PRE-DESIGN INVESTIGATION REPORT

WORK ASSIGNMENT D009803-36

ERDLE PERFORATING SITE
SITE NO. 828072
TOWN OF GATES, MONROE COUNTY, NY

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York

Basil Seggos, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION

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FINAL

March 2023

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LIST OF ABBREVIATIONS/ACRONYMS

AECOM	AECOM USA, Inc.
bgs	below ground surface
cm/sec	centimeters per second
cis-1,2-DCE	cis-1,2- dichloroethene
CVOC	chlorinated VOCs
DER	Division of Environmental Remediation
DPT	direct push technology
DUSR	Data Usability Summary Report
Erdle	Erdle Perforating Site
ERH	electrical resistivity heating
FS	Feasibility Study
ft	feet/foot
ft/ft	foot per foot
H&A	Haley & Aldrich, Inc.
HSA	hollow stem auger
IDW	investigation-derived waste
IRM	Interim Remedial Measure
mg/kg	milligrams per kilograms
µg/L	micrograms per liter
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/L	milligrams per liter
NAPL	non-aqueous phase liquid
NYCRR	New York Codes, Rules and Regulations,
NYSDEC	New York State Department of Environmental Conservation
PCE	Tetrachloroethene
PDI	Pre-Design Investigation
PDIR	Pre-Design Investigation Report
PDIWP	Pre-Design Investigation Work Plan
PID	photoionization detector
PVC	polyvinyl chloride
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
RQD	rock-quality designation
SCG	standards, criteria, and guidance value
SCO	soil cleanup objective
Site	Erdle Perforating Site
SSDS	sub-slab depressurization system
SVI	soil vapor intrusion
SVOC	semi-volatile organic compound(s)
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
UST	underground storage tank
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound(s)

1.0 INTRODUCTION

This Pre-Design Investigation Report (PDIR) presents the data generated from the Pre-Design Investigation (PDI) activities conducted under New York State Department of Environmental Conservation (NYSDEC) Contract D009803-Work Assignment 36. Work activities were conducted from June 2021 to September 2021 to further investigate chlorinated solvent contamination at the Erdle Perforating Site (Site No. 828072) (Site) located in the Town of Gates, New York (Figure 1-1). This document describes activities performed during the PDI as proposed in the approved Pre-Design Investigation Work Plan (PDIWP, AECOM USA, Inc., May 2021), compares the PDI data against applicable criteria, and recommends additional activities to address remediation of remaining contamination at the Site.

This PDIR incorporates and describes the relevant findings of previous investigations completed to date for environmental media that remains impacted at the Site. Historical data and analytical results from samples collected from various environmental media were evaluated to characterize determine the remaining extent of contamination. Data from this PDI and relevant information from previous investigations, remedial activities, and subsequent investigations will be used to develop remedial plans and specifications to address remaining contamination.

1.1 Purpose of Report

The purpose of the PDI was to identify the remaining source of contamination at the Site and to determine if non-aqueous phase liquid (NAPL) is present in overburden and/or bedrock. Remediation using electrical resistivity heating (ERH) was previously performed at the Site. It is possible that impacted overburden soil remains at the Site. The PDI was focused in the area of known former spills and areas within and immediately adjacent to the ERH treatment area.

1.2 Site Background and History

The Site is approximately 9.2 acres and is bounded on the south by CSX railroad tracks and an undeveloped wooded area further south of the railroad tracks, on the north and east by light industry, and on the west by open land and Interstate 490. The Site contains one occupied 84,000 square foot facility building which was constructed in 1968. The main site feature is the building which is surrounded by an asphalt parking to the north and grass and wooded areas to the south, east, and west. The Site and surrounding developed areas are serviced by public water. A townhouse development (Hidden Valley Development) is located approximately 800 feet south of the Site. The property and land south of the Site are fairly low lying, with areas of intermittent stagnant water. A drainage swale is located along the west side of the Site parcel. The drainage swale passes under the railroad tracks, through the undeveloped

wooded land south of the Site and eventually along the western edge of the Hidden Valley Development to a small pond located along the western edge of the development.

The Site is currently active and is zoned for industrial purposes including manufacturing and processing. Site occupants include a manufacturer of various types of perforated sheet metal products. The surrounding parcels to the north, east and west, which include both undeveloped and developed properties, are also zoned for industrial purposes. The undeveloped and developed areas located south of the CSX railroad tracks are zoned for one-family residential. The Site Plan is presented as Figure 1-2.

Erdle Perforating Company (Erdle) constructed the facility in 1968 on what was then farmland. Erdle used a variety of lubricants in its perforating processes which were removed from the finished product through the use of chlorinated degreasing solvents, such as trichloroethene (TCE). From the early 1970's to 1987, Erdle collected spent TCE degreasing solvent in a 2,000-gallon underground storage tank (UST) prior to shipping off-site for disposal. The TCE UST was located adjacent to the southwestern edge of the building. Erdle also stored waste oils in a UST next to the TCE UST. In February 1987, the TCE UST failed a pressure test. Subsequent soil and groundwater sampling confirmed that Site soil and groundwater had been impacted by TCE. The TCE tank and several other tanks (including the waste oils tank formerly adjacent to the TCE UST) were removed in 1987, along with approximately 100 cubic yards of contaminated soil. Erdle provided a report on these removals to the NYSDEC in July 1987. Because of the TCE release, the Site was listed as a Class 2 site in the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites. A Class 2 site is defined as a "significant threat to public health or environment – action required".

Investigation and Remedial History

The following narratives provide a remedial history timeline and a brief summary of the available project records that document key investigative and remedial milestones for the Site:

- 1987: Leaking UST identified and removed along with contaminated soil (Day, 1987).
- 1987: Site listed as Class 2 site in Registry of Inactive Hazardous Waste Disposal Sites (NYSDEC, 2010).
- October 24, 1994: Consent Order B8-0185-87-05 signed by Erdle Perforating Company (NYSDEC, 2010).
- 1995: Phase I Site Investigation completed by Erdle Perforating Company (Radian, 1995).
- 1996: Phase II Site Investigation completed by Erdle Perforating Company (NYSDEC, 2010).
- 1997: Installation of a dual phase extraction system as an interim remedial measure (IRM), by Erdle Perforating Company (NYSDEC, 2010).

- 1998: Remedial Alternatives Feasibility Study completed by Erdle Perforating Company (Radian, 1998).
- 1999: Installation of off-site groundwater monitoring wells completed by Erdle Perforating Company (NYSDEC, 2010b).
- 2002: Dual phase extraction system shut down by Erdle Perforating Company (NYSDEC, 2010b).
- 2005: Off-site limited soil vapor intrusion (SVI) study by Erdle Perforating Company (NYSDEC, 2010b).
- 2006: Erdle Perforating Company Site referred to State Superfund by NYSDEC (NYSDEC, 2006).
- 2007: Off-site SVI study performed by NYSDEC (EA Engineering, 2007).
- 2008-2010 Remedial Investigation/Feasibility Study (RI/FS) completed by MACTEC Engineering and Consulting, P.C. (MACTEC) for the NYSDEC (included installation of sub-slab depressurization systems [SSDS]) (MACTEC, 2010).
- July 2012: Baseline groundwater sampling completed by MACTEC for the NYSDEC (MACTEC, 2012).
- June 2013: SSDSs installed at 391 Upper Valley Road and 394 Upper Valley Road, by Mitigation Tech (MACTEC, 2013).
- December 8, 2014: Dual phase extraction system removed by TRS (MACTEC, 2017).
- January 2015 - June 2015: ERH system components installed by TRS (MACTEC, 2017).
- June 26, 2015 - April 2016: ERH system operated and maintained by TRS (MACTEC, 2017).
- May 2018: Post ERH groundwater sampling (MACTEC, 2018).
- May 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2019).
- November 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020a).
- June 2020: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020b).

Historical soil and groundwater analytical results are presented in Appendix A.

As mentioned above, activities performed by Erdle included several phases of RI, installation and sampling of on-site and off-site groundwater monitoring wells, an FS, and installation of a dual phase extraction system as an IRM to extract contaminated groundwater and vapor from the former TCE UST source area. The dual phase extraction system was installed in 1997 and operated for less than one year with minimal effect (MACTEC, 2010). NYSDEC retained MACTEC in 2007 to conduct an RI to better define the nature and distribution of contamination resulting from previous activities at the Site. The RI activities were conducted from 2007 to 2010 and included the following:

- Historical Site data review.
- Soil boring and monitoring well installations.
- Sampling of pore water point installations for volatile organic compound (VOC) analysis.
- Stream piezometer installation.
- Sampling of groundwater from overburden and bedrock monitoring wells for VOCs, semi-volatile organic compounds (SVOCs), and metals analysis.
- Sampling of soil for VOCs, SVOCs, metals, pesticides, and polychlorinated biphenyl (PCB) analysis.
- Sampling of soil vapor, indoor air, and outdoor air for VOC analysis, and
- Qualitative exposure assessment – Public Health Evaluation.

Based on the groundwater, soil, and soil vapor sampling, primary contaminants of concern are chlorinated VOCs (CVOC), including TCE and its associated breakdown products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC).

To address current and/or potential indoor air contamination from VOCs associated with SVI, ten SSDSs were installed at residential locations as IRMs between 2007 and 2010 and two residential SSDSs were installed in 2013. No further action was deemed necessary for the remaining 43 residential structures sampled (MACTEC, 2013).

