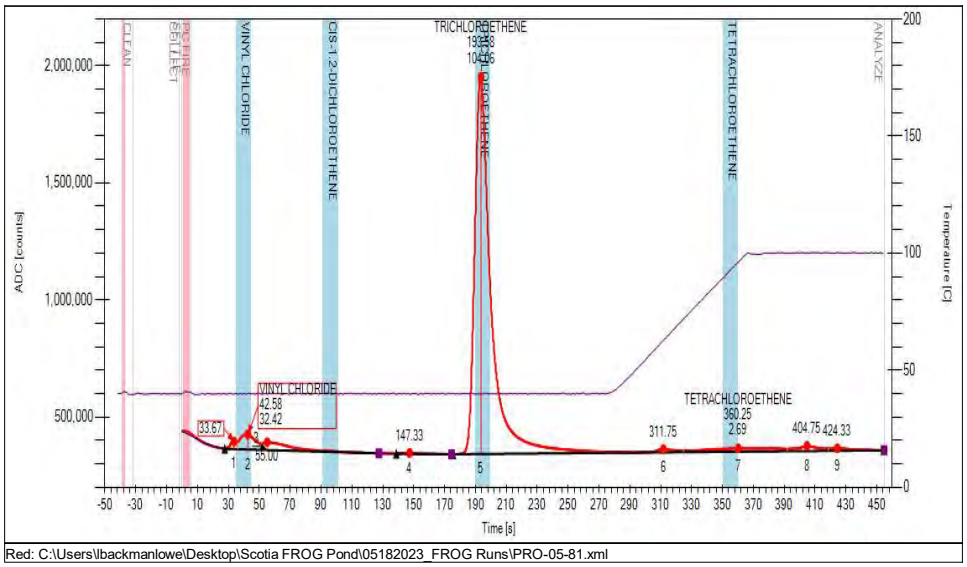
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		33.67	31868	152275		
2	VINYL CHLORIDE	42.58	64915	747614	32.42	32.42
3		55	33946	744172		
4		147.33	3844	39951		
5	TRICHLOROETHENE	193.58	1610867	19851917	104.06	104.06
6		311.75	14319	192539		
7	TETRACHLOROETHENE	360.25	14384	758065	2.69	2.69
8		404.75	22588	376257		
9		424.33	10986	197672		



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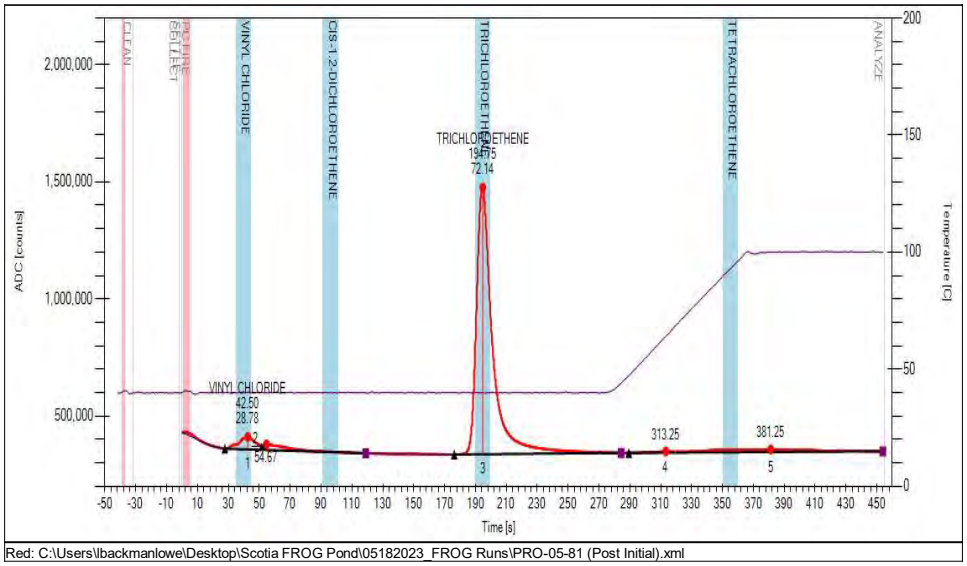
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.5	52956	663605	28.78	28.78
2		54.67	24187	446688		
3	TRICHLOROETHENE	194.75	1138296	13762083	72.14	72.14
4		313.25	5355	59868		
5		381.25	10650	863257		



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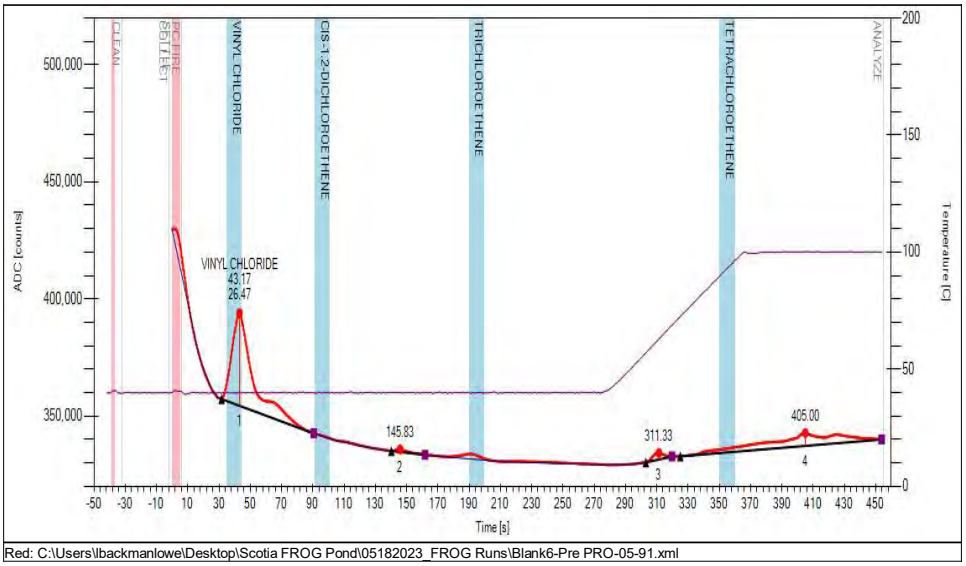
Pump=30%, 3%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.17	39531	610276	26.47	26.47
2		145.83	1094	9633		
3		311.33	2830	23484		
4		405	5518	287025		



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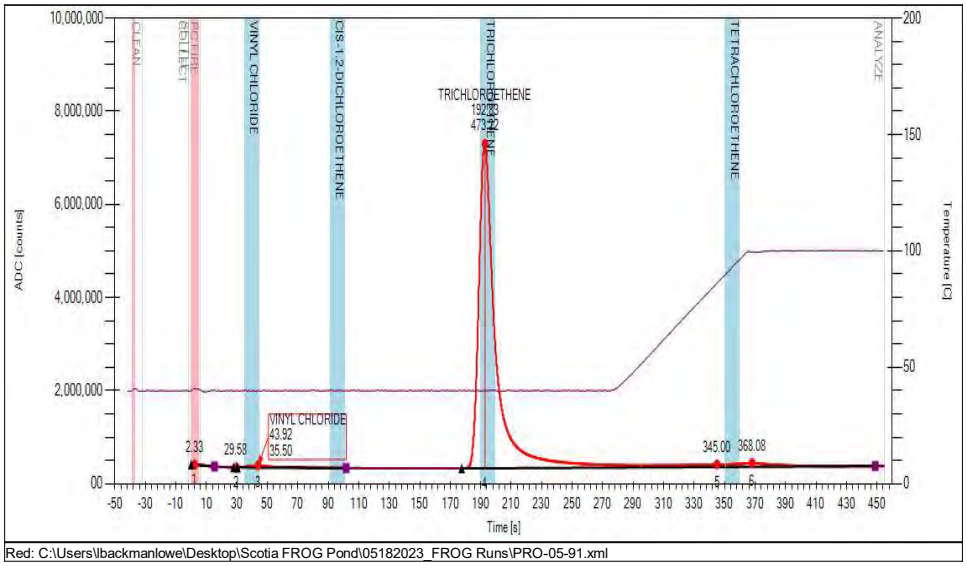
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.33	7244	77579		
2		29.58	680	1202		
3	VINYL CHLORIDE	43.92	46749	818463	35.50	35.5
4	TRICHLOROETHENE	192.83	6964763	90278434	473.22	473.22
5		345	57111	2540859		
6		368.08	80170	2769288		



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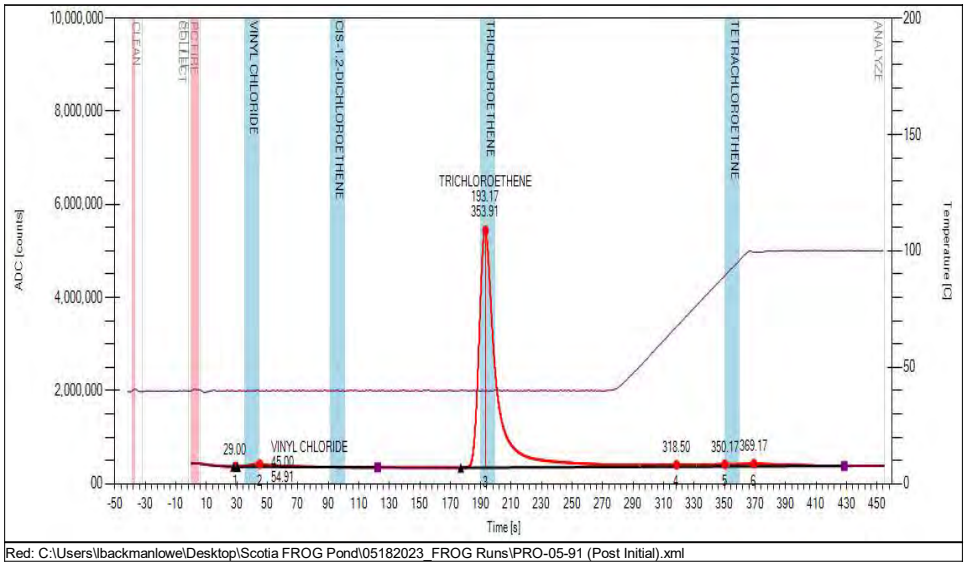
Pump=30%, 0%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		29	518	677		
2	VINYL CHLORIDE	45	57680	1266198	54.91	54.91
3	TRICHLOROETHENE	193.17	5093104	67516074	353.91	353.91
4		318.5	42812	1493727		
5		350.17	48063	928553		
6		369.17	60852	2298826		



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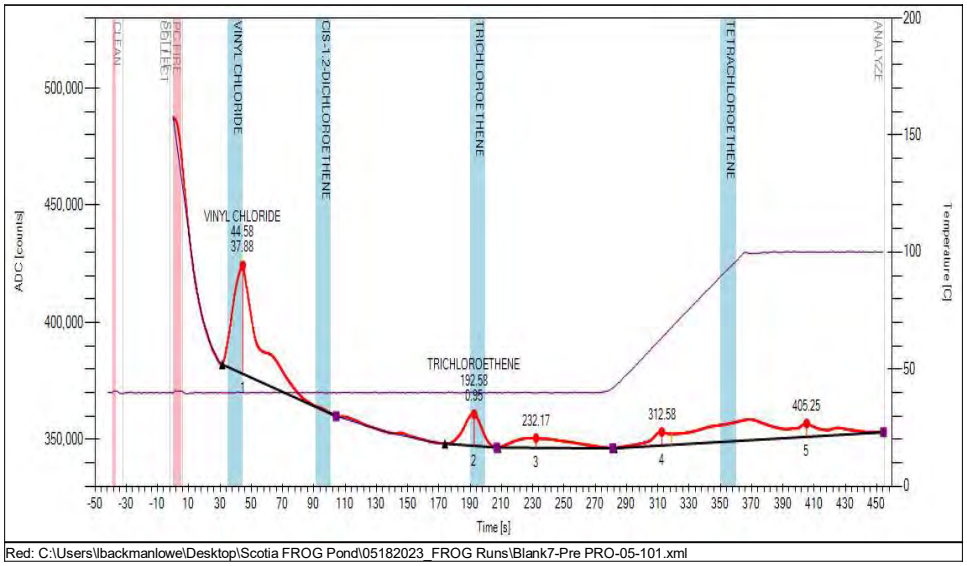
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	44.58	46255	873547	37.88	37.88
2	TRICHLOROETHENE	192.58	13545	180822	0.95	0.95
3		232.17	4168	171912		
4		312.58	5758	85430		
5		405.25	5726	629332		



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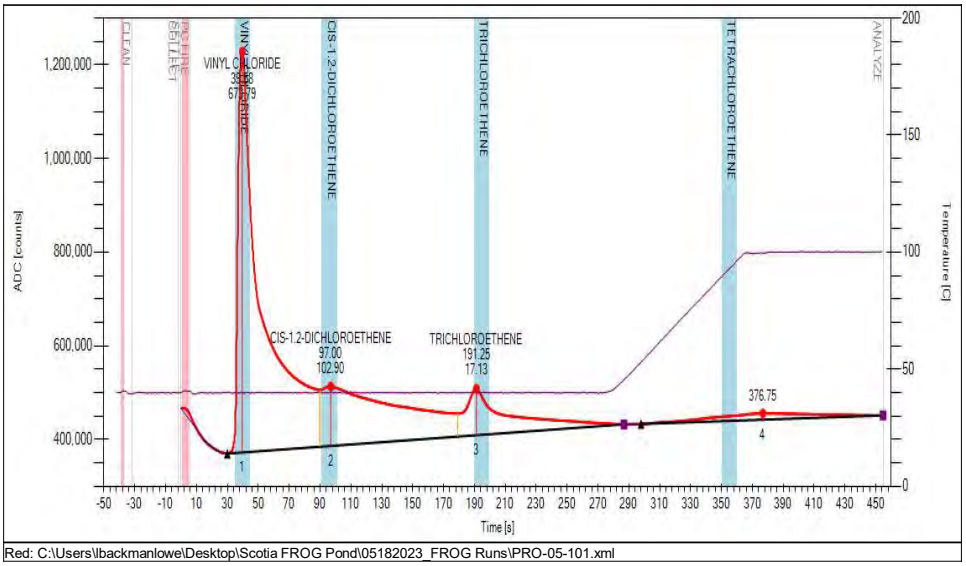
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	39.58	855944	15536144	673.79	673.79
2	CIS-1.2-DICHLOROETHENE	97	126660	7516005	102.90	102.9
3	TRICHLOROETHENE	191.25	99150	3268190	17.13	17.13
4		376.75	13524	1025199		