Based on surface water sampling conducted by the Monroe County Department of Public Health in June 2007, no site-related surface water contamination was identified. There were no exceedances of Standards, Criteria, or Guidance (SCGs) for VOCs in surface water indicating that VOC-impacted groundwater has not impacted the surface water within the drainage swales or retention pond.

Sediment samples were not collected from the wooded area located downgradient of the soil source area because the area is only intermittently wet. Sediment samples were also not collected from the drainage swale because it is dredged regularly by the Department of Public Works.

Soil samples collected within the wooded area did not reveal contaminant concentrations exceeding SCGs.

Following completion of the RI/FS, the NYSDEC Record of Decision (ROD) outlined the selected remedy for the Site:

- Implementation of a full-scale in-situ electrical resistance heating system to address on-site VOC soil and groundwater contamination. Implementation of this alternative will consist of the installation of electrodes throughout the source area on approximately fifteen-foot spacing.

Each electrode will be paired with one vapor recovery extraction well for vapor recovery. The vapor recovery system will include vapor phase treatment.

- In-situ enhanced biodegradation could be implemented, if appropriate, to remediate site-related groundwater contamination contributing to the existing off-site soil vapor to indoor air pathway. The decision to conduct in-situ enhanced biodegradation during implementation of remedial action will be based upon the information from the Remedial Investigation, results of the pre-design investigation and data gathered to evaluate the effectiveness of the electrical resistance heating of the on-site source area. Full-scale implementation of in-situ enhanced biodegradation will consist of the injection of the selected amendment(s) into the contaminated overburden and shallow bedrock aquifers along two separate horizontal transects; transecting the groundwater plume at locations MW-7/7D and MW-8/8D. The installation of injection points as permanent wells will allow for multiple rounds of injection without the need for mobilization of heavy equipment, and will also provide additional locations to monitor groundwater conditions. Subsequent rounds of in-situ biodegradation will be conducted, as appropriate, based upon evaluation of groundwater and vapor monitoring results.
- Institutional controls in the form of an environmental easement for the controlled property.
- Site Management Plan (NYSDEC, 2010b).

The ERH system was installed and operated from June 2015 to April 2016. The goal of the remedial action was the cleanup of source area soils to meet the New York State Codes Rules and Regulations Part 375 Soil Cleanup Objectives (SCOs) for the protection of groundwater. Although post ERH soil sample analytical results indicated the soils met the SCOs, groundwater sampling conducted in May 2018 and May 2019 indicated that contaminants (primarily chlorinated compounds) were still present at concentrations above New York State groundwater standards in groundwater at and downgradient from the Site (MACTEC, 2018 and 2019). As a result, six new wells were installed (IW-1 to IW-6) and chemical oxidant cylinders (RemOx® SR ISCO Reagent - a mix of potassium permanganate and sodium persulfate by Carus Corporation) were placed in the new wells and in four existing wells (MW-8, MW-8D, MW-9, and MW-9D) to oxidize the remaining contaminants present in groundwater.

1.3 Remaining Contamination

The remaining contamination near the former source consists of primarily chlorinated compounds, specifically TCE and daughter products, in groundwater. It is possible that residual soil contamination is present around the perimeter of the ERH treatment area. Remaining off-site contamination consists of groundwater and potential soil vapor contamination. However, the focus of the PDI was to investigate remaining contamination on-site.

Soil

No soil samples exceeded the Restricted Use or Protection of Groundwater SCOs after completion of the remedial action (MACTEC, 2017).

Sediment

Sediment is not a medium of concern at the Site.

Groundwater

As mentioned above, the ERH system operated June 2015 through April 2016. Groundwater sampling was conducted in April 2015 to establish a baseline prior to implementation of the remedial action, in May 2016, and in May 2018.

The May 2018 sampling indicated that VOC concentrations continued to exceed groundwater standards. However, total CVOC concentrations in overburden source area monitoring well MW-3A decreased from 409,700 micrograms per liter (µg/L) in April 2015 to 2,750 µg/L in May 2018. CVOC concentrations in most of the source area monitoring wells decreased since 2015, except for deep monitoring well MW-3D, which increased following the completion of the ERH treatment. In MW-3D, the total CVOC concentration increased from 57.5 µg/L in 2015 to 1,520 µg/L in May 2018.

Although total CVOC concentrations in most wells decreased since 2012 (prior to the ERH treatment), concentrations in some of the wells remained consistent or increased over the same time period (MACTEC, 2018). In general, groundwater concentrations decreased at most monitored locations in and downgradient of the source area as reported pre- and post-ERH treatment; however, New York Class GA groundwater standards were exceeded at many locations at and downgradient of the Site. Further, degradation of TCE to cis-1,2- DCE and VC is generally observed; however, based on the wells sampled, degradation was occurring at differing rates (MACTEC, 2018).

1,4-dioxane was historically used as a stabilizer and corrosion inhibitor for certain chlorinated solvents, particularly TCE (United States Environmental Protection Agency [USEPA], 2014), but its presence had not previously been evaluated at the Site. In May 2018, four wells (MW-5, MW-5D, MW-8, and MW-8D) were sampled for 1,4-dioxane. New York State has not published standards or guidance values for 1,4-dioxane, so the results were compared to the USEPA Regional Screening Level (RSL) of 0.46 µg/L for residential tap water. 1,4-dioxane was detected in all four of the wells sampled in May 2018. Three of the four detections exceeded the RSL, with the highest concentration (2.9 µg/L) detected in the upgradient well MW-5 (MACTEC, 2018).

Additional groundwater sampling was conducted in May 2019 and November 2019. Concentrations of CVOCs detected in November 2019 at and downgradient from the Site were similar to

those detected in 2018 and May 2019, with continued elevated concentrations of TCE and daughter products in the former source area (monitoring well MW-2A). Although concentrations were slightly lower in wells downgradient from the Site, this may just represent seasonal variation. Considering the still elevated CVOC concentrations, the continued presence of chemical oxidant in the placement wells, and field measurements of water quality parameters, it appears that chemical oxidant did not travel far from where it was placed (MACTEC, 2020a).

Data from the June 2020 groundwater sampling event show that CVOC concentrations in groundwater were similar to those detected from the previous November 2019 sampling event; although several wells further downgradient from the Site had lower concentrations, including MW-17D, MW-11 and MW-11D, MW-16D, and MW-19D. The 2020 data shows that New York Class GA groundwater standards for CVOCs continue to be exceeded at many locations at and downgradient of the Site, although degradation of TCE to cis-1,2-DCE and VC is generally observed.

Surface Water

Surface water is not a medium of concern at this Site.

Soil Vapor

Soil vapor sampling was not conducted at the Erdle facility during the RI due to the active manufacturing processes.

SVI sampling was conducted at 55 residences in the Hidden Valley Development located approximately 800 feet south of the site. Collectively, a total of 55 residential structures have been sampled for SVI over four consecutive heating seasons (2006/2007 through 2009/2010). Soil vapor concentration of TCE were as high as 420 µg/m^3.

Based on the soil vapor/indoor air results, 12 residential properties were mitigated with SSDSs and no further action was deemed necessary at the remaining 43 residences.

1.4 Site Hydrogeologic Conditions

Overburden groundwater on the south side of the Site building is interpreted to flow southwest towards the drainage swale adjacent to the western portion of the Site. Bedrock groundwater at the Site is interpreted to flow primarily to the south. Depth to groundwater was measured at 1 to 2 feet below ground surface (bgs) adjacent to the south side of the Erdle building.

Based on the shallow depth to groundwater, it is possible that groundwater is discharging into the drainage swale. Pore-water samples were collected from the drainage swales south of the Site. Chlorinated VOCs were not detected in any of the pore-water samples.

Hydraulic conductivity tests (slug tests) were not conducted at the Site for either the overburden or bedrock wells during the RI but were performed at monitoring wells located approximately 120 feet downgradient from the Site. The hydraulic conductivity values in the overburden water-bearing zone ranged from 0.001 centimeters per second (cm/sec) to 0.012 cm/sec. The hydraulic conductivity values for the bedrock water-bearing zone ranged from 0.002 cm/sec to 0.010 cm/sec (MACTEC, 2012).

Based on groundwater gradients across and south of the Site, calculated overburden groundwater flow velocities range from 16 feet/year in monitoring well MW-14 to 172 feet per year in monitoring well MW-19, with a geometric mean of 50 feet/year in the four overburden wells for which hydraulic conductivity were calculated. Based on field observations during groundwater sampling of overburden wells, hydraulic conductivities in the area previously treated with ERH at the Site are expected to be lower than these ranges.

The calculated shallow bedrock groundwater flow velocities range from 371 feet/year in monitoring well MW-17D to 1,826 feet per year in monitoring well MW-14D, with a geometric mean of 962 feet/year in the five bedrock wells for which hydraulic conductivity was calculated.

2.0 PRE-DESIGN INVESTIGATION

AECOM and our subcontractor team completed the PDI that refined remedial extents and generated data to support the development of a remedial plan for submittal to the NYSDEC. PDI activities were supervised by AECOM personnel. The following work elements were performed as part of the PDI:

- Advancement of Soil Borings and Soil Sampling using Direct-Push Technology (DPT).
- Installation of Two Overburden and Six Bedrock Monitoring Wells.
- Monitoring Well Development.
- Collection of Water Levels/Product Thickness.
- Collection of Groundwater Samples.
- Investigation Derived Waste (IDW) Handling, and
- Completed an engineering survey to refine the Site base map and establish the sampling locations.