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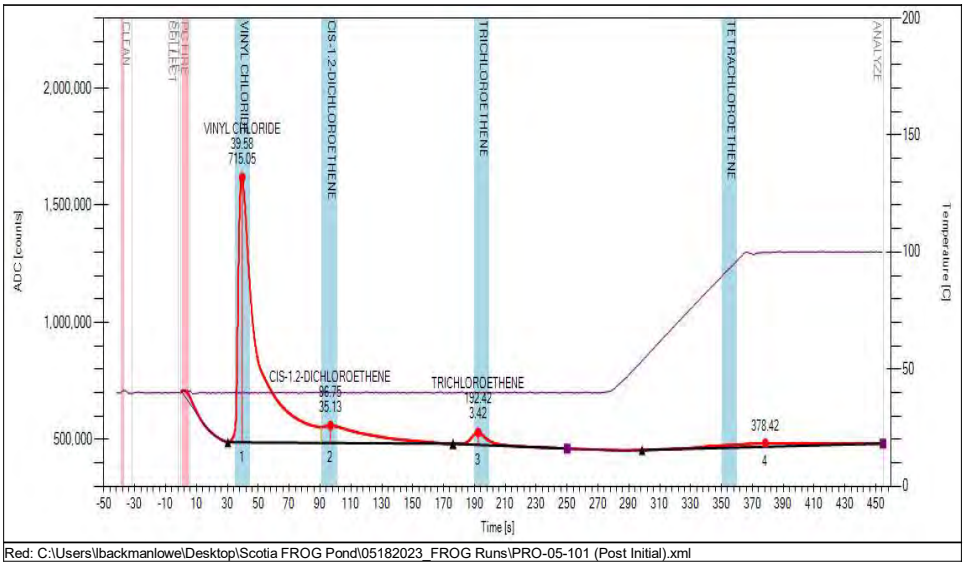
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	39.58	1131623	16487700	715.05	715.05
2	CIS-1.2-DICHLOROETHENE	96.75	74338	2565713	35.13	35.13
3	TRICHLOROETHENE	192.42	52708	651559	3.42	3.42
4		378.42	14614	1149463		



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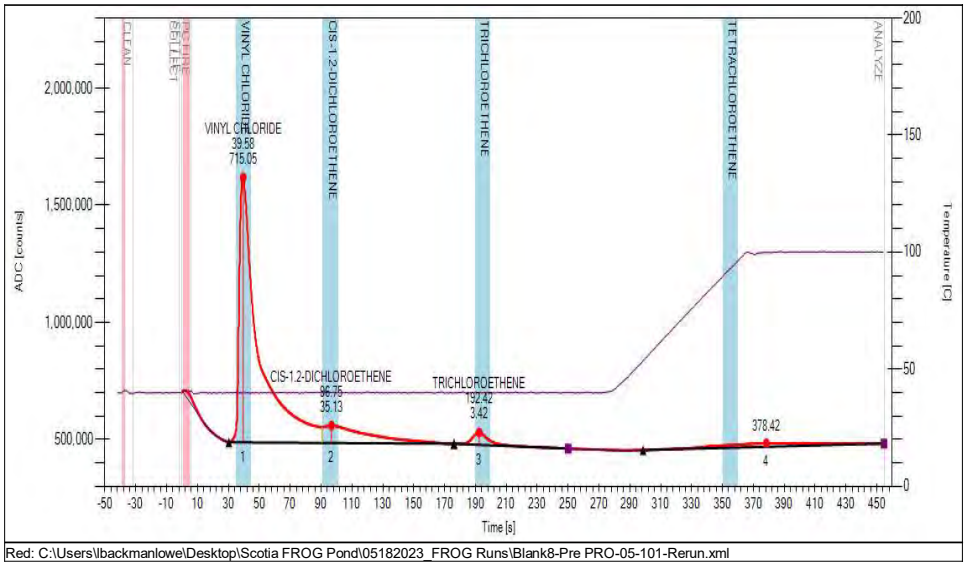
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	39.58	1131623	16487700	715.05	715.05
2	CIS-1.2-DICHLOROETHENE	96.75	74338	2565713	35.13	35.13
3	TRICHLOROETHENE	192.42	52708	651559	3.42	3.42
4		378.42	14614	1149463		



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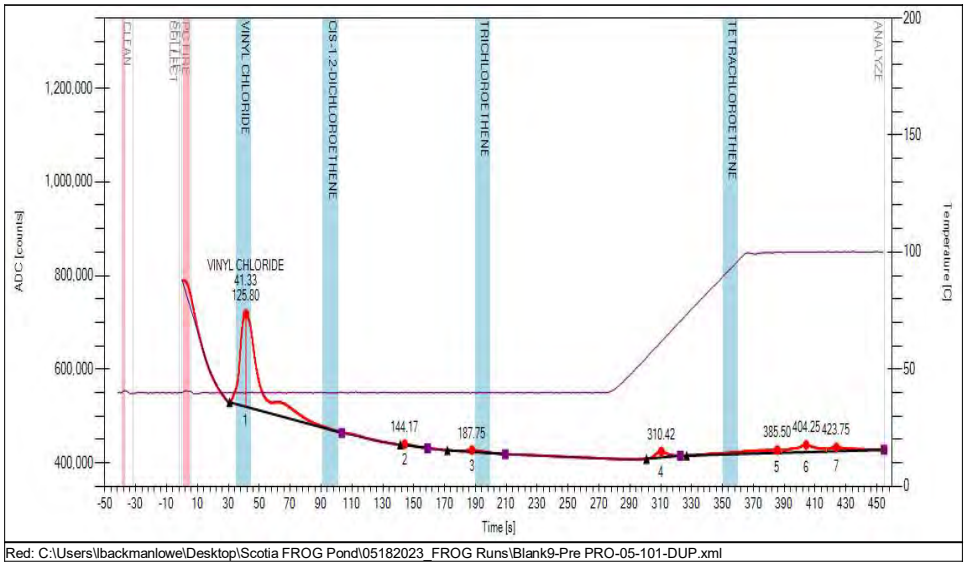
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.33	197528	2900653	125.80	125.8
2		144.17	1771	14639		
3		187.75	3764	50069		
4		310.42	12728	113399		
5		385.5	6173	233331		
6		404.25	15537	269745		
7		423.75	8358	145168		



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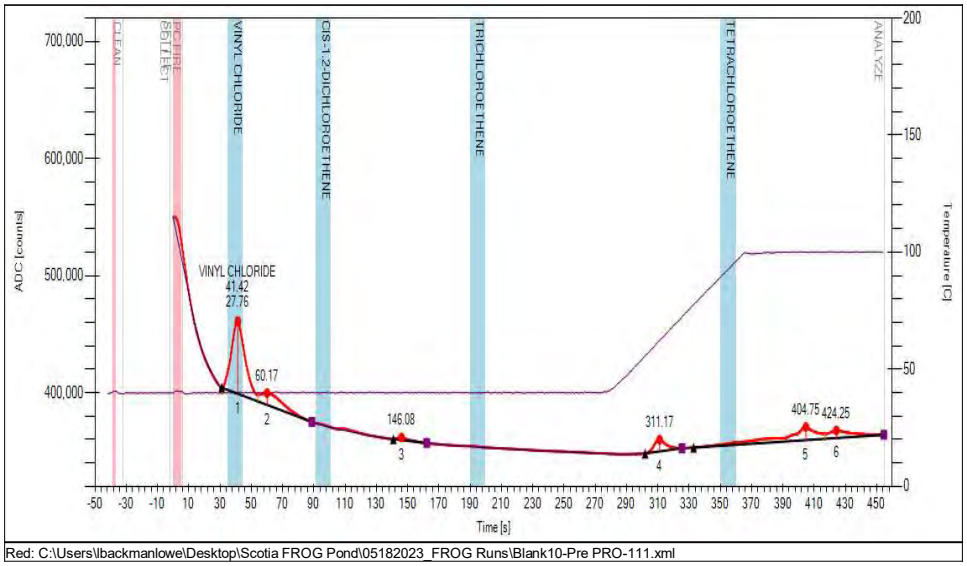
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	41.42	61965	640040	27.76	27.76
2		60.17	10061	176897		
3		146.08	2262	17989		
4		311.17	9903	89762		
5		404.75	11199	275983		
6		424.25	6473	115249		



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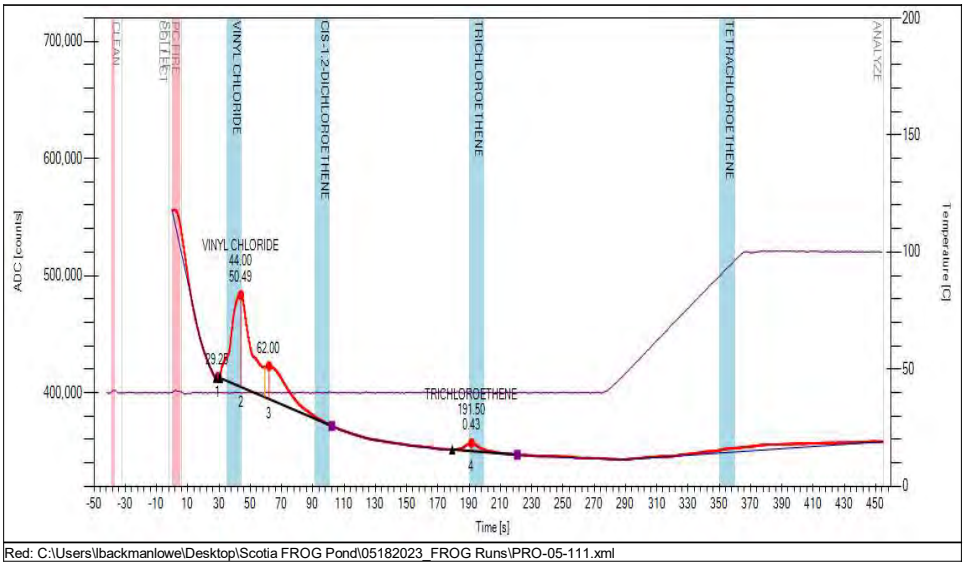
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		29.25	1037	1304		
2	VINYL CHLORIDE	44	78474	1164133	50.49	50.49
3		62	28078	495910		
4	TRICHLOROETHENE	191.5	6822	81745	0.43	0.43



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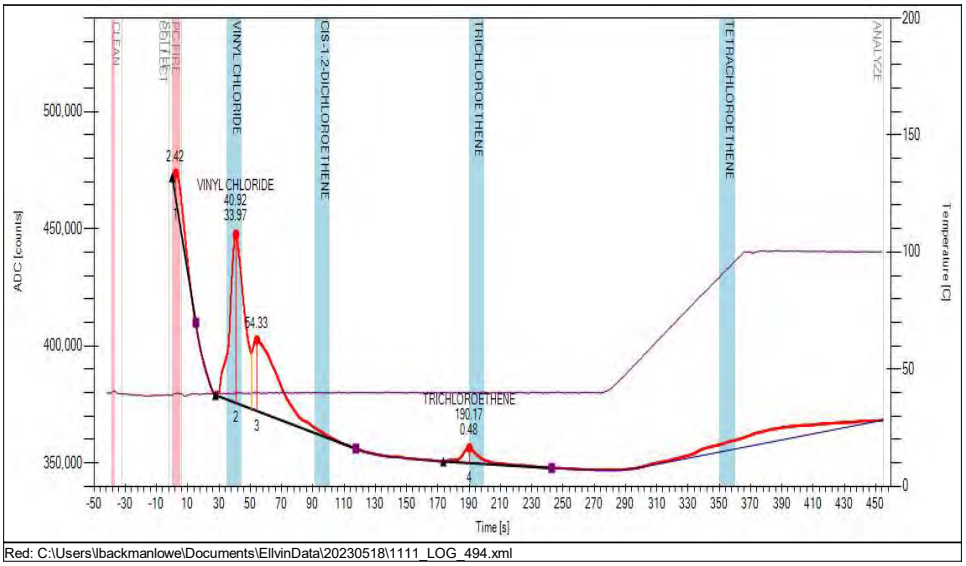
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2.42	11113	119938		
2	VINYL CHLORIDE	40.92	71958	783178	33.97	33.97
3		54.33	30280	623590		
4	TRICHLOROETHENE	190.17	6419	92098	0.48	0.48



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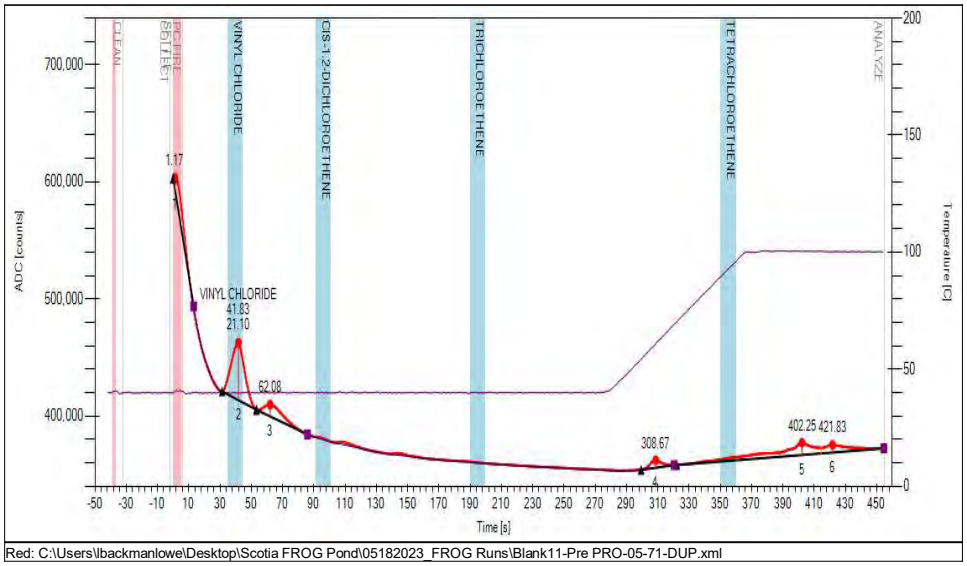
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.17	9916	155856		
2	VINYL CHLORIDE	41.83	49030	486612	21.10	21.1
3		62.08	10086	147273		
4		308.67	6464	55383		
5		402.25	10487	307398		
6		421.83	6512	124247		



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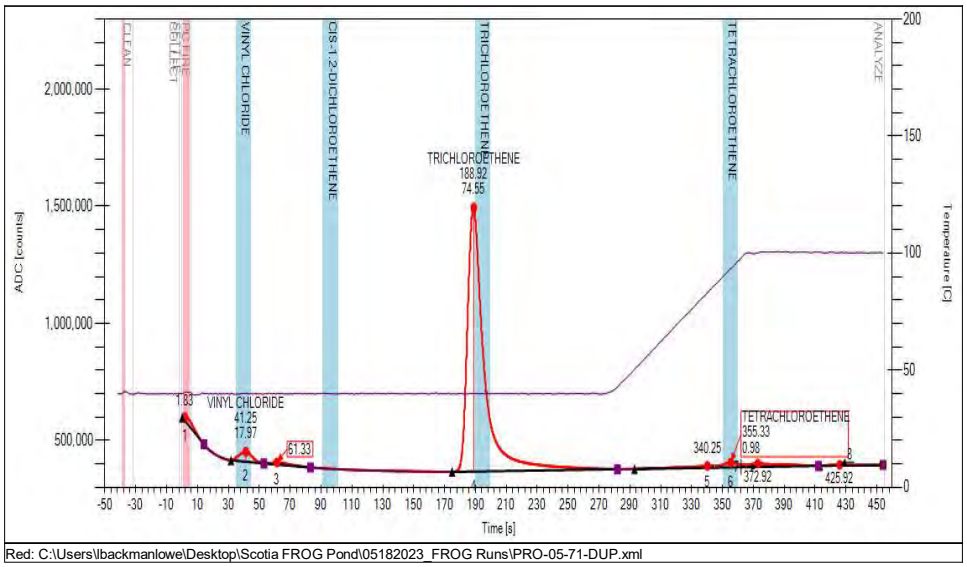
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.83	15169	191206		
2	VINYL CHLORIDE	41.25	42972	414275	17.97	17.97
3		61.33	9105	127914		
4	TRICHLOROETHENE	188.92	1127356	14222983	74.55	74.55
5		340.25	7994	195189		
6	TETRACHLOROETHENE	355.33	20363	275656	0.98	0.98
7		372.92	14302	375562		
8		425.92	3309	60543		



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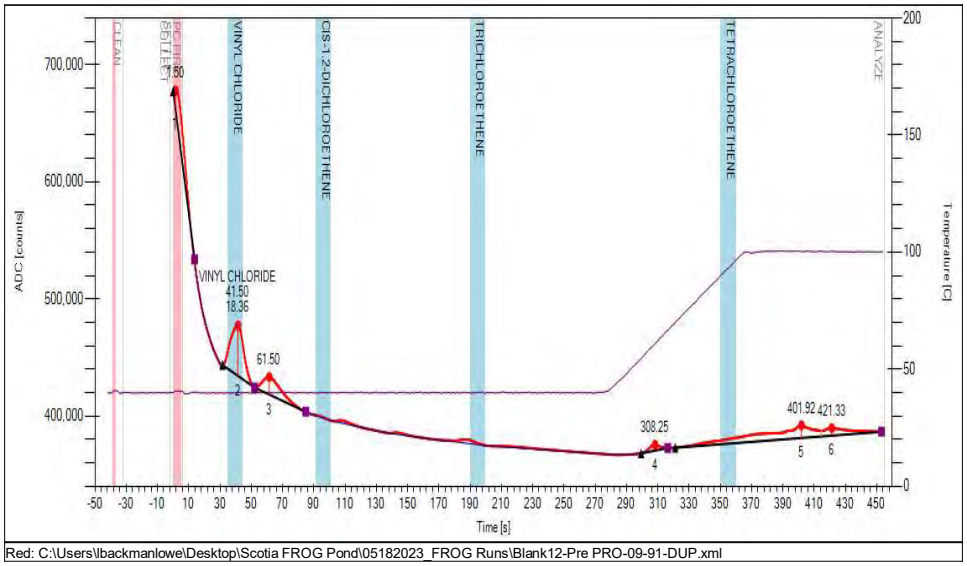
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.5	15634	239002		
2	VINYL CHLORIDE	41.5	43173	423343	18.36	18.36
3		61.5	14957	210373		
4		308.25	5033	38912		
5		401.92	10726	435654		
6		421.33	6398	123944		



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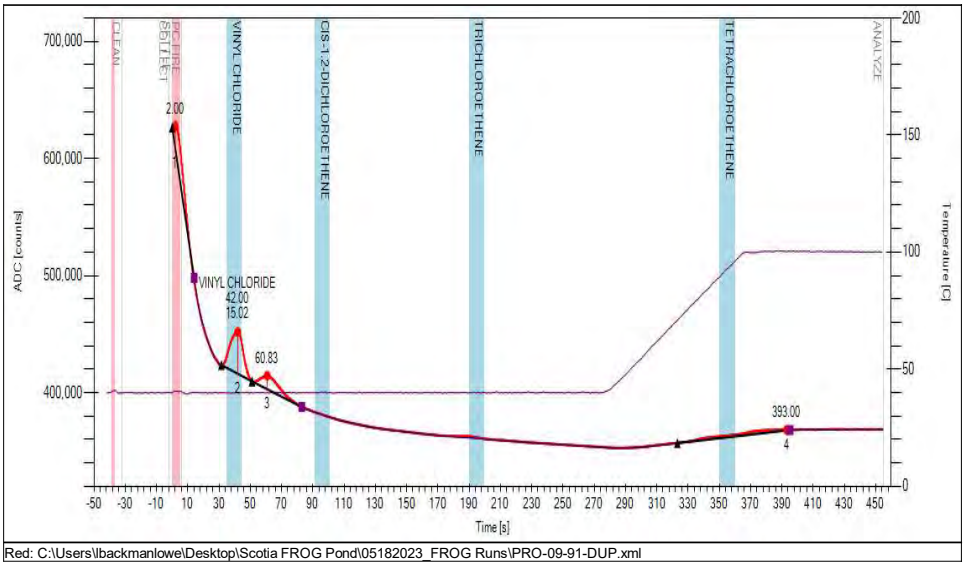
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		2	18966	223878		
2	VINYL CHLORIDE	42	35537	346431	15.02	15.02
3		60.83	11461	165327		
4		393	453	94008		



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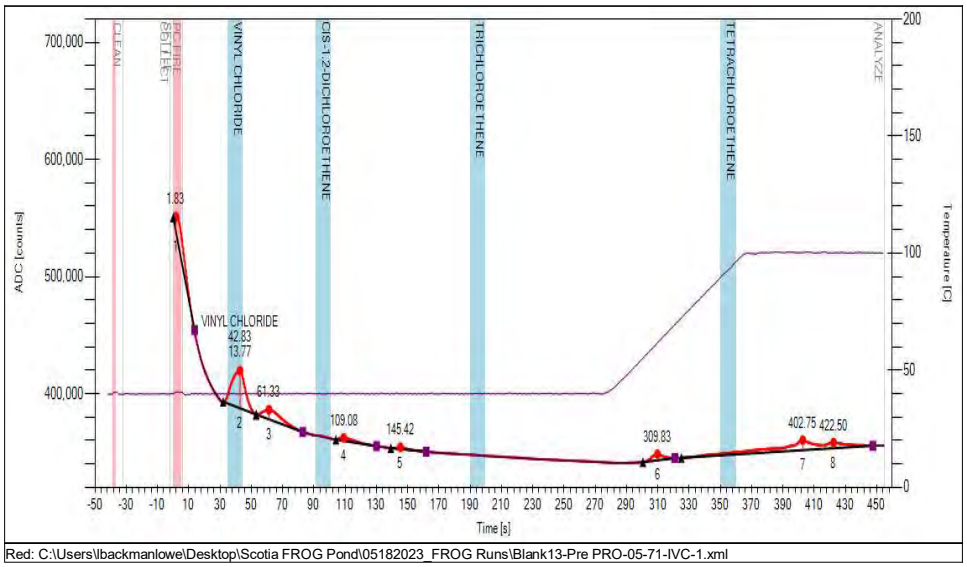
Pump=30%, 1%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1		1.83	13107	164504		
2	VINYL CHLORIDE	42.83	32000	317478	13.77	13.77
3		61.33	8239	115807		
4		109.08	2475	28325		
5		145.42	1533	12524		
6		309.83	5256	44395		
7		402.75	8531	236237		
8		422.5	4832	77211		



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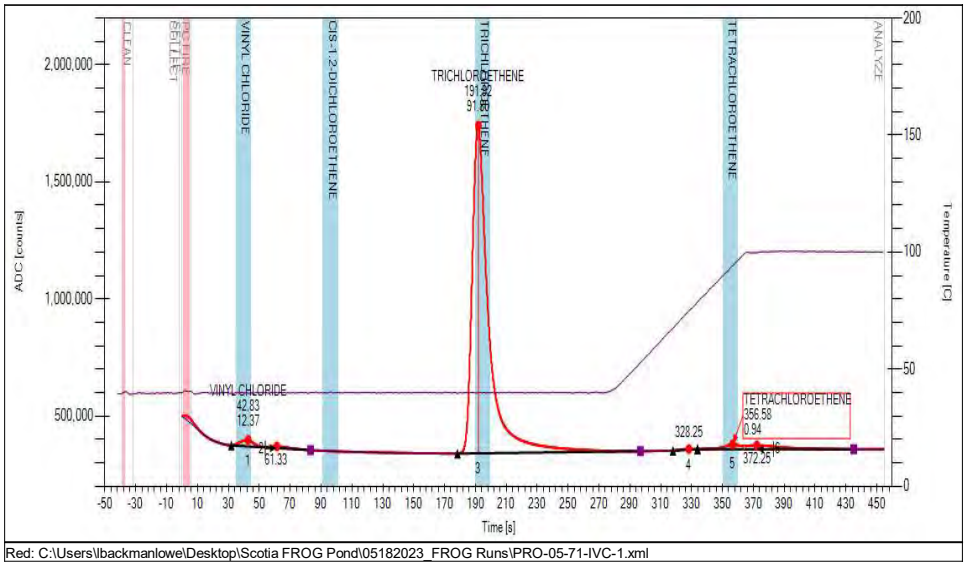
Pump=30%, 2%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.83	28246	285119	12.37	12.37
2		61.33	7605	109798		
3	TRICHLOROETHENE	191.92	1399339	17513378	91.80	91.8
4		328.25	2827	27829		
5	TETRACHLOROETHENE	356.58	20821	264652	0.94	0.94
6		372.25	16763	448112		



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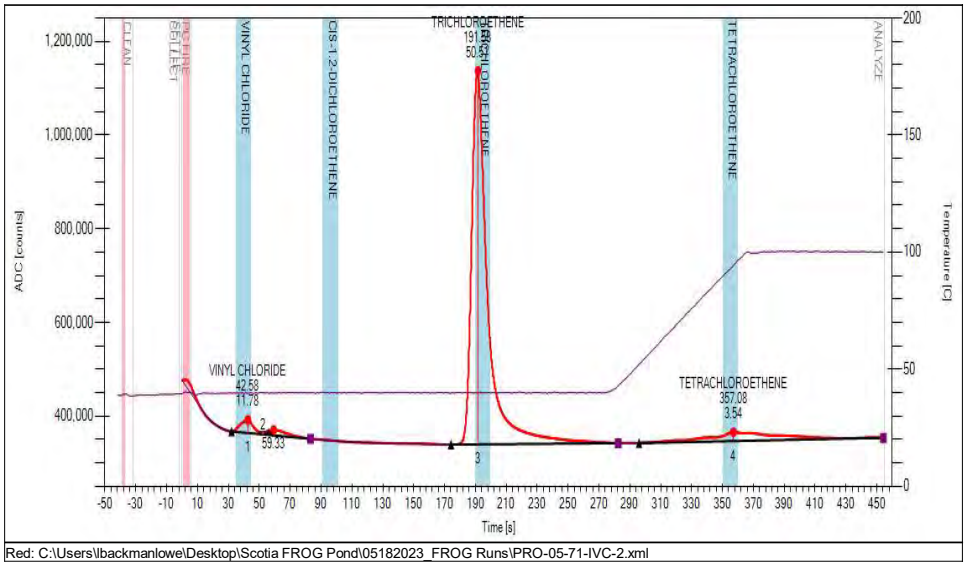
Pump=30%, 3%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	42.58	28022	271616	11.78	11.78
2		59.33	11728	181286		
3	TRICHLOROETHENE	191.58	797356	9635222	50.51	50.51
4	TETRACHLOROETHENE	357.08	18954	996616	3.54	3.54



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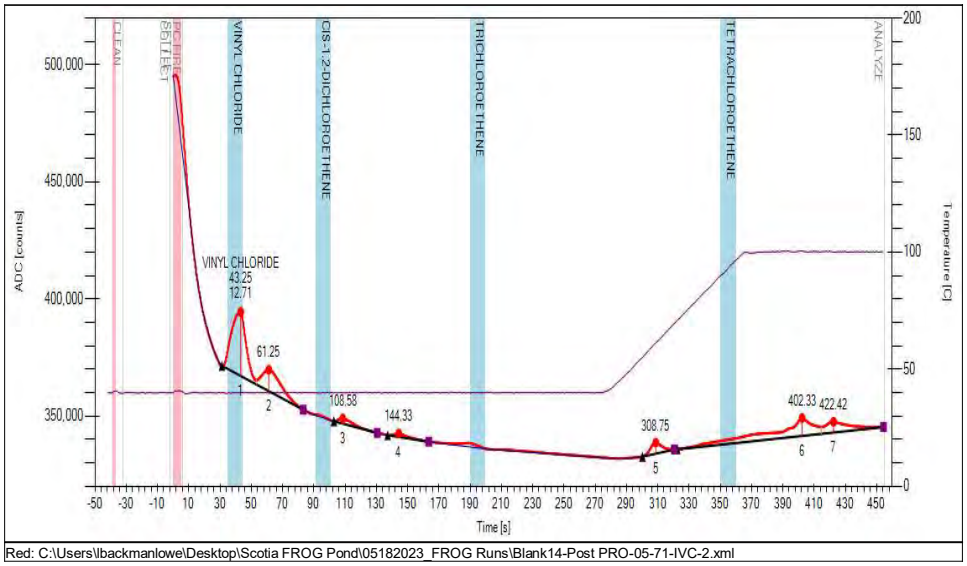
Pump=30%, 3%
Dilution = 1.0

RUN CANCELED!