PDI locations are shown in Figure 2-1. Table 2-1 provides the sample analytical program. The work was performed in accordance with the PDIWP (Appendix B), unless specified below. The following subcontractors were utilized by AECOM for the PDI: Nothnagle Drilling, Inc. - DPT and Conventional Drilling; Frandina Engineering and Land Surveying, PC – Land Survey; Clean Harbors and Environmental Service Group NY, Inc. – Investigation-Derived Waste Transportation and Disposal; and Environmental Data Validation, Inc. – Data Validation.

Fieldwork commenced on June 1, 2021 and was completed on September 16, 2021. DPT procedures were used to advance borings at 40 locations. Two overburden and six bedrock wells were installed. Groundwater samples were collected from 8 new monitoring wells. Details are provided in the sections below. Field notes generated during this PDI are included in Appendix C.

2.1 Advancement of Direct-Push Soil Borings and Soil Sampling

As one of the initial field tasks, AECOM established a 20-foot by 20-foot grid within a 140-foot by 100-foot area south of the Erdle building in the area south of where the former UST was located (Figure 2-1). On June 7-8, 2021 additional boring locations along the western edge of the initial grid were selected. A soil boring was advanced to bedrock (or refusal) using a DPT drill rig at 48 locations as shown on Figure 2-1.

Soil sampling was conducted continuously to classify subsurface material and obtain samples for laboratory analyses. Upon recovery, the soil samples were visually described and classified, inspected for

signs of contamination, and screened with a photoionization detector (PID) for the presence of volatile organic vapors by a qualified geologist. The PID readings are displayed in Figures 2-2 through 2-9.

Soil cuttings were contained in Department of Transportation approved 55-gallon drums. Boreholes were backfilled with bentonite chips.

Up to three soil samples from each soil boring location were collected and submitted for analysis of Target Compound List (TCL) VOCs via USEPA Method 8260C, as summarized in Table 2-1. Samples for laboratory analysis were collected as follows:

- One or more soil sample was collected from the interval(s) with the greatest observed potential impacts.
- If no potential impacts were observed, the soil sample was collected from the interval directly above groundwater or from the interval immediately above the bedrock surface.
- Three samples were collected at location 40N 20E based on the PID readings.

Table 2-2 contains a boring summary. Boring logs can be found in Appendix D.

2.2 Installation of Two Overburden and Six Bedrock Monitoring Wells

Two borings for installation of overburden monitoring wells were advanced to the bedrock surface using 4 1/4-inch hollow stem augers (HSA) while continuously collecting soil samples using a macrocore sampler via DPT.

The borings for the six bedrock wells were advanced to the bedrock surface using a conventional drilling rig with 6 1/4-inch HSA and were previously characterized and sampled using a macrocore sampler via DPT. Upon reaching the bedrock surface, the augers were removed, and a temporary 6-inch diameter casing was installed. A 5 7/8-inch diameter rotary bit was used to drill 3- to 5-foot-long rock socket. A 4-inch diameter permanent steel casing was then set into the rock socket and grouted with a cement/bentonite grout. The grout was allowed to cure for at least 24 hours. After the grout had cured, the boring was continuously cored to the target depth using an HQ core barrel. The bedrock cores were visually described by the AECOM geologist and the rock-quality designation (RQD) was calculated. A rock coring summary is provided in Table 2-3. Rock cores were contained in rock core boxes.

One soil sample from monitoring well location BMW-3DD and two soil samples from monitoring well location OMW-2 were analyzed for TCL VOCs via USEPA Method 8260C as indicated on Table 2-1.

The two overburden monitoring wells were constructed using a 10-foot length of continuous wrap #10 slot stainless-steel screen attached to 2-inch ID, Schedule 40 polyvinyl chloride (PVC) riser. The six

bedrock wells were constructed with a 10-foot length of 2-inch ID #10 slot Schedule 40 PVC screen and 2-inch ID, Schedule 40 PVC riser. A 2-foot Schedule 40 PVC sump was placed beneath the screen. The wells were completed with flush-mount curb boxes or stick-up casings. A summary of new and existing well construction details are provided in Table 2-4. Boring and well construction logs can be found in Appendix D and E, respectively.

2.3 Monitoring Well Development

The new monitoring wells were developed using surge and pump methods until the discharged water was relatively sediment free and the water quality indicator parameters (pH, temperature, and specific conductivity) reached steady state. Water volumes removed ranged from 25 gallons to 100 gallons. Well development logs can be found in Appendix F.

2.4 Collection of Water Levels

On August 11, 2021, AECOM collected a comprehensive round of water levels in all monitoring wells shown on Figures 2-10 and 2-11 and in Table 2-5. Groundwater elevation contours from this data are presented in Figures 2-10 and 2-11.

2.5 Groundwater Sample Collection

AECOM collected groundwater samples from eight new monitoring wells and analyzed the samples for VOCs via USEPA Method 8260C, as indicated on Table 2-1. Groundwater samples were collected using low flow procedures using peristaltic pump methods. Details on the groundwater sample collection can be found in the purge logs located in Appendix G.

2.6 Investigation-Derived Waste Management

IDW, including purge and decontamination water and soil spoils from borings, was drummed for disposal. Drums were categorized and removed from the Site after fieldwork was completed. Copies of the waste manifests for the IDW are included in Appendix H.

2.7 Survey

A survey was completed that included the location of borings, monitoring wells, edges of the pavement, erosional features, key grade changes, and other notable features. The survey tied into the existing Site survey and base map. Data from the survey was entered in the project specific database, which was then used to generate maps for this PDIR.

3.0 STUDY AREA GEOLOGY

This section discusses the physical and hydrogeological characteristics of the study area.

3.1 Geology and Hydrogeology

The hydrogeology and geology at the Site were characterized during previous investigations and further refined as part of the PDI. Information obtained from other studies conducted near the Site and from various literature sources also were used to help characterize the hydrogeology. The following subsections summarize the regional and site-specific geology and hydrogeology.

3.1.1 Geology

3.1.1.1 Regional Geology

The Town of Gates is situated in the Erie-Ontario Lowlands physiographic province of New York State (Broughton, et al. 1966). The province is characterized by low plains with little relief. In the Ontario lowland south of Lake Ontario, two escarpments occur which correspond to the underlying Onondaga Limestone and Lockport Dolomite bedrock units.

The overburden deposits in the region have been mapped largely as glacial till, which consists of a well-graded mixture of clay, silt, sand, and gravel (USGS 1985). The overburden varies in thickness from a few feet to more than 100 feet.

Beneath the overburden deposits are the Penfield Dolostone, DeCew Dolostone, and underlying Rochester Shale bedrock units. These rocks are Silurian in age, strike east-west, and dip gently to the south at approximately 1 degree or 40 to 50 feet per mile (Rickard, L. et al. - New York State Museum and Science Service 1970). The dip of the rocks follow the structural trend of a homocline affecting the Paleozoic basement rocks across western and southern New York State. In general, dip increases from west to east across western and central New York. Bedrock joints are common in the Lockport Formation and are a result of structural stresses during the late Paleozoic Appalachian deformation (Zenger 1965). In the Gates area, bedrock outcrops along the Erie Barge Canal are characterized by occasional near vertical joints and horizontal bedding planes.

As part of field investigations performed by Haley & Aldrich, Inc. (H&A) in 1994, bedrock fractures were mapped in the Lyell Avenue/Lee Street vicinity. H&A mapped 35 linear features from aerial photographs. Fractures within the nearby Erie Canal range in orientation from ranged from N34W to N70W, N36E to N70E, and N27W to N28E.

3.1.1.2 Site Geology

Overburden

The stratigraphic sequence at the Site includes the following units from the surface down: topsoil, miscellaneous heterogenous fill, interstratified soil layers consisting primarily of silty fine sands and clays, with some small fine sand lenses and a sandy/clay layer above bedrock with less fines at most locations. At the southwest end of the sampling grid (Figure 2-1), the overburden consist of interbedded layers of clayey silt and very dilatant sand. Overburden thickness ranges from approximately 11 to 15 feet (Figure 3-1).

Bedrock

The bedrock consists of the Penfield Dolostone and DeCew Dolostone Member of the lower Lockport Formation and Rochester Shale Formations. The Rochester Shale Formation bedrock is divided in the Gates area into the Gates Dolomite and Rochester Shale of the Rochester Shale Formation. The Rochester Shale is further divided into the Burleigh Hill Member and Lewiston Members (USGS 1995). The rock units also vary in thickness in the region, and in general, the Lockport Formation is approximately 29 to 39 feet, and the Rochester Formation is reportedly approximately 90 feet thick.

Information obtained from the well borings were used to determine the depth to bedrock and prepare a bedrock surface map (Figure 3-2). The bedrock surface slopes gently toward south and southwest at the Site.

Lockport Formation

The Penfield and DeCew Members are part of the lower Lockport Formation. The Penfield Member is characterized as a medium gray to light gray, medium grained and thin to medium bedded quartzose dolomite. Laminations, carbonaceous partings, cross-stratification are common. Vugs containing dolomite, sphalerite, gypsum, and selenite are found in these cavities. The DeCew Member is characterized as hard, medium to dark gray, thin to medium bedded, fine-grained dolomite. The thickness of the DeCew is reported to be approximately 10 to 15 feet near the Site. It outcrops in the nearby Erie Barge Canal east of the Site. It is classified as a siliceous dolomite (Zenger 1965). Small vugs containing gypsum and dolomite were sporadically identified in portions of the cored sequence, especially within the upper portion (Penfield Member). The contact between the Penfield and DeCew Members could not be distinguished from the rock cores. RQDs from the rock cores are presented in Table 2-3.