Peak	Analyte Name	Time	Height	Area	Concentration	Final Conc.
1	VINYL CHLORIDE	43.25	27324	293180	12.71	12.71
2		61.25	9196	134919		
3		108.58	2246	24400		
4		144.33	1484	14296		
5		308.75	4716	40568		
6		402.33	7625	230260		
7		422.42	4599	85386		



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Appendix H Table 1. Relative Percent Difference for Laboratory and FROG Analyses

	Laboratory				FROG 5000				Relative Percent Difference			
Sample ID	Vinyl Chloride Conc. (ppb)	*cis* 1,2-DCE Conc. (ppb)	TCE Conc. (ppb)	PCE Conc. (ppb)	Vinyl Chloride Conc. (ppb)	*cis* 1,2-DCE Conc. (ppb)	TCE Conc. (ppb)	PCE Conc. (ppb)	Vinyl Chloride	*cis* 1,2-DCE	TCE	PCE
FSND-PRO-07-90-05032023	ND	ND	160.0	ND	17.2 (ND)	ND	229.7	ND	--	--	43.5	--
FSND-PRO-07-99-05032023	ND	ND	420.0	ND	16.3 (ND)	ND	770.6	ND	--	--	83.5	--
FSND-PRO-06-79-05042023	ND	ND	110.0	ND	16.2 (ND)	ND	208.4	ND	--	--	89.5	--
FSND-PRO-06-99-05042023	ND	1.9	510.0	ND	16.0 (ND)	2.2	867.4	ND	--	15.8	70.1	--
FSND-PRO-01-70-05062023	ND	ND	93.7	ND	15.9 (ND)	ND	133.3	ND	--	--	42.3	--
FSND-PRO-01-89-05062023	ND	1.4	570.0	ND	12.1 (ND)	1.4	1214.1	ND	--	0.0	113.0	--
FSND-PRO-01-99-05062023	ND	ND	0.6	ND	11.5 (ND)	ND	1.2	ND	--	--	96.6	--
FSND-PRO-03-71-05072023	ND	1.8	63.2	3.6	62	35.8	178.8	90.9	--	1888.9	182.9	2425.6
FSND-PRO-03-90-05072023	ND	ND	8.3	ND	17.2 (ND)	ND	6.2	ND	--	--	25.3	--
FSND-PRO-02-71-05082023	ND	2.8	150.0	9	19.4 (ND)	9.8	181.7	45.6	--	250.0	21.1	406.1
FSND-PRO-02-81-05082023	ND	ND	4.2	ND	14.3 (ND)	3.6 (ND)	5.2	ND	--	--	22.9	--
FSND-PRO-04-71-05092023	ND	ND	79.3	0.4	17.7 (ND)	ND	158.2	ND	--	--	99.5	--
FSND-PRO-04-81-05092023	ND	1.6	61.1	ND	42.2	3.5 (ND)	115.2	ND	--	--	88.6	--
FSND-PRO-08-81-05112023	ND	1	16.2	11.2	14.3 (ND)	5.1	14.6	16.3	--	410.0	10.0	45.4
FSND-PRO-08-71-05112023	ND	0.7	44.0	5.9	21.7	3.5 (ND)	77.3	99.2	--	--	75.7	1581.5
FSND-PRO-10-131-05152023	ND	ND	180.0	ND	38.9	ND	205.8	ND	--	--	14.3	--
FSND-PRO-10-151-05152023	ND	ND	0.9	ND	1.7 (ND)	ND	ND	ND	--	--	--	--
FSND-PRO-09-73-05162023	ND	ND	120.0	ND	26.3	ND	81.2	2.2	--	--	32.3	--
FSND-PRO-09-101-05162023	ND	ND	0.4	ND	16.7 (ND)	ND	ND	ND	--	--	--	--
FSND-PRO-05-91-05182023	ND	ND	570.0	ND	35.5	ND	473.2	ND	--	--	17.0	--
FSND-PRO-05-101-05182023	ND	ND	1.6	ND	673.8	102.9	17.1	ND	--	--	970.6	--

Notes:

-- = Not Calculated

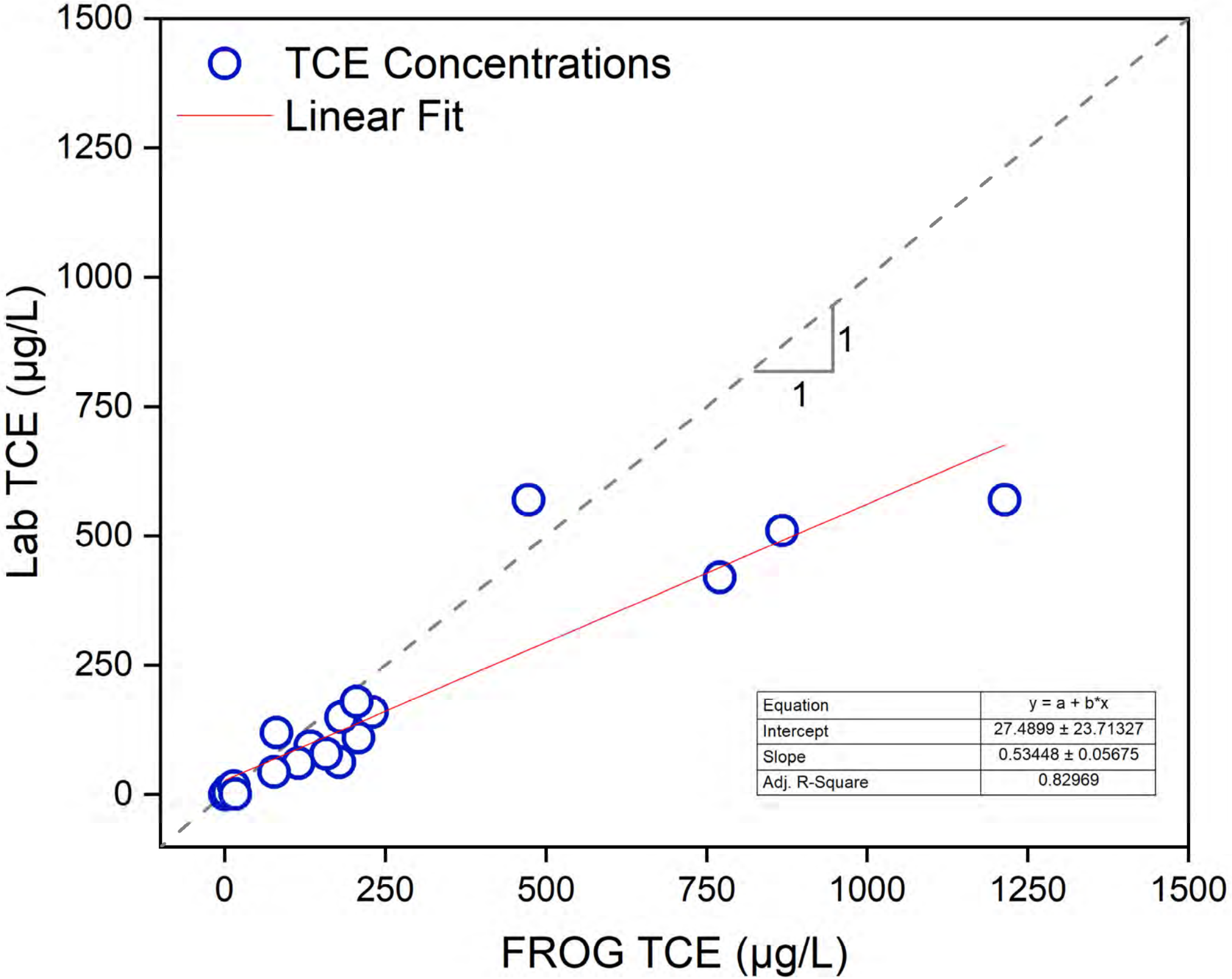
DCE = Dichloroethene

ppb = Part(s) per billion

ND = Non-Detect

PCE = Tetrachloroethene

TCE = Trichloroethene


TCE Concentrations
Linear Fit
1
1
Equation
y = a + b*x
Intercept
27.4899 ± 23.71327
Slope
0.53448 ± 0.05675
Adj. R-Square
0.82969
Lab TCE (µg/L)
FROG TCE (µg/L)
0
250
500
750
1000
1250
1500

Appendix I

Mass Discharge Results

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Table I-1. Groundwater TCE Concentrations in Eight Compliance Monitoring Wells

Event	Well Pair MW-29/28		Well Pair MW-31/30		Well Pair MW-33/32		Well Pair MW-35/34	
	MW-29	MW-28	MW-31	MW-30	MW-33	MW-32	MW-35	MW-34
	TCE (µg/L)							
12/1/2015	**224**	**182**	**42.7**	**25.2**	**133**	**150**	**31.9**	**17.7**
12/14/2016	209	196	38.2	42.3	93.5	191	31.8	41.3
6/27/2017	264	195	29	24.3	152	130	43.8	34
6/22/2018	248	214	20.6	8.1	178	64.1	39.4	31.3
6/19/2019	161	172	26.2	5	97.4	118	34.8	1.1
6/19/2020	102	140	33.5	5.7	165	149	42.9	18.9
6/16/2021	155	260	27.5	9.1	149	134	39.6	3.9
10/19/2022	**210**	**220**	**38.4**	**2.3**	**140**	**110**	**44**	**22.5**

Notes:

Bolded values were used to calculate mass flux and mass discharge

µg/L = Microgram(s) per liter

TCE = Trichloroethene

Table I-2. Groundwater Elevations and Hydraulic Gradients in Eight Compliance Monitoring Wells

	Well Pair MW-29/28			Well Pair MW-31/30			Well Pair MW-33/32			Well Pair MW-35/34		
	MW-29	MW-28		MW-31	MW-30		MW-33	MW-32		MW-35	MW-34	
Event	Groundwater Elevation (ft amsl)		Hydraulic Gradient (ft/ft)	Groundwater Elevation (ft amsl)		Hydraulic Gradient (ft/ft)	Groundwater Elevation (ft amsl)		Hydraulic Gradient (ft/ft)	Groundwater Elevation (ft amsl)		Hydraulic Gradient (ft/ft)
2015	227.07	227.05	-0.00095	226.98	226.95	-0.00150	226.86	226.89	**0.00150**	226.73	226.69	-0.0020
2016	225.41	225.38	-0.00143	225.35	225.4	**0.00250**	225.45	225.51	0.00300	225.48	225.46	-0.0010
Q1 2017	224.31	224.33	**0.00095**	223.98	224.12	0.00700	223.7	223.8	0.00500	223.35	223.4	**0.0025**
Q2 2017	229.79	229.82	0.00143	229.44	229.52	0.00400	229.05	229.11	0.00300	228.66	228.68	0.0010
Q3 2017	229.19	229.19	0.00000	229.04	229.11	0.00350	228.93	229.05	0.00600	228.77	228.81	0.0020
Q4 2017	225.53	225.23	-0.01429	225.28	225.4	0.00600	225.42	225.54	0.00600	225.51	225.56	0.0025
Q1 2018	224.44	224.43	-0.00048	224.28	224.34	0.00300	224.18	224.26	0.00400	223.89	224.08	0.0095
Q2 2018	228.07	228.09	0.00095	227.8	227.84	0.00200	227.45	227.51	0.00300	227.03	227.04	0.0005
Q3 2018	227.62	227.64	0.00095	227.52	227.55	0.00150	227.39	227.42	0.00150	227.21	227.26	0.0025
Q4 2018	227.01	227.07	0.00286	226.7	226.85	0.00750	226.6	226.68	0.00400	226.37	226.47	0.0050
Q2 2019	229.97	230	0.00143	229.62	229.7	0.00400	229.3	229.37	0.00350	228.61	228.95	0.0170
Q4 2019	225.84	226.06	0.01048	225.74	225.89	0.00750	225.75	225.86	0.00550	225.44	225.23	-0.0105
Q2 2020	226.56	226.58	0.00095	226.19	226.33	0.00700	225.93	226.07	0.00700	225.45	225.66	0.0105
Q4 2020	224.17	224.27	0.00476	224.65	225.28	0.03150	223.54	223.63	-0.00350	223.49	223.61	0.0060
Q2 2021	227.73	228.12	0.01857	227.91	228.48	0.02850	226.27	226.29	0.00100	225.66	225.75	**0.0045**
Q4 2022	227.95	228	**0.00238**	228.39	229.02	0.03150	227.3	227.23	-0.00350	227.49	227.36	-0.0065
Q2 2023	--	--	--	226.02	226.16	**0.00700**	225.68	225.8	**0.00600**	225.46	225.43	-0.0015