Rochester Shale Formation

The Gates Member lies beneath the DeCew Member of the Lockport Formation. Because of its shaly character, it is considered a part of the Rochester Shale Formation. It is regarded as a transitional unit between the overlying Lockport Dolomite and underlying finer, less dolomitic shales of the Rochester

Formation (Zenger 1965). The contact between the Gates and DeCew is difficult to discern from rock cores. The Gates Member is reported to be 18 to 20 feet thick along the nearby Erie Canal, and is characterized as dark-gray, fine-grained, medium hard, thin bedded argillaceous and siliceous dolomite (Zenger 1965).

Argillaceous partings are interbedded throughout the unit. Small vugs containing gypsum and dolomite are reported to be present within the rock sequence as well. The rocks beneath it are considered as Rochester shale which are characterized as thin to medium bedded, dark gray to black, medium hard to medium soft, argillaceous shale and dolomitic shale. In general, bedding planes and fractures decrease with increasing depth and RQDs measured during coring operations and summarized in Table 2-3 reflect this observation

3.1.2 Hydrogeology

The primary hydrogeologic unit identified at the Site is the unconfined water-table aquifer present in both the overburden and bedrock. No confining unit was identified thus no barrier exists between the overburden and bedrock groundwater zones.

Groundwater in bedrock flows through primarily secondary porosity features in the rock including faults, joints, solution cavities, and bedding planes. Figures 2-10 and 2-11 depict the potentiometric surfaces of the overburden and bedrock based on August 11, 2021 monitoring data. The potentiometric surface in the overburden indicates groundwater flow to the south-southeast and ranges from approximately 553.96 feet above mean sea level (amsl) along the northern side of the Site to approximately 546.71 feet amsl approximately 1,200 feet south of the Site. The horizontal hydraulic gradient in the overburden is approximately 0.004 feet per foot (ft/ft).

Hydraulic conductivity testing was not performed at the Site. Vertical hydraulic gradients, provided in Table 3-1, show an upward vertical gradient between overburden and shallow bedrock. Vertical hydraulic gradients are downward between overburden and deep bedrock, and between shallow bedrock and deeper bedrock as indicated in Table 3-1.

4.0 PRE-DESIGN INVESTIGATION ANALYTICAL RESULTS

The following sections discuss the analytical results for the PDI fieldwork. This section summarizes and describes the findings of this PDI and incorporates sampling information completed to date for all environmental media that were evaluated. As part of this PDI, samples were collected from various environmental media to delineate the extent and volume of impacted environmental media and to determine the areas that require remedial action in accordance with the ROD.

4.1 Standards, Criteria and Guidance Values

For each medium, detected concentrations of individual contaminants were compared to applicable standards, criteria, and guidance values (SCGs). The SCGs determined for the individual media are identified below.

4.1.1 Soil

Two sources of soil SCGs are appropriate for this Site: 6 NYCRR Part 375, Environmental Remediation Programs, Subpart 375-6, Remedial Program Soil Cleanup Objectives, effective December 14, 2006 (SCOs); and NYSDEC Commissioner Policy (CP), CP-51/Soil Cleanup Guidance, effective October 21, 2010 (CP-51). CP-51 supplements Part 375 by providing criteria for contaminants where values were not included in Part 375. Hereafter mention of Part 375 includes incorporation of CP-51 criteria values.

The property is zoned Light Manufacturing. The zoning classification for the property is a consideration in the determination of the appropriate soil SCOs. Per the ROD, Part 375 Commercial Use criteria is being used to evaluate the soil sample results. Results are also evaluated against Protection of Groundwater SCOs

4.1.2 Groundwater

The groundwater results are compared to the New York State Class GA standards, or guidance values, set forth in the NYSDEC's Division of Water Technical and Operational Guidance Series (1.1.1) (TOGS) Memo *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. These are collectively referred to as TOGS 1.1.1 in the tables and figures. These groundwater SCGs are included on the groundwater analytical tables presented below.

4.2 Analytical Results

Analytical results from this PDI are summarized in Tables 4-1 and 4-2 and Figures 4-1 and 4-2. Complete results are included in the Data Usability Summary Reports (Appendix I). Results from the previous Site investigations are presented in Appendix A.

4.2.1 Soil Sampling Results

The results for soil sample analyses are summarized in Table 4-1 and Figure 4-2. No VOCs were detected at concentrations exceeding Commercial Use criteria.

- TCE exceeded Protection of Groundwater criterion in the samples collected from locations 0N 0E 12-13 feet bgs, 100N 0E 10.5-11 feet bgs, 100N 20E 14-14.4 feet bgs, 120N 20E 14.5-14.9 feet bgs, 120N -20E 12-13 feet bgs, 20N 20E 11-11.5 feet bgs, 20N 40E 13.9-14.1 feet bgs, 60N 0E 12.5-13 feet bgs, 60N 20E 10.5-11 feet bgs, 60N 60E 11-11.5 feet bgs, 60N 80E 10.5-11 feet bgs, BMW-3DD 13-14 feet bgs and OMW-2 13-14 feet bgs.
- Cis-1,2-DCE exceeded Protection of Groundwater criterion in the sample collected from location 100N 0E 10.5-11 feet bgs and 13-13.5 feet bgs, 100N 20E 14-14.4 feet bgs, 105N 140E 14-14.3 feet bgs, 120N 20E 14.5-14.9 feet bgs, 120N 40E 10-11 feet bgs, 20N 20E 11-11.5 feet bgs, 20N 40E 13.9-14.1 feet bgs, 60N 0 E 11-11.5 feet bgs and 12.5-13 feet bgs, 60N 20E 10.5-11 feet bgs, 60N 60E 11-11.5 feet bgs, 60N 80E 10.5-11 feet bgs, BMW-3DD 13-14 feet bgs, and OMW-2 13-14 feet bgs.
- VC exceeded Protection of Groundwater criterion in the samples collected from location 100N 0E 13-13.5 feet bgs and 80N 20E 13.5-14 feet bgs.
- Tetrachloroethene (PCE) exceeded Protection of Groundwater criterion in the sample collected from location 100N 20E 14-14.4 feet bgs.
- Acetone exceeded Protection of Groundwater criterion in the samples collected from location 100N -20E, 120N 0E, 120N 20E, 120N -20E, 120N 40E, 140N -20E, and 80N 20E.

The highest concentration of TCE was found at location 100N 20E, 14–14.4 feet bgs (160 mg/kg). In the historical data, the highest concentration of TCE was at the source area location GS-001 (2,200 mg/kg) 5 feet bgs.

4.2.2 Groundwater Results

The groundwater results, summarized in Table 4-2 and Figure 4-2, show the following:

- TCE exceeded Class GA criterion in the samples collected from locations OMW-2 (140,000 µg/L), BMW-1D (2,300 µg/L) and BMW-2D (150 µg/L).

- Cis-1,2-DCE exceeded Class GA criterion in the sample collected from location OMW-2 (27,000 µg/L), BMW-1D (490 µg/L), OMW-1 (260 µg/L) and BMW-2D (190 µg/L).
- VC exceeded Class GA criterion in the samples collected from location OMW-2 (2,200 µg/L), OMW-1 (99 µg/L) and BMW-2D (8.7 µg/L).

No other detected compounds exceeded groundwater SCGs.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The Site is approximately 9.2 acres and is bounded on the south by CSX railroad tracks and an undeveloped wooded area further south of the railroad tracks, on the north and east by light industry and on the west by open land and Interstate 490. The Site contains one 84,000 square foot facility building which was constructed in 1968. The main Site feature is this occupied facility building which is surrounded by an asphalt parking area to the north and grass and wooded areas to the south, east, and west. The Site and surrounding developed areas are serviced by public water. A townhouse development (Hidden Valley Development) is located approximately 800 feet south of the Site. The property and land south of the Site are fairly low lying, with areas of intermittent stagnant water. A drainage swale is located along the west side of the Site parcel. The drainage swale passes under the railroad tracks, through the undeveloped wooded land south of the Site and eventually along the western edge of the Hidden Valley Development to a small pond located along the western edge of the development.

The Site is currently active and is zoned for industrial purposes including manufacturing and processing and is currently active. Site occupants include a manufacturer of various types of perforated sheet metal products. The surrounding parcels to the north, east and west, which include both undeveloped and developed properties, are also zoned for industrial use. The undeveloped and developed areas located south of the CSX railroad tracks are zoned for one-family residential.

Erdle used a variety of lubricants in its perforating processes which were removed from the finished product through the use of chlorinated degreasing solvents, such as TCE. From the early 1970's to 1987, Erdle collected spent TCE degreasing solvent in a 2,000-gallon UST prior to shipping off-site for disposal. The TCE UST was located adjacent to the southwestern edge of the building. Erdle also stored waste oils in a UST next to the TCE UST. In February 1987, the TCE UST failed a pressure test and was determined to have leaked into the subsurface. Subsequent soil and groundwater sampling confirmed that Site soil and groundwater had been impacted by TCE. The TCE tank and several other tanks (including the waste oils tank formerly adjacent to the TCE UST) on the property were removed in 1987 along with approximately 100 cubic yards of contaminated soil.

ERH was conducted in 2015/2016 to remediate the soil source immediately south of the former UST. Although post ERH soil samples indicated the soils met the soil cleanup objectives, groundwater sampling conducted in May 2018 and May 2019 indicated that contaminants (primarily CVOCs) were still present in groundwater at and downgradient from the Site at concentrations above New York State Standards (MACTEC, 2018 and 2019). RemOx® SR ISCO Reagent cylinders were placed in several of the

wells and in four existing wells to oxidize the remaining contaminants present in groundwater. However, groundwater contamination persists in the overburden and shallow bedrock within the ERH treatment area.

5.1.1 Field Activities

PDI field activities included soil sampling within the ERH treatment and adjacent area to determine the extent of remaining soil contamination, installation of two overburden monitoring wells and two shallow bedrock monitoring wells, two intermediate bedrock monitoring wells, and two deep bedrock monitoring wells. The new wells were installed near locations impacted with CVOCs. The PDI also included groundwater sampling in the newly installed monitoring wells and a Site survey to locate and map field data.

5.1.2 Geology and Hydrogeology

The stratigraphic sequence at the Site includes heterogenous fill materials to a depth of approximately 4 to 8 feet bgs, overlying approximately 8 to 12 feet of generally natural deposits comprised of interstratified clay, clayey silt, and silty sand seams/layers down to the bedrock surface. The bedrock consists of the Penfield and DeCew Dolostone units of the lower Lockport Formation and underlying Gates Dolostone and Rochester Shale of the Rochester Shale Formation. The bedrock surface slopes gently toward the south and southwest. The contacts between the rock units were not readily distinguishable, which is demonstrated through the review of the rock cores obtained during the PDI. Bedrock was found to be very competent, with RQDs ranging from the lower 80's to as high as 100 at depth.

Groundwater occurs under unconfined conditions in both the overburden materials and bedrock. Groundwater flow in the overburden is generally toward the south-southeast with a low horizontal hydraulic gradient of approximately 0.004 ft/ft. Groundwater in the bedrock flows through secondary porosity features including faults, joints, solution cavities, and bedding planes. Historical bedrock groundwater elevation data suggested flow locally toward the south.

5.1.3 Soil Analytical Results

CVOCs were detected in numerous soil samples collected as part of the PDI, however, none of the samples contained concentrations exceeding Commercial Use SCOs. TCE concentrations ranged from 0.012 mg/kg to 160 mg/kg with the highest concentration west of the former staging area. CVOCs exceeding Protection of Groundwater SCOs included TCE, cis-1,2-DCE, VC, and PCE.

5.1.4 Groundwater Analytical Results

CVOCs were detected in groundwater samples at concentrations exceeding Class GA groundwater SCGs. TCE concentrations ranged from 0.48 µg/L to 140,000 µg/L with the highest concentration occurring

in the overburden monitoring well OMW-2 located on the west of the staging area, in the vicinity where the highest concentration of TCE in soil was found. The next highest TCE concentrations were found in the shallow bedrock groundwater at well MW-1D, downgradient of OMW-2. TCE breakdown products cis-1,2-DCE and VC were found in the overburden and shallow bedrock wells. There were no exceedances found in the deep bedrock wells.

5.2 Conclusions

The PDI confirmed that there is remaining contamination in the soil, overburden groundwater, and shallow bedrock groundwater within the ERH treatment area. The deeper bedrock, greater than approximately 30 feet, is not impacted.

The horizontal and vertical extent of the impacts in soil is situated near the northwestern, central and southeastern portions of the ERH area as shown in figure 5-1. Within the overburden, the highest soil vapor PID readings occurred at depths between 10 and 16 feet bgs. The highest concentrations of TCE remaining in overburden soil occurred at grid 100N/20E, approximately forty feet directly south of the former UST. No NAPL was found in overburden, but there was some staining reported in a few locations (Table 2-2). A sheen of NAPL were identified in the BMW-2D rock core at 27.29 feet bgs.

Significant overburden groundwater impacts were identified within the north central portion of the ERH treatment area where TCE was reported at 140 ppm in OMW-2. Shallow bedrock groundwater was also impacted near OMW-2 and within the southeastern portion of the ERH treatment area, albeit at much lower concentrations (Figure 4-2). Deeper bedrock groundwater was not impacted with chlorinated VOCs around the building footprint.

5.3 Recommendations

The following recommendations are offered for consideration by the Department.

- Implement a Remedial Design (RD) to address remaining contamination within the ERH treatment area as identified as part of the PDI.

The RD would likely include In-situ Chemical Reduction (ISCR) reagents injected into the overburden and shallow bedrock.

6.0 REFERENCES

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TABLES

TABLE 2-1
ERDLE PERFORATING, SITE No. 828072
NYSDEC WA D009803-36
SAMPLE ANALYTICAL PROGRAM

Analytical Methods*	Samples	QC						Total No of Samples
		Field Dup	MS	MSD	Equipment/ Rinse Blank	Field Blank	Trip Blank	
Soils								
Direct Push/Hand Driven Soil Boring Soils								
TCL Volatiles + 10 TICs by 8260C	72	4	4	4	0	0	0	84
Monitoring Well Split Spoon Soil Samples								
TCL Volatiles + 10 TICs by 8260C	6	1	1	1	0	0	0	9
Groundwater (new wells only)								
TCL Volatiles + 10 TICs by 8260C	8	1	1	1	0	0	1	12
NAPL*								
TCL Volatiles + 10 TICs by 8260C	0	0	0	0	0	0	0	0
TCL Semivolatiles + 20 TICs by 8270D	0	0	0	0	0	0	0	0
TCL PCBs by 8082A	0	0	0	0	0	0	0	0
Fuel Fingerprint by 310-13	0	0	0	0	0	0	0	0
Flashpoint by 1010	0	0	0	0	0	0	0	0
Density	0	0	0	0	0	0	0	0
Waste Characterization								
Full TCLP	3	0	0	0	0	0	0	3
Ignitability	3	0	0	0	0	0	0	3
Corrosivity	3	0	0	0	0	0	0	3
Reactivity	3	0	0	0	0	0	0	3

MS - Matrix Spike
MSD - Matrix Spike Duplicate
TCL - Target compound List
TCLP - Toxicity Characteristics Leaching Procedure
TICs - Tentatively Identified Compounds

TABLE 2-2
Direct Push Boring Summary
Erdle Perforating Site

Boring ID	Overburden Interval (ft. bgs.)	Oveburden Description	PID Range (ppm)	Staining	NAPL	Comment/ Impact
0N 0E	0-4	FILL: Medium to fine Sand	0.0 to 0.0	None	None	
	4-8	Clayey SILT	0.0 to 0.0	None	None	
	8-11	Medium to fine SAND, Running Sand/Quicksand	0.0 to 0.0	None	None	
	11-13.1	Clayey SILT	0.0 to 0.0	None	None	Collected sample at 12-13' for VOCs.
0N 20E	0-3	TOPSOIL: Silt	0.0 to 0.0	None	None	
	3-4	FILL: Medium to fine Sand	0.0 to 0.0	None	None	
	4-8	Clayey SILT, some-trace Gravel	0.0 to 0.0	None	None	
	8-8.5	Medium to fine SAND, Running Sand/Quicksand	0.0 to 0.0	None	None	
	8.5-12	Clayey SILT, some-trace Gravel	0.0 to 0.0	None	None	
	12-13.7	Medium to fine SAND, Running Sand/Quicksand	0.0 to 0.0	None	None	Collected sample at 12-13' for VOCs.
0N -20E	0-2	TOPSOIL	0.0 to 0.0	None	None	
	2-4	FILL: Medium to fine Sand	0.0 to 0.0	None	None	
	4-8	Clayey SILT	0.0 to 0.0	None	None	
	8-10	Medium to fine SAND, Running Sand/Quicksand	0.0 to 0.0	None	None	
	10-13.9	Clayey SILT	0.0 to 0.0	None	None	Collected sample at 11-12' for VOCs.
20N 0E	0-1.9	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1.9-2.8	FILL: Reworked Gravel and Pulverized Rock	0.0 to 0.4	None	None	
	2.8-4.4	SAND, little Silt	0.0 to 0.0	None	None	
	4.4-8.1	CLAY	0.0 to 0.0	None	None	Collected soil sample at 7.5-8.1' for VOCs.
	8.1-13.8	SAND	0.0 to 0.0	None	None	
20N 20E	0-3.8	TOPSOIL, little Gravel and Organics.	0.0 to 0.0	None	None	
	3.8-5.2	FILL: Reworked Silt, Sand, Gravel and Clay.	0.0 to 3.9	None	None	
	5.2-8.3	CLAY	0.0 to 0.0	None	None	
	8.2-9	SAND	0.0 to 0.0	None	None	
	9-14.1	CLAY	0.0 to 76.3	None	None	Collected soil sample at 11-11.5' for VOCs.
20N 40E	0-1.2	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1.2-5.6	FILL: Reworked Silt, Sand, Gravel and Clay	0.0 to 0.0	None	None	
	5.6-8	CLAY	0.0 to 0.5	None	None	
	8-14.1	SAND, little Gravel	0.0 to 6.8	None	None	Collected soil sample at 13.9-14.1' for VOCs.
20N 60E	0-2	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	2-3.8	FILL: Reworked Silt, Sand, Gravel and Clay	0.0 to 0.0	None	None	
	3.8-14.3	CLAY	0.0 to 1.0	None	None	Collected soil sample at 11-11.5' for VOCs.
40N 0E	0-1	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1-4.5	FILL: Reworked Silt, Gravel and Clay	0.0 to 0.0	None	None	
	4.5-8	CLAY	0.0 to 0.1	None	None	
	8-9	Fine to medium SAND	0.0 to 0.0	None	None	
	9-12.7	CLAY	0.0 to 1.8	None	None	
	12.7-13.8	Sandy CLAY, some Gravel	0.9 to 7.1	None	None	Collected soil sample at 13-13.8' for VOCs.
40N 20E	0-1.5	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1.5-5	FILL: Reworked Silt, Sand, Gravel and Clay	0.0 to 10.2	None	None	Collected soil samples at 2.5-3' & 4-5' for VOCs
	5-14.1	CLAY	0.0 to 19.5	None	None	Collected soil samples at 13.5-14.1' for VOCs