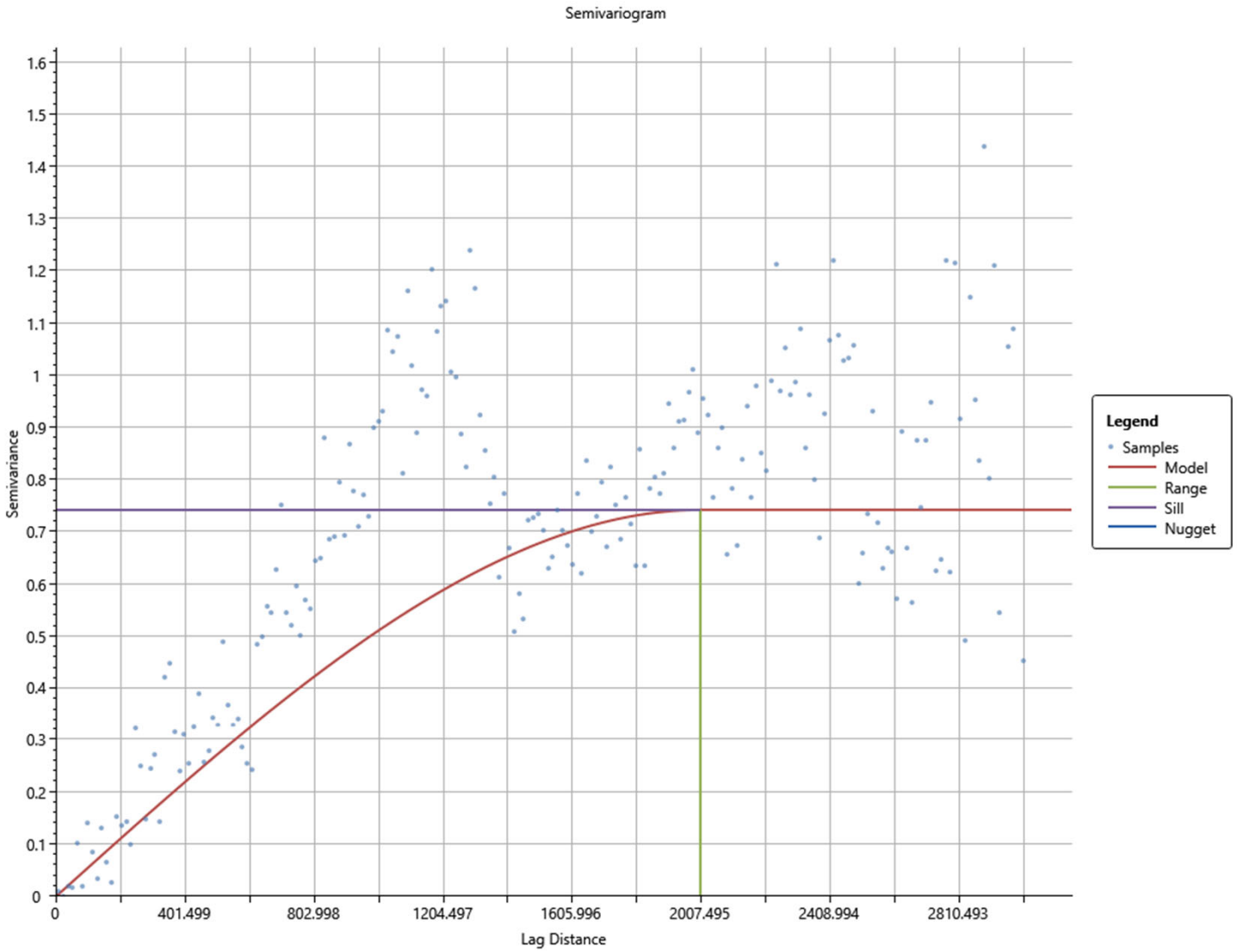
Notes:

Bolded values were used to calculate mass flux and mass discharge

amsl = Above mean sea level

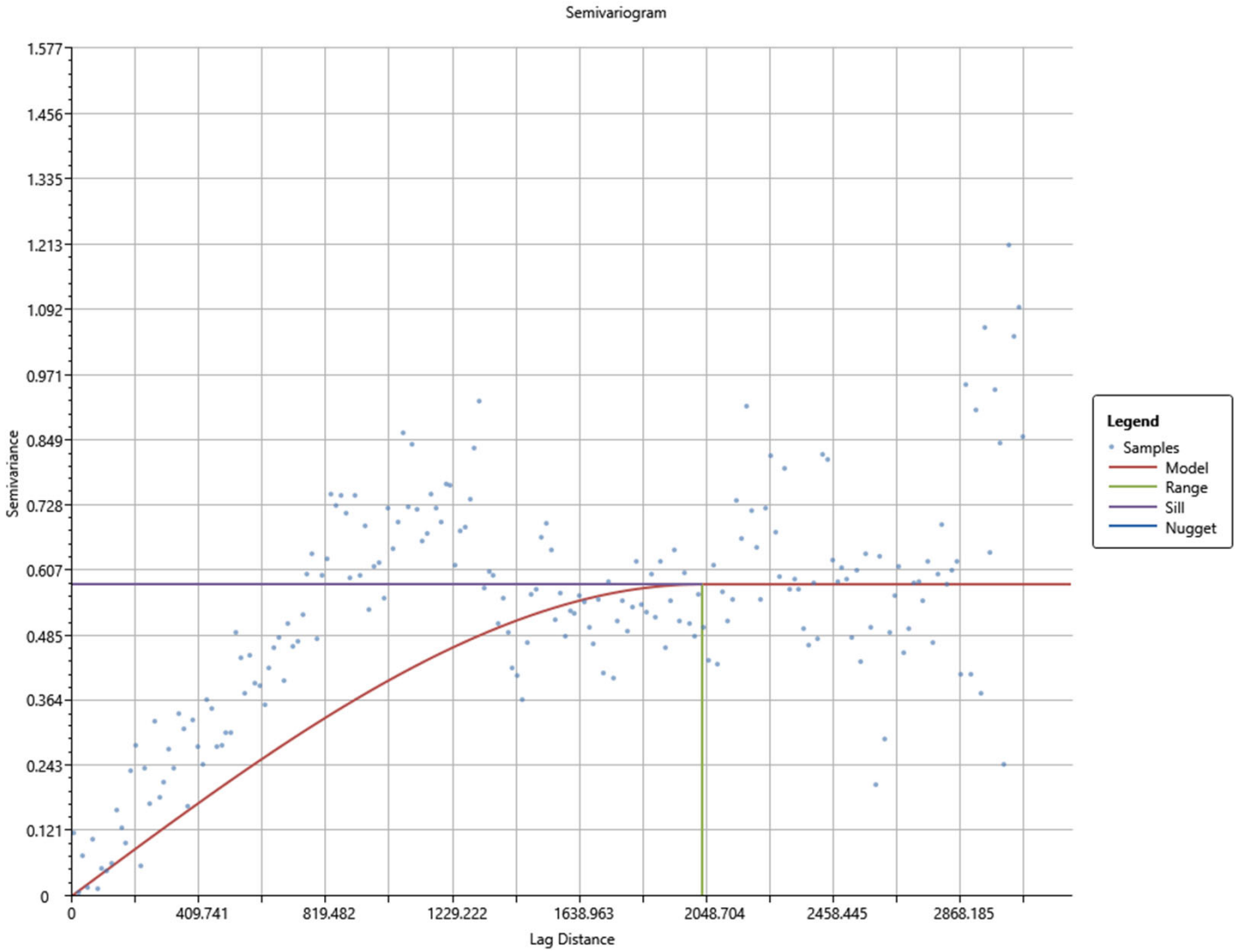
ft = Foot (feet)

ft/ft = Foot (Feet) per foot



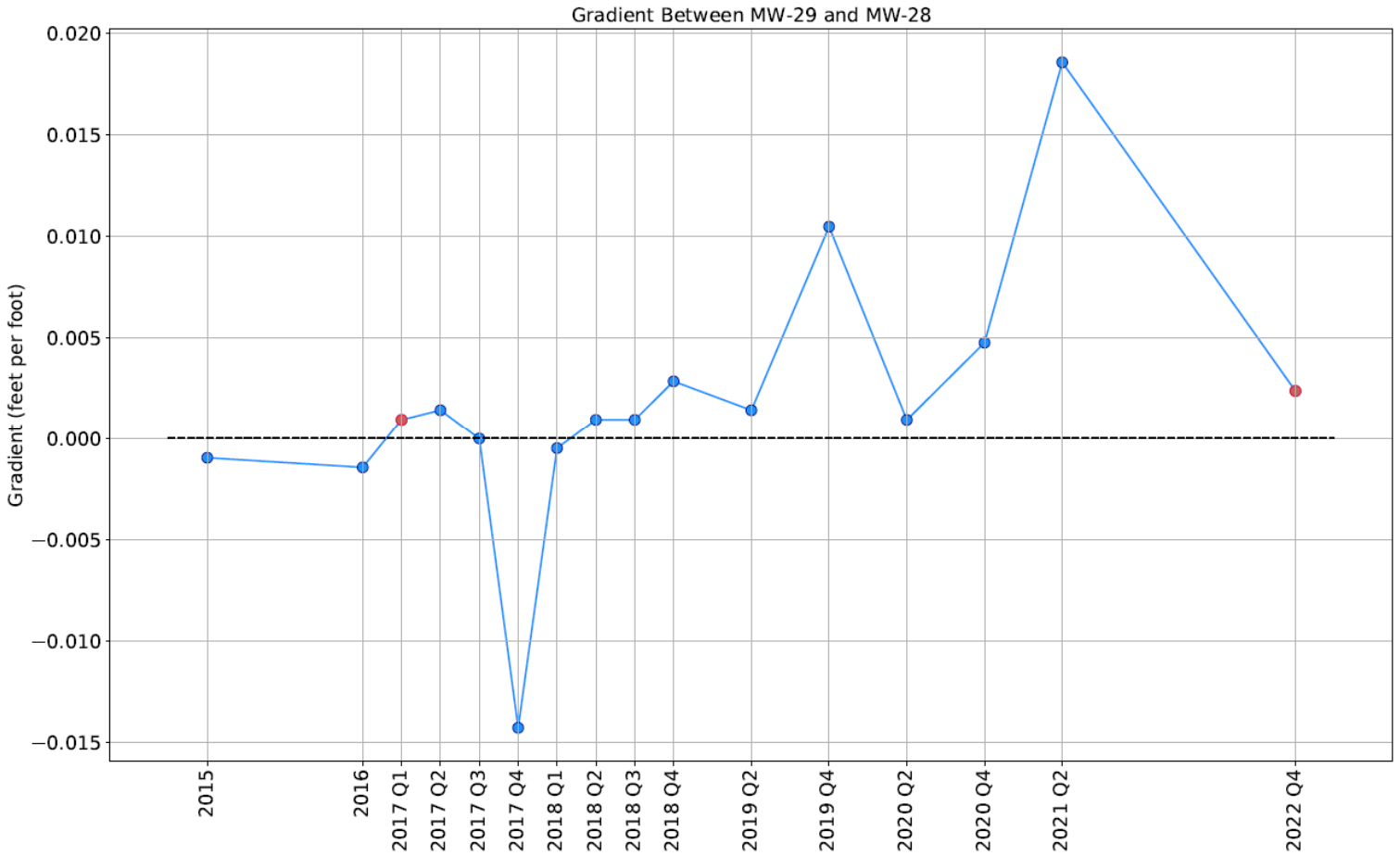
Appendix I Figure I-1.
Variogram for 2015 Groundwater Concentrations
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC



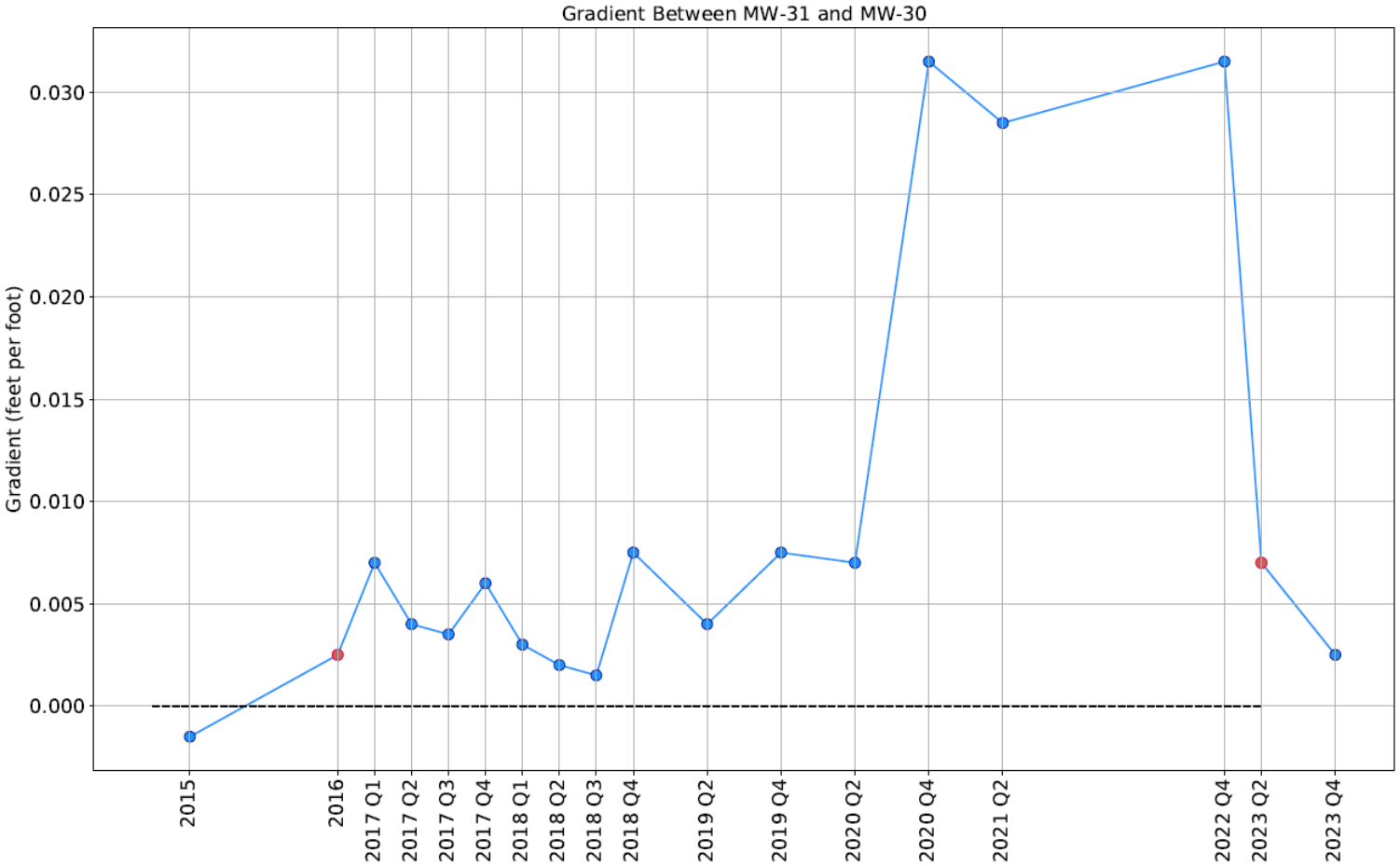
Appendix I Figure I-2.
Variogram for 2022-2023 Groundwater Concentrations
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC



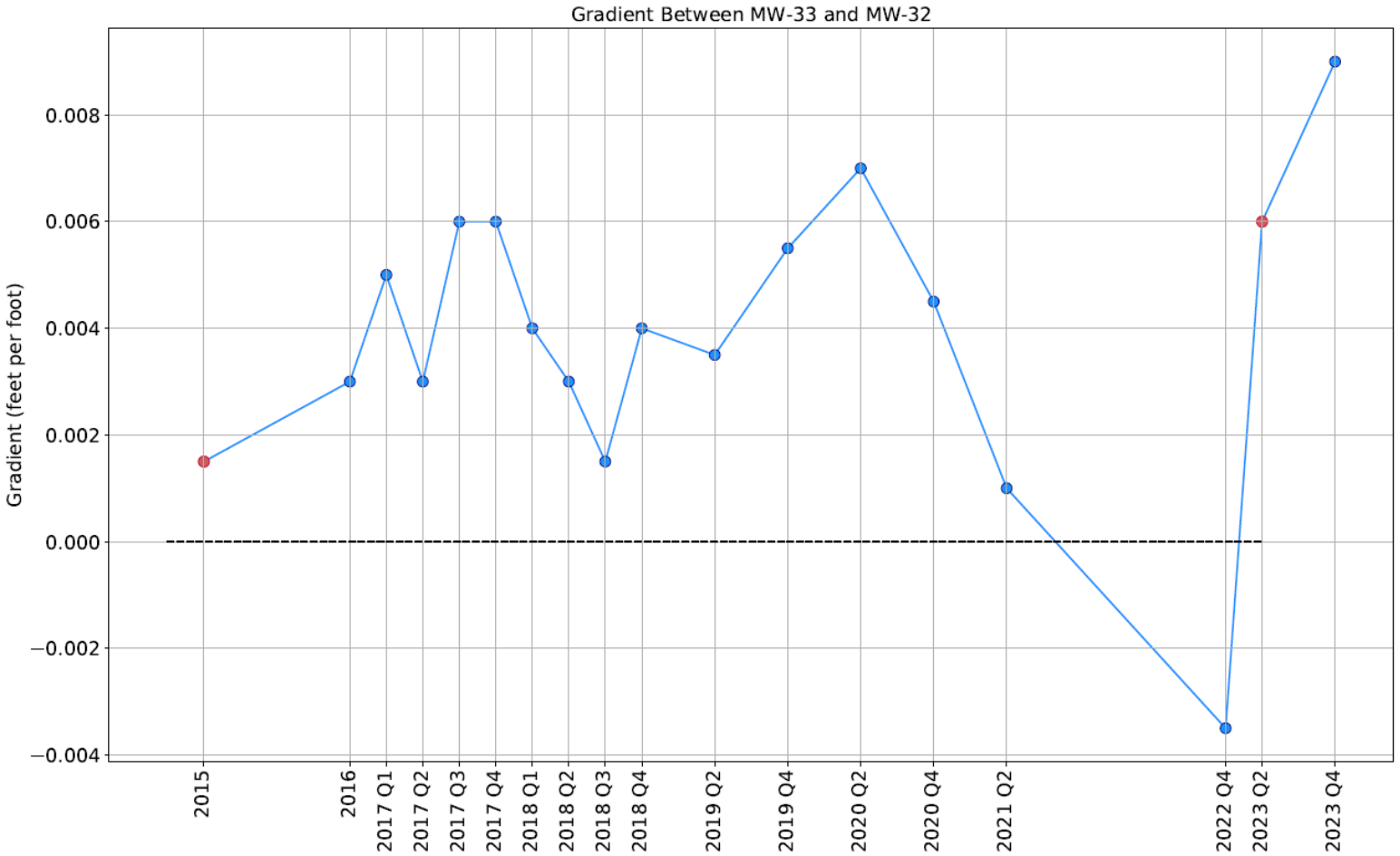
Appendix I Figure I-3.
Hydraulic gradient trends between MW-29 and MW-28
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC



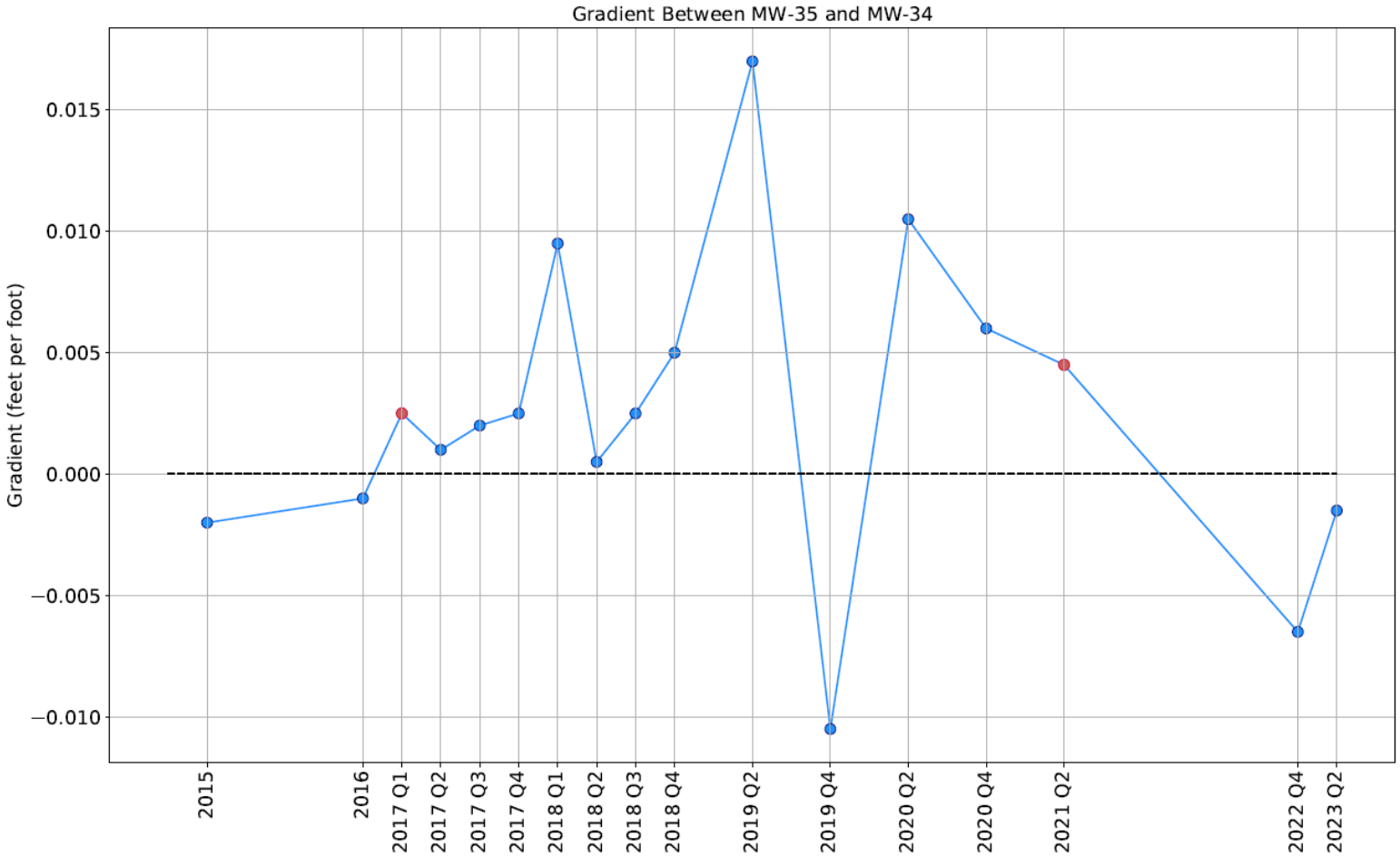
Appendix I Figure I-4.
Hydraulic gradient trends between MW-31 and MW-30
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC



Appendix I Figure I-5.
Hydraulic gradient trends between MW-33 and MW-32
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC



Appendix I Figure I-6.
Hydraulic gradient trends between MW-35 and MW-34
Former Scotia Navy Depot
PRB Evaluation Report