TABLE 2-2
Direct Push Boring Summary
Erdle Perforating Site

Boring ID	Overburden Interval (ft. bgs.)	Oveburden Description	PID Range (ppm)	Staining	NAPL	Comment/ Impact
40N 40E	0-0.9	TOPSOIL	0.0 to 0.0	None	None	Collected no sample for laboratory analyses.
	0.9-3.2	FILL: Pulverized Rock and Gravel 0.8-1.2' bgs	0.0 to 0.4	None	None	
	3.2-14.1	CLAY, trace Gravel	0.0 to 0.4	None	None	
40N 60E	0-3.5	FILL	0.0 to 0.2	None	None	
	3.5-12	CLAY, trace Gravel	0.0 to 1.5	None	None	
	12-14.3	Medium to coarse SAND, trace Gravel	0.0 to 1.2	None	None	Collected soil sample at 13.5-14.3' for VOCs.
60N 0E	0-1.8	TOPSOIL	0.0 to 0.0	None	None	
	1.8-4.3	FILL: Reworked Silt, Gravel and Clay, wood debris @ 3.2-3.6'	0.0 to 0.0	None	None	
	4.3-11.4	CLAY	0.0 to 9.9	None	None	Collected soil samples at 11-11.5' for VOCs.
	11.4-13.9	Sandy CLAY, some Gravel	9.8 to 32.8	None	None	Collected soil samples at 12.5-13' for VOCs.
60N 20E	0-1.1	TOPSOIL	0.0 to 2.5	None	None	
	1.1-4	FILL	0.0 to 8.2	None	None	
	4-10.5	CLAY	5.6 to 44.3	None	None	
	10.5-13.2	Silty CLAY, some fine to medium Sand	2.0 to 2.3	None	None	
	13.2-13.9	CLAY	0.0 to 44.3	None	None	
60N 40E	0-1.5	TOPSOIL	0.0 to 0.0	None	None	
	1.5-3.5	FILL	0.0 to 0.0	None	None	Collected samples at 2.5-3.5' for VOCs
	3.5-11.3	CLAY	0.0 to 3.5	None	None	Collected samples at 10.5-11' for VOCs
	11.3-13.9	Silty CLAY	2.5 to 6.5	None	None	
60N 60E	0-2.2	TOPSOIL	0.0 to 0.0	None	None	
	2.2-4	FILL	0.0 to 0.0	None	None	
	4-13	CLAY	0.0 to 51.5	None	None	Collected sample at 11-11.5' for VOCs.
	13-14.1	Silty CLAY	0.6 to 1.1	None	None	
60N 80E	0-1.1	TOPSOIL	0.0 to 0.0	None	None	
	1.1-5	FILL	0.0 to 0.0	None	None	
	5-13.9	CLAY	0.0 to 0.8	None	None	Collected sample at 10.5-11' for VOCs.
	13.9-14.1	Silty CLAY	0.0 to 0.0	None	None	
80N 0E	0-1.2	TOPSOIL	0.0 to 0.0	None	None	
	1.2-3.8	FILL: Reworked Silt, Gravel and Clay	0.0 to 0.0	None	None	
	3.8-10.5	CLAY	0.0 to 0.1	None	None	
	10.5-13.7	Sandy CLAY, some Gravel	0.5 to 3.9	None	None	Collected soil sample at 13-13.7' for VOCs.
80N 20E	0-1.2	TOPSOIL	0.0 to 0.0	None	None	
	1.2-4.5	FILL: Reworked Silt, Gravel and Clay	0.0 to 0.2	None	None	
	4.5-10	CLAY	0.0 to 0.0	None	None	
	10-14	Sandy CLAY	0.0 to 17.9	None	None	Collected soil sample at 13.5-14' for VOCs.
80N -20E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-4	FILL: Reworked Silt and Clay	0.0 to 0.0	None	None	
	4-12	Clayey SILT, some-trace Gravel	0.0 to 0.0	None	None	
	12-13.6	Sandy CLAY	0.0 to 0.0	None	None	Collected sample at 12-13' for VOCs.
80N 40E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-4.4	FILL: Pulverized Rock and Gravel	0.0 to 0.0	None	None	
	4.4-5.3	CLAY, little Gravel	0.0 to 0.0	None	None	
	5.3-7.7	Fine to medium Silty SAND	0.0 to 0.0	None	None	
	7.7-12	CLAY, little Gravel	0.0 to 0.0	None	None	
	12-14.3	Sandy SILT, little Clay, trace Gravel	0.0 to 2.4	None	None	Collected sample at 13.5-14.3' for VOCs.

TABLE 2-2
Direct Push Boring Summary
Erdle Perforating Site

Boring ID	Overburden Interval (ft. bgs.)	Oveburden Description	PID Range (ppm)	Staining	NAPL	Comment/ Impact
80N 60E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-4	FILL	0.0 to 0.0	None	None	
	4-11	CLAY	0.0 to 1.1	None	None	Collected sample at 7-7.5' for VOCs.
	11-14.2	Silty CLAY	0.0 to 0.0	None	None	
80N 80E	0-4.5	FILL	0.0 to 0.0	None	None	Collected no sample for laboratory analyses.
	4.5-11.3	CLAY	0.0 to 0.0	None	None	
	11.3-14.2	Silty CLAY	0.0 to 0.0	None	None	
100N 0E	0-0.9	TOPSOIL	0.0 to 0.0	None	None	
	0.9-5	FILL: Reworked Silt, Gravel and Clay	0.0 to 4.0	None	None	
	5-11.2	CLAY	0.0 to 7.8	None	None	Collected soil samples at 10.5-11' for VOCs.
	11.2-14	Clayey SAND	0.0 to 17.5	None	None	Collected soil samples at 13-13.5' for VOC.s
100N 20E	0-1.9	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1.9-4.8	FILL: Reworked Silt, Sand, Gravel and Clay and Wood Debris	0.0 to 0.8	None	None	
	4.8-11.2	CLAY	0.0 to 0.4	None	None	
	11.2-14.4	Sandy CLAY	0.0 to 23.9	None	None	Collected soil sample at 14-14.4' for VOCs
100N -20E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-4	FILL: Reworked Silt and Clay	0.0 to 0.0	None	None	
	4-13.5	Clayey SILT, some-trace Gravel	0.0 to 0.0	None	None	Collected sample at 12-13' for VOCs.
100N 40E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-3.5	FILL: Pulverized Rock and Gravel	0.0 to 0.0	None	None	
	3.5-4.2	Silty CLAY	0.0 to 0.0	None	None	
	4.2-8	CLAY	0.0 to 0.0	None	None	
	8-8.9	Fine to medium SAND, little Silt	0.0 to 0.0	None	None	
	8.6-9.8	CLAY	0.0 to 0.0	None	None	
	9.3-9.9	Fine to medium SAND, little Silt	0.0 to 0.0	None	None	
	9.9-11.9	CLAY	0.0 to 0.0	None	None	
	11.9-14	Silty CLAY, trace Sand	0.0 to 0.0	None	None	
	14-14.5	Silty SAND, trave Gravel	0.0 to 0.0	None	None	Collected sample at 14-14.5' for VOCs.
100N 60E	0-1.2	TOPSOIL	0.0 to 0.0	None	None	
	1.2-4.2	FILL	0.0 to 0.0	None	None	
	14.2-9.8	CLAY	0.0 to 0.0	None	None	
	9.8-14.5	Silty CLAY	0.0 to 0.0	None	None	Collected sample at 14-14.5' for VOCs.
100N 80E	0-4.2	FILL: Gravel, Rocks and Sand	0.0 to 0.0	None	None	
	4.2-14	CLAY	0.0 to 0.0	None	None	
	14-14.2	Coarse to Medium SAND Lense	0.0 to 0.0	None	None	
	14.2-14.4	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 14.2-14.4' for VOCs.
100N 100E	0-4.5	FILL: Gravel, Rocks and Sand	0.0 to 0.0	None	None	
	4.5-11.3	CLAY, trace Silt and Sand	0.0 to 0.0	None	None	
	11.3-14.2	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 14-14.2' for VOCs.
105N 120E	0-4.6	FILL: Gravel	0.0 to 0.5	None	None	Collected sample at 4-4.5' for VOCs.
	4.6-8	CLAY, with Silt and Sand lenses	0.0 to 0.6	None	None	
	8-8.2	Medium to coarse SAND	0.0 to 0.0	None	None	
	8.2-8.9	CLAY	0.0 to 0.0	None	None	
	8.9-11.2	Medium to fine SAND	0.0 to 0.0	None	None	
	11.2-14	CLAY	0.0 to 0.0	None	None	
	14-14.2	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	
105N 140E	0-4.3	FILL: Gravel	0.0 to 0.0	None	None	
	4.3-14.3	CLAY, with Silt lenses	0.0 to 0.0	None	None	Collected sample at 14-14.3' for VOCs.