EA Engineering, Science, and Technology, Inc., PBC

Appendix J

CVOC Trend Analysis

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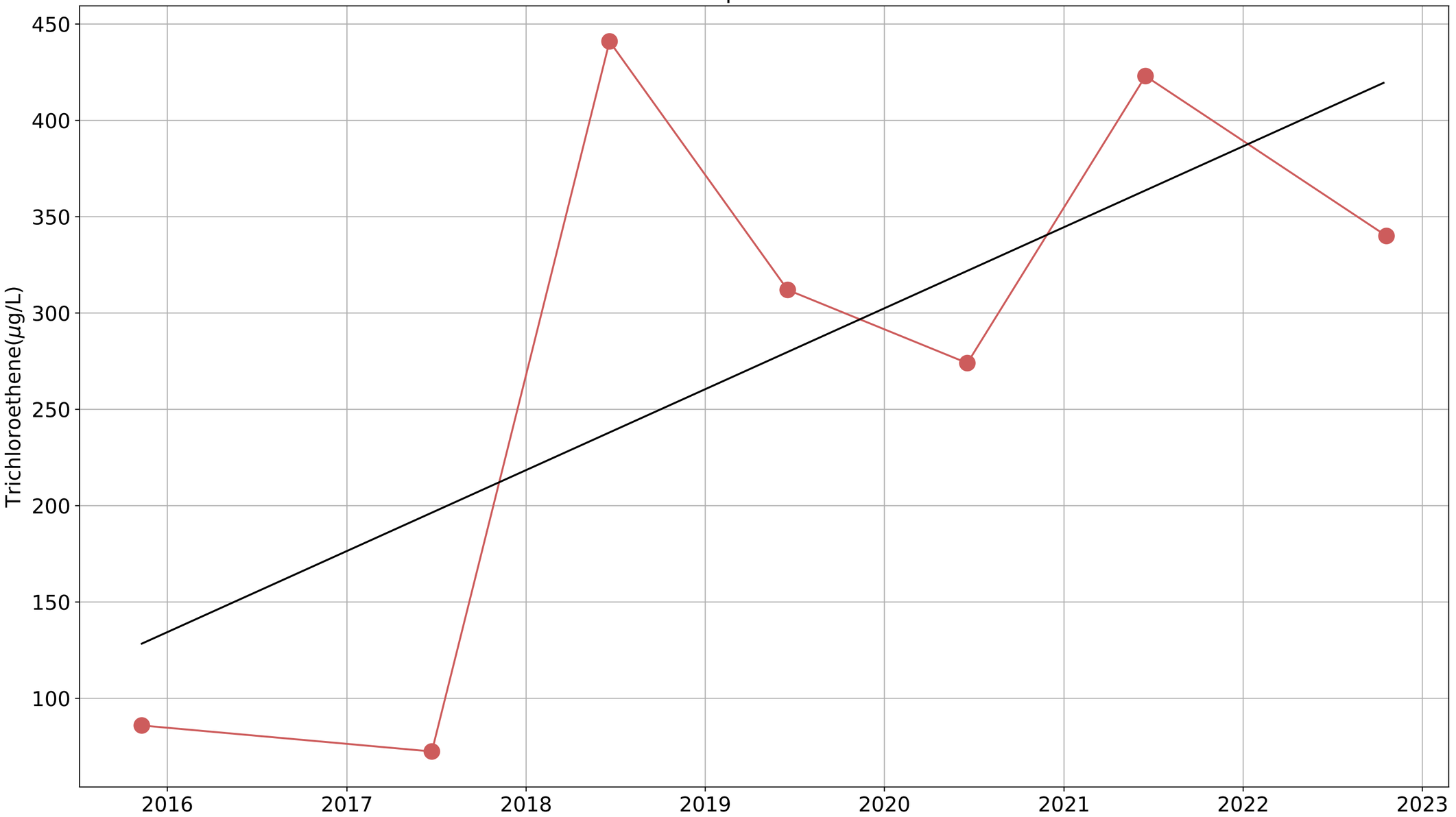
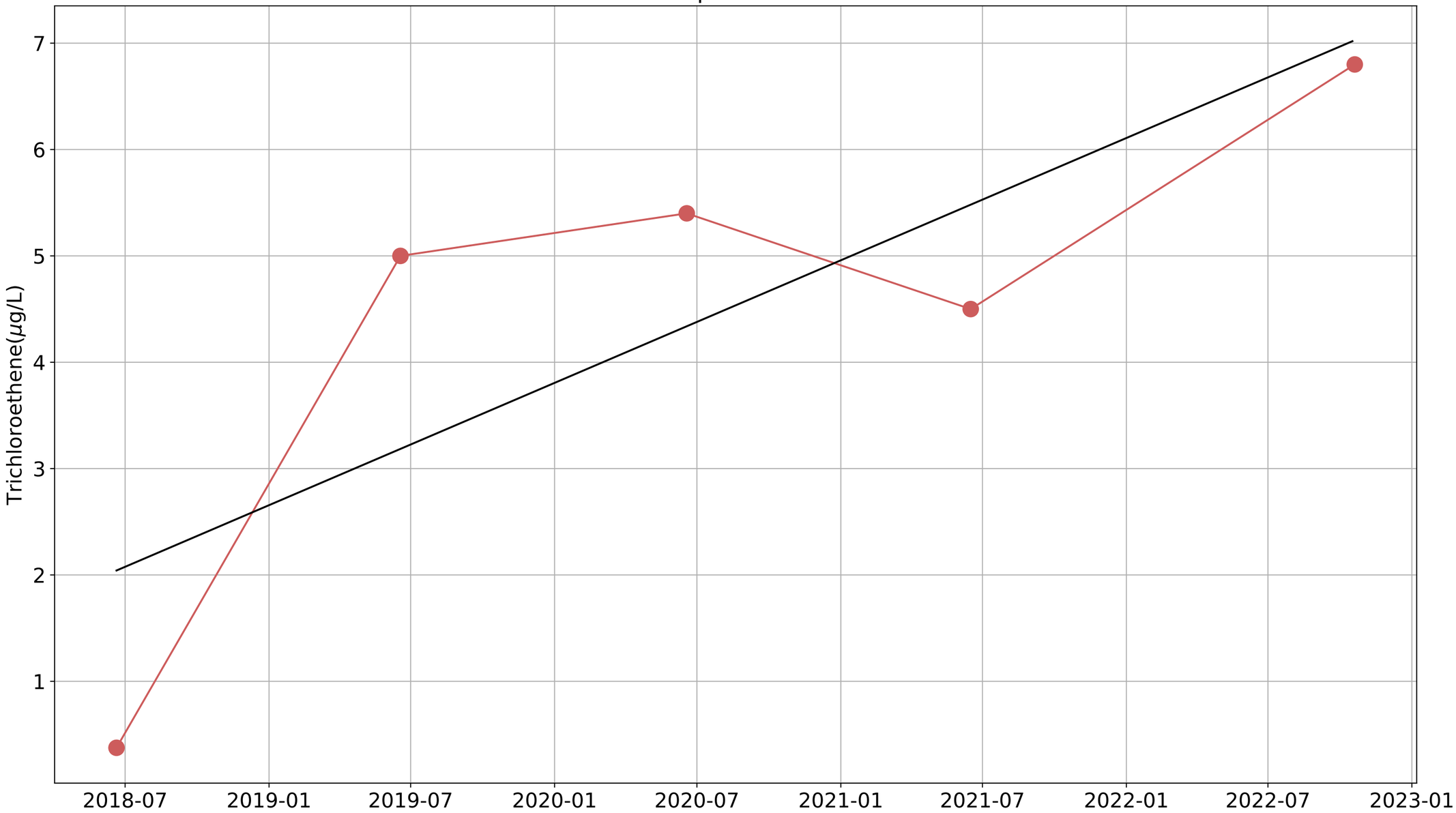
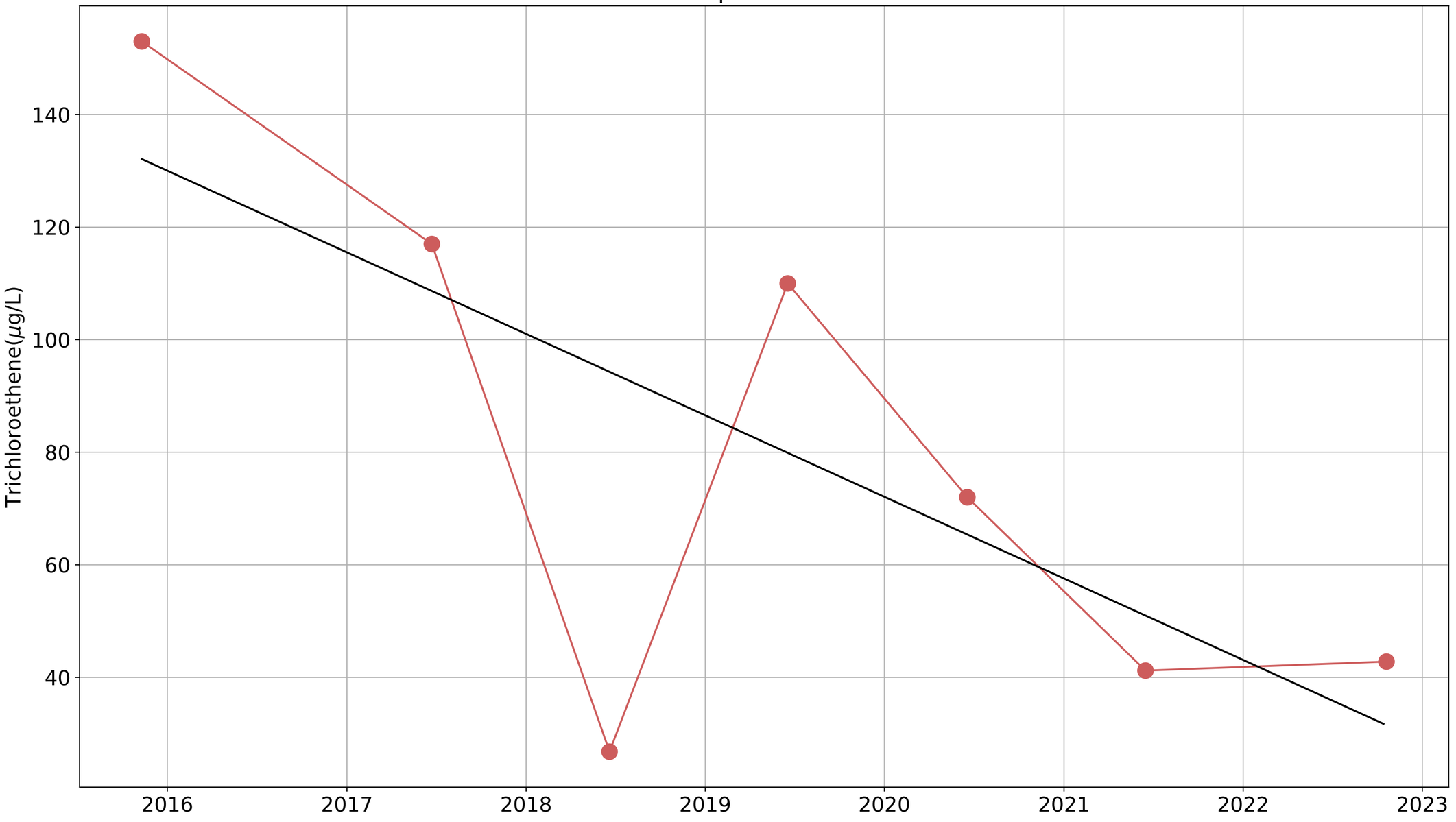
GEP-4
Slope: 42.0 μg/L per year
p = 0.1



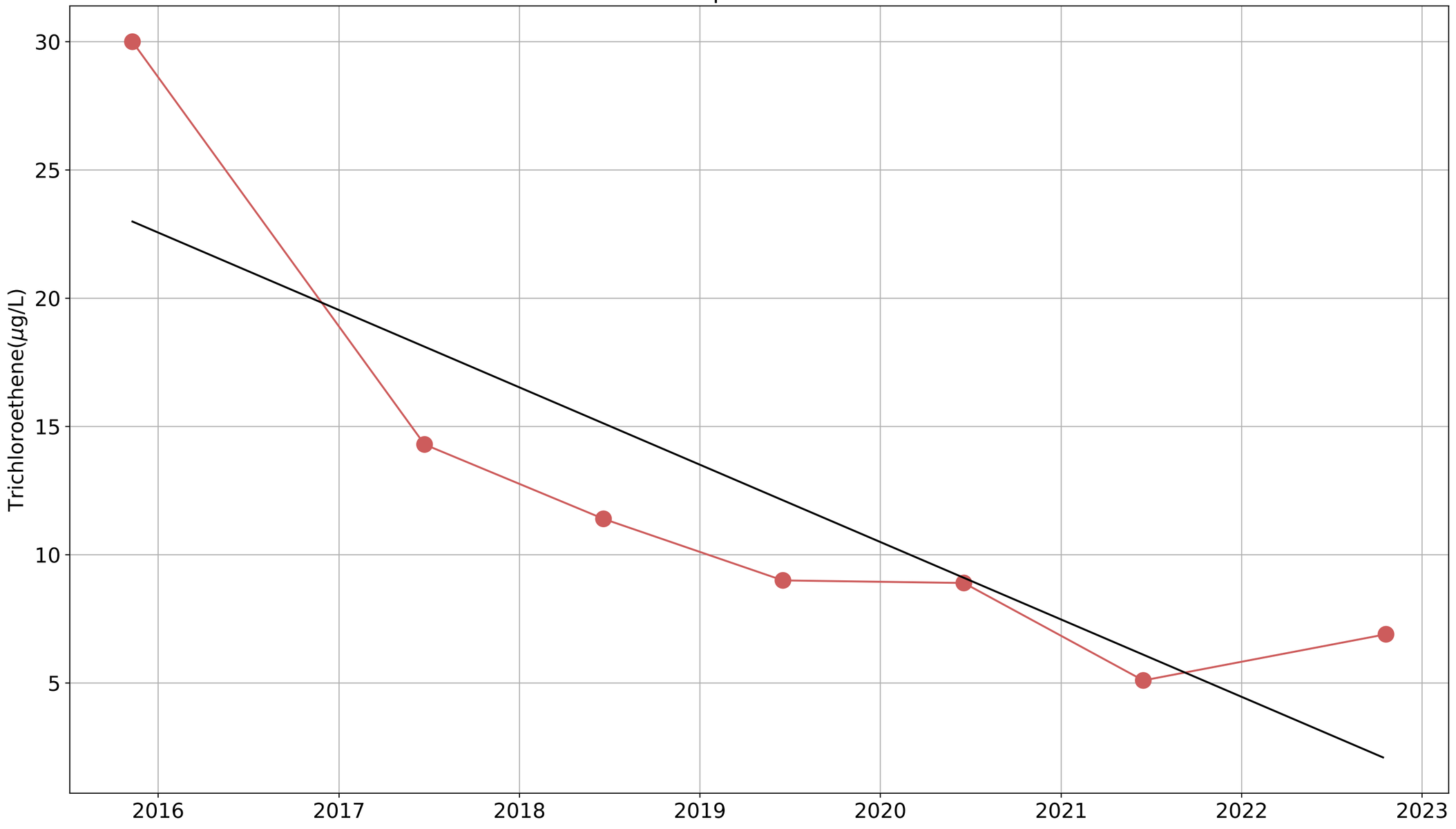
MW-12R
Slope: 1.15 μg/L per year
p = 0.1



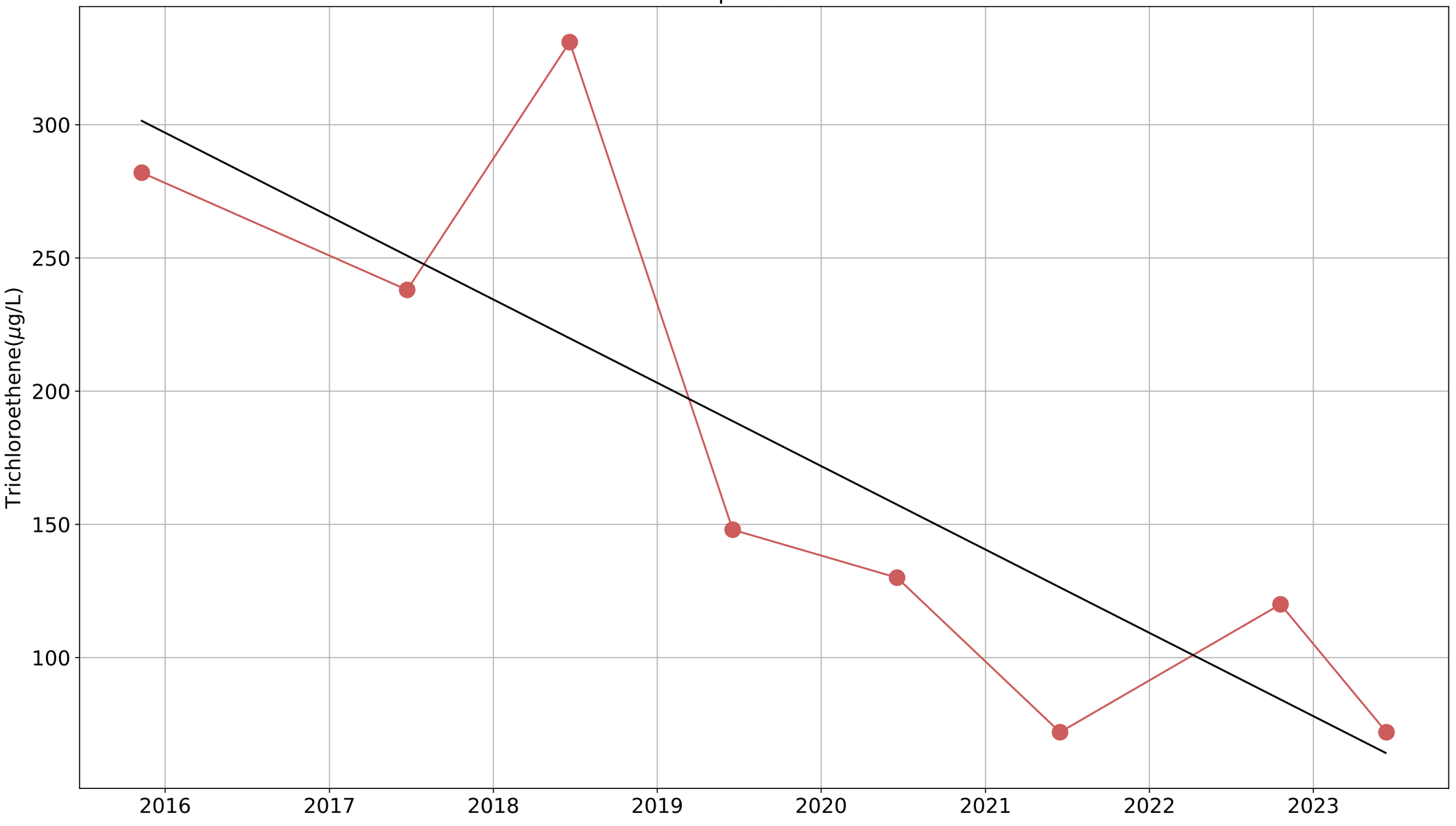
MW-18
Slope: -14.48 μg/L per year
p = 0.06