TABLE 2-2
Direct Push Boring Summary
Erdle Perforating Site

Boring ID	Overburden Interval (ft. bgs.)	Oveburden Description	PID Range (ppm)	Staining	NAPL	Comment/ Impact
120N 0E	0-1	TOPSOIL	Not Analyzed	None	None	
	1-4.1	FILL: Reworked Silt, Gravel and Clay	3.5	None	None	Collected soil sample at 2-2.5' for VOCs.
	4.1-8.5	CLAY, little Silt	0.0 to 6.1	None	None	
	8.5-9	Silty SAND, little Clay	1.2	None	None	
	9-12.5	Silty CLAY, little Sand, gray lenses	0.0 to 1.9	None	None	
	12.5-14.5	Clayey SAND	0.9 to 13.7	None	None	
120N 20E	0-1.8	TOPSOIL, little Gravel and Organics	0.0 to 0.0	None	None	
	1.8-5.8	FILL: Reworked Silt, Sand, Gravel and Clay	0.0 to 0.5	Possible @ 3.9-4'	None	Collected soil samples at 3.9-4' for VOCs.
	5.8-14.9	CLAY	0.0 to 7.8	None	None	Collected soil samples at 14.5-14.9' for VOCs.
120N -20E	0-2	TOPSOIL	0.0 to 0.0	None	None	
	2-4	FILL: Medium to fine Sand	0.0 to 0.0	2-4'	None	Slight odor @ 2-4'. Collected samples at 2-4' for VOCs.
	4-11.4	SILT, some Clay	0.0 to 0.0	None	None	
	11.4-13.7	Silty CLAY, some fine Sand	0.0 to 0.0	None	None	Collected samples at12-13' for VOCs.
120N 40E	0-1.2	TOPSOIL	0.0 to 0.0	None	None	
	1.2-6	FILL: Pulverized Rock and Gravel	0.0 to 0.7	None	None	
	6-10	CLAY, Hard/Stiff	0.0 to 1.5	None	None	
	10-15.5	Silty CLAY, trace Sand and Gravel	0.0 to 4.1	None	None	Collected sample at 10-11' for VOCs.
120N 60E	0-1.2	TOPSOIL	0.0 to 0.0	None	None	
	1.2-5.7	FILL: Pulverized Rock and Gravel	0.0 to 0.0	None	None	
	5.7-10.7	CLAY, Hard/Stiff	0.0 to 0.8	None	None	Collected sample at 8.5-9.5' for VOCs.
	10.7-11.5	Silty CLAY, trace Sand and Gravel	0.0 to 0.4	None	None	
120N 80E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-7	FILL: Sand and Silt mix, trace Gravel, Clay, Organics	0.0 to 0.0	None	None	
	7-11	CLAY	0.0 to 0.0	None	None	
	11-13.2	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	
	13.2-13.9	Fine to Medium SAND Lense	0.0 to 0.0	None	None	
	13.9-14.6	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 13.9-14.6' for VOCs.
120N 100E	0-1.7	TOPSOIL	0.0 to 0.0	None	None	
	1.7-4.3	FILL: Sand and Silt mix, trace Gravel, Clay, Organics	0.0 to 0.0	None	None	
	4.3-9.4	CLAY, trace Sand and Silt	0.0 to 0.0	None	None	
	9.4-15.1	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 14.5-15.1' for VOCs.
120N 120E	0-2	TOPSOIL	0.0 to 0.0	None	None	
	2-6	FILL: Sand and Silt mix, trace Gravel, Clay, Organics	0.0 to 0.0	None	None	
	6-11.8	CLAY, trace Sand and Silt	0.0 to 0.0	None	None	
	11.8-14.6	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 14-14.6' for VOCs.
120N 140E	0-1.1	TOPSOIL	0.0 to 0.0	None	None	
	1.1-4.6	FILL: Sand and Silt mix, trace Gravel, Clay, Organics. Wood Chips	0.0 to 0.0	None	None	
	4.6-13	CLAY, with Silt lenses	0.0 to 0.0	None	None	
	13-14.3	Silty CLAY, trace Sand and Gravel	0.0 to 0.0	None	None	Collected sample at 14-14.3' for VOCs.
140N -20E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-14	FILL: Reworked Silt and Clay	0.0 to 0.0	4-12'	None	Collected sample at 11-12 for VOCs.

TABLE 2-2
Direct Push Boring Summary
Erdle Perforating Site

Boring ID	Overburden Interval (ft. bgs.)	Oveburden Description	PID Range (ppm)	Staining	NAPL	Comment/ Impact
140N -40E	0-1	TOPSOIL	0.0 to 0.0	None	None	
	1-4	FILL: Reworked Silt and Wood Fragments	0.0 to 0.0	None	None	
	4-9	SILT, some Clay, some-trace Gravel	0.0 to 0.0	None	None	
	9-13	Grading to CLAY, some fine Sand and Silt	0.0 to 0.0	None	None	Collected sample at 12-13' for VOCs.
OMW-1	0-13.8	See Boring 40N 60E				Well Screen @ 3.8-13.8'
BMW-1DD						Well Screen @ 19-29'
BMW-1DD						Well Screen @ 30-40'
BMW-2D	0-13.4	See Boring OMW-2				Well Screen @ 19-29'
BMW-2DD						Well Screen @ 30-40'
BMW-3D	0-14	See Boring BMW-3DD				Well Screen @ 19-29'
BMW-3DD	0-1	TOPSOIL	0.0 to 0.0	None	None	Well Screen @ 30-40'
	1-4	FILL: Reworked Silt and Wood Fragments	0.0 to 0.0	None	None	Collected sample at 13-14' for VOCs. Well Screen @ 30-40'.
	4-12	SILT, some Clay, trace Gravel	0.0 to 0.0	None	None	
	12-14	Grading to CLAY, some fine Sand and Silt	5.3 to 16.3	None	None	
OMW-2	0-1	TOPSOIL	0.0 to 0.0	None	None	Collected samples at 3.5-4' and 13-14' for VOCs. Well screen @ 4-14'.
	1-4	FILL: Reworked Silt and Wood Fragments	0.0 to 0.0	Possible sheen @ 3.5-4'	None	
	4-9	SILT, some Clay, trace Gravel	0.0 to 0.0	None	None	
	9-14.1	Grading to CLAY, some fine Sand and Silt	0.0 to 0.2	None	None	

Note: All boring are located on site, south of the site building.

TABLE 2-3
Rock Coring Summary
Erdle Perforatings Site

Boring ID	Core Run	Run Depth (ft bgs)	REC (%)	RQD (%)	PID Range (ppm)	Comment/ Impact
BMW-1DD	R1	13.8-18.8	100	90	0.0 to 0.0	
	R2	19-24	90	87	0.0 to 0.0	Sheen observed on core.
	R3	24-29	99	98	0.0 to 0.0	275-gallon water loss. Sheen observed on core
	R4	29-34	100	84	0.0 to 0.0	260-gallon water loss. Sheen observed on core
	R5	34-39	97	92.5	0.0 to 0.0	260-gallon water loss. No sheen observed on core
	R6	39-42	100	82.5	0.0 to 0.0	70-gallon water loss.
BMW-2D	R1	13.4-18.4	97	85.8	0.0 to 0.0	150-gallon water loss.
	R2	19-24	89.5	86.3	0.0 to 0.0	70-gallon water loss.
	R3	24-29	100	100	0.0 to 0.0	100-gallon water loss. Sheen/NAPL Evidence @ 27.29'
	R4	29-31	100	100	0.0 to 0.0	100-gallon water loss. No Sheen or NAPL
BMW-2DD	R1	14-19	100	100	0.0 to 0.0	100-gallon water loss.
	R2	19-24	81.7	72.5	0.0 to 0.0	30-gallon water loss.
	R3	24-29	100	95.8	0.0 to 0.0	250-gallon water loss.
	R4	29-34	100	92.5	0.0 to 0.0	170-gallon water loss.
	R5	34-39	95.8	95.8	0.0 to 0.0	150-gallon water loss.
	R6	39-42	97.2	97.2	0.0 to 0.0	60-gallon water loss.
BMW-3D	R1	14-19	NA	NA	0.0 to 0.0	
	R2	19-24	96	93	0.0 to 0.0	
	R3	24-29	98	92	0.0 to 0.0	100-gallon water loss.
	R4	29-31	100	87.5	0.0 to 0.0	50-gallon water loss.
BMW-3DD	R1	14-19	93	93	0.0 to 0.0	
	R2	19-24	100	92.5	0.0 to 0.0	
	R3	24-29	100	97	0.0 to 0.0	150-gallon water loss.
	R4	29-34	93	93	0.0 to 0.0	100-gallon water loss.
	R5	34-39	100	98	0.0 to 0.0	100-gallon water loss.
	R6	39-42	100	90	0.0 to 0.0	75-gallon water loss.

Note: All boring are located on site; south of the site building.