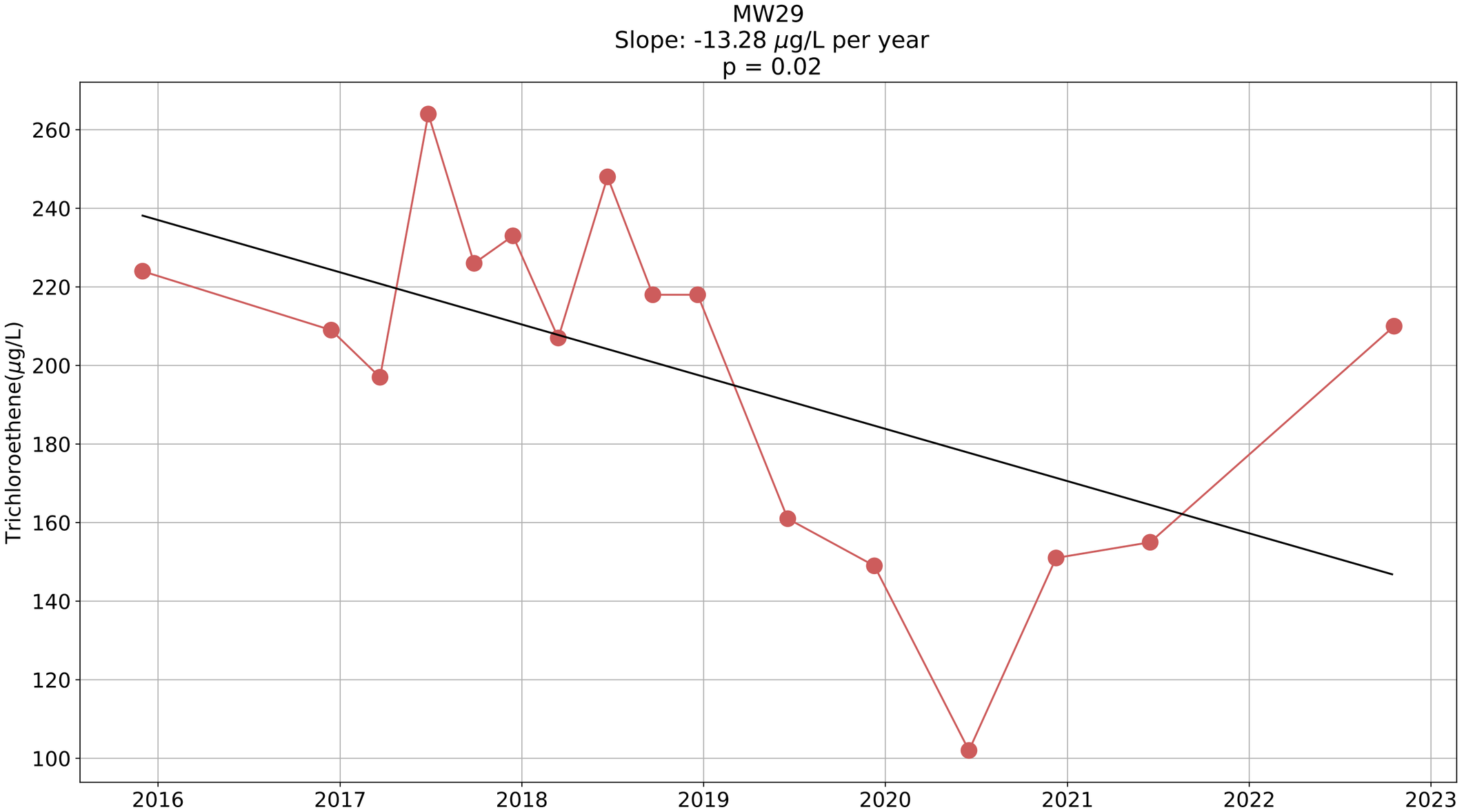


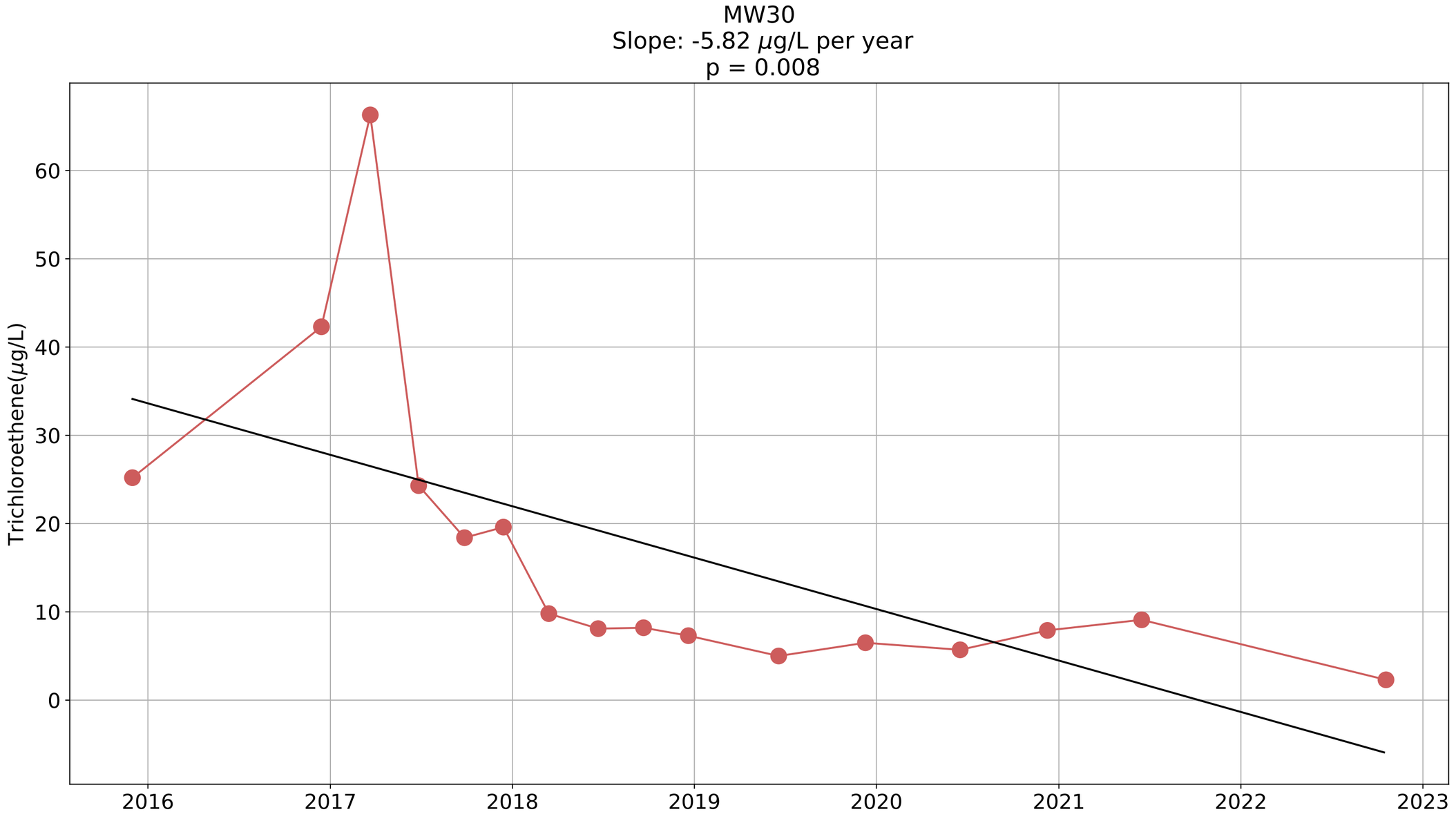
MW-19
Slope: -3.01 μg/L per year
p = 0.01

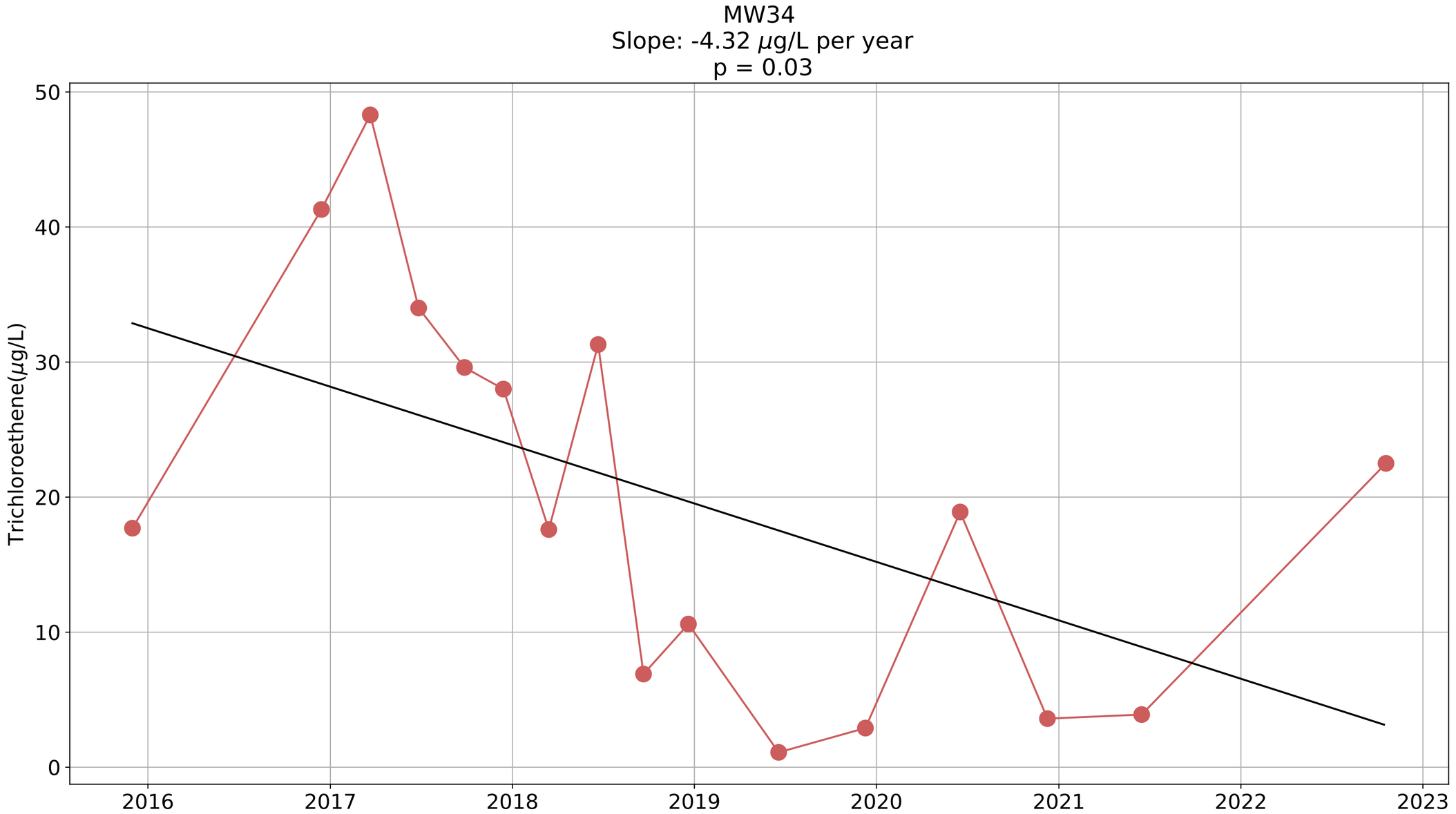


MW-22R
Slope: -31.25 μg/L per year
p = 0.01




MW29
Slope: -13.28 μg/L per year
p = 0.02
Trichloroethene(μg/L)
260
240
220
200
180
160
140
120
100
2016
2017
2018
2019
2020
2021
2022
2023


MW30
Slope: -5.82 μg/L per year
p = 0.008
Trichloroethene(μg/L)
60
50
40
30
20
10
0
2016
2017
2018
2019
2020
2021
2022
2023


MW34
Slope: -4.32 μg/L per year
p = 0.03
Trichloroethene(μg/L)
50
40
30
20
10
0
2016
2017
2018
2019
2020
2021
2022
2023

CVOC Trend Analysis

Monitoring Well	Number of Samples	Number of Detected Samples	Number of Non-Detected Samples	Slope (µg/L per year)
MW-01S	1	1	0	NA
MW-01D	1	1	0	NA
MW-02S	1	1	0	NA
MW-02D	1	1	0	NA
MW-03S	1	1	0	NA
MW-03D	1	1	0	NA
MW-04S	1	1	0	NA
MW-04D	1	1	0	NA
GEP-1	7	7	0	-5.83
GEP-2	7	7	0	-4.24
GEP-3	6	6	0	+4.51
GEP-4	7	7	0	+42.0
MW-B-3	6	1	5	NA
MW-5	7	2	5	NA
MW-6	8	8	0	-2.01
MW-7	7	1	6	NA
MW-8	5	1	4	NA
MW-9	7	2	5	NA
MW-11R	4	1	3	NA
MW-12R	5	4	1	+1.15
MW-13	1	1	0	NA
MW-14	7	7	0	+0.44
MW-15	16	16	0	-3.10
MW-16	16	2	14	NA
MW-17	7	7	0	-2.04
MW-18	7	7	0	-14.5
MW-19	7	7	0	-3.01
MW-20	7	7	0	-4.91
MW-22/22R	8	8	0	-31.3
MW-23	6	0	6	NA
MW-24	16	16	0	+7.20
MW-25	6	6	0	-2.46
MW-26	16	1	15	NA
MW-27	6	6	0	-5.65
MW-28	16	16	0	+3.64
MW-29	16	16	0	-13.28
MW-30	16	16	0	-5.82
MW-31	16	16	0	-0.27
MW-32	16	16	0	-4.01
MW-33	16	16	0	+1.83
MW-34	16	16	0	-4.32
MW-35	16	16	0	+1.38
MW-36	6	5	1	0.0

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