TABLE 2-4
Summary of Well Construction Details
Erdle Perforating Site

Well ID	Well Location	NORTHING	EASTING	Well Diameter (inches)	Ground Elevation[1]	Riser Elevation[1]	Casing Elevation[1]	Depth of Monitoring Well (ft bgs.)	Measurement Point
MW-1A	On-Site	1144526.7	1380000.0	2.0	557.30	NA	560.62	10.0	TOC
MW-1D	On-Site	1144532.3	1380000.0	4.0	556.49	558.91	559.07	26.5	TOR
MW-1DD	On-Site	1144529.2	1379994.8	4.0	557.22	558.30	558.42	41.7	TOR
MW-2A	On-Site	1144478.1	1380044.1	2.0	559.37	NA	559.76	10.0	TOC
MW-2D	On-Site	1144483.9	1380043.5	6.0	556.37	557.32	557.32	22.0	TOR
MW-3A	On-Site	1144467.7	1380001.2	2.0	555.37	NA	559.04	10.0	TOC
MW-3D	On-Site	1144471.8	1380005.2	6.0	555.75	556.87	556.87	20.3	TOR
MW-4	On-Site	1144523.6	1379934.2	2.0	555.41	556.94	557.06	9.5	TOR
MW-4D	On-Site	1144516.9	1379933.8	6.0	555.46	NA	557.51	22.1	TOC
MW-5	Upgradient	1144941.1	1380028.0	2.0	555.00	554.76	555.00	7.8	TOR
MW-5D	Upgradient	1144939.1	1380032.8	6.0	555.16	555.36	555.36	NA	TOR
MW-6	On-Site	1144406.0	1379958.2	2.0	554.72	556.36	556.34	10.1	TOR
MW-6D	On-Site	1144340.7	1379960.1	4.0	553.76	555.67	555.67	25.6	TOR
MW-7	On-Site	1144312.6	1380014.1	2.0	553.89	556.24	556.48	17.0	TOR
MW-7D	On-Site	1144316.0	1380009.1	4.0	553.70	555.49	555.49	27.1	TOR
MW-8	Downgradient	1144077.7	1379996.2	2.0	565.37	566.80	566.73	27.9	TOR
MW-8D	Downgradient	1144079.8	1380000.2	4.0	565.25	566.65	566.65	38.7	TOR
MW-9	Downgradient	1144035.0	1379910.9	2.0	567.01	568.91	568.86	30.2	TOR
MW-9D	Downgradient	1144036.5	1379916.4	4.0	566.76	568.86	568.86	48.0	TOR
MW-10	Downgradient	1144352.3	1379863.4	2.0	553.86	556.90	557.03	17.0	TOR
MW-11	Downgradient	1143571.4	1380264.4	2.0	553.55	556.60	556.75	13.3	TOR
MW-11D	Downgradient	1143564.8	1380271.7	4.0	554.05	555.09	557.81	23.7	TOR
MW-12	Downgradient	1143932.8	1380455.6	2.0	554.66	557.60	557.74	12.0	TOR
MW-13	Downgradient	1143217.5	1380158.8	2.0	553.71	553.40	553.79	7.8	TOR
MW-13D	Downgradient	1143215.3	1380165.4	2.0	553.57	553.33	553.63	12.3	TOR
MW-13DD	Downgradient	1143220.3	1380149.2	2.0	553.55	553.33	553.60	40.1	TOR
MW-14	Downgradient	1143172.6	1379837.7	2.0	552.88	552.64	553.01	16.2	TOR
MW-14D	Downgradient	1143170.4	1379836.0	2.0	552.96	552.78	552.97	33.8	TOR
MW-15	Downgradient	1143189.0	1380373.6	2.0	553.18	553.11	553.30	6.5	TOR
MW-15D	Downgradient	1143190.4	1380376.0	2.0	553.22	553.09	553.28	23.9	TOR
MW-16	Downgradient	1143362.1	1380725.0	2.0	553.94	553.78	553.96	8.9	TOR
MW-16D	Downgradient	1143396.4	1380733.8	2.0	553.94	553.64	553.97	22.2	TOR
MW-17	Downgradient	1143645.5	1380795.9	2.0	553.88	553.43	553.95	7.7	TOR
MW-17D	Downgradient	1143644.6	1380799.9	2.0	554.01	553.73	554.09	23.2	TOR
MW-18	Downgradient	1142854.1	1380205.6	2.0	552.34	551.84	552.25	10.9	TOR
MW-18D	Downgradient	1142854.3	1380200.7	2.0	552.28	551.72	552.23	22.8	TOR
MW-19	Downgradient	1142686.5	1380552.2	2.0	552.03	551.55	551.95	7.2	TOR
MW-19D	Downgradient	1142690.2	1380555.5	2.0	551.98	551.43	552.02	19.5	TOR
MW-20	Downgradient	1142988.1	1380691.8	2.0	553.62	553.39	553.70	6.8	TOR
MW-20D	Downgradient	1142981.0	1380694.6	2.0	553.59	553.39	553.64	20.9	TOR
MW-21	On-Site	1144407.1	1379999.7	2.0	554.10	NA	557.44	12.7	TOC
MW-21D	On-Site	1144407.2	1380005.3	2.0	554.41	NA	557.81	22.0	TOC

TABLE 2-4
Summary of Well Construction Details
Erdle Perforating Site

Well ID	Well Location	NORTHING	EASTING	Well Diameter (inches)	Ground Elevation[1]	Riser Elevation[1]	Casing Elevation[1]	Depth of Monitoring Well (ft bgs.)	Measurement Point
GPZ-1S1	Downgradient	1143878.9	1379994.7	1.0	552.70	554.91	NA	8.6	TOR
GPZ-1D	Downgradient	1143873.0	1379997.9	1.0	552.99	555.50	NA	15.5	TOR
GPZ-2S1	Downgradient	1143971.4	1379807.5	1.0	562.79	565.01	NA	16.6	TOR
GPZ-2D	Downgradient	1143969.1	1379805.7	1.0	562.38	564.88	NA	27.5	TOR
GPZ-5S	Downgradient	1144115.6	1380061.4	1.0	563.99	566.94	NA	20.0	TOR
GPZ-5D	Downgradient	1144113.7	1380058.4	1.0	564.08	566.98	NA	29.1	TOR
GPZ-6S	Downgradient	1144151.9	1380168.9	1.0	563.72	564.14	NA	20.1	TOR
GPZ-6D	Downgradient	1144150.6	1380165.8	1.0	564.25	566.74	NA	28.4	TOR
GPZ-7S	On-Site	1144404.7	1380172.4	1.0	557.95	560.57	NA	NA	TOR
GPZ-7D	On-Site	1144402.0	1380171.2	1.0	557.82	560.37	NA	NA	TOR
OMW-1	On-Site	1144454.6	1380039.0	2.0	555.41	558.06	558.06	13.8	TOR
BMW-1D	On-Site	1144456.8	1380033.3	2.0	555.56	557.44	557.44	31.0	TOR
BMW-1DD	On-Site	1144459.7	1380038.5	2.0	555.53	557.65	557.65	42.0	TOR
OMW-2	On-Site	1144504.6	1380009.6	2.0	556.41	556.19	556.41	14.0	TOR
BMW-2D	On-Site	1144495.5	1380008.6	2.0	556.13	555.92	556.13	31.0	TOR
BMW-2DD	On-Site	1144499.5	1380008.8	2.0	556.21	555.95	556.21	42.0	TOR
BMW-3D	On-Site	1144442.3	1380012.6	2.0	555.26	557.60	557.60	31.0	TOR
BMW-3DD	On-Site	1144435.7	1380011.8	2.0	555.13	557.71	557.71	42.0	TOR

Notes:

1 - Wells Surveyed by AECOM - Northing/Easting = North American Datum 83/96 - NYSPCS WEST (US SURVEY FT.) Elevations = North Atlantic Vertical Datum 88 (US SURVEY FT.)

DTW = depth to water

TOR/TOC = from top of riser or top of casing

Screen details (i.e., top, bottom, etc.) were not available for the majority of the wells; NA = Not Available

TABLE 2-5
GROUNDWATER ELEVATION MEASUREMENTS
ERDLE PERFORATING SITE

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
BMW-1D	1144456.768	1380033.349	555.557	557.44	557.44			8/11/2021 1248	3.56	553.88	0.00		
BMW-1DD	1144459.718	1380038.515	555.534	557.65	557.65			8/11/2021 1244	4.04	553.61	0.00		
BMW-2D	1144495.539	1380008.63	556.125	556.125	555.92			8/11/2021 1134	2.10	553.82	0.00		
BMW-2DD	1144499.481	1380008.83	556.21	556.21	555.95			8/11/2021 1133	2.42	553.53	0.00		
BMW-3D	1144442.268	1380012.614	555.264	557.6	557.6			8/11/2021 1251	3.50	554.10	0.00		
BMW-3DD	1144435.673	1380011.771	555.13	557.71	557.71			8/11/2021 1253	4.22	553.49	0.00		
MW-01D	1144532.3330	1380000.0456	556.49	559.07	558.91			8/11/2021 0000			NP		Can't Find
MW-01DD	1144529.207	1379994.829	557.215	558.42	558.30			8/11/2021 1226	5.80	552.50	0.00		
MW-02	1144478.8823	1380047.9274	555.49	557.81	557.42			8/11/2021 0000			NP		Can't Find
MW-02D	1144483.89	1380043.5	556.367	557.32	557.32			8/11/2021 1237	4.45	552.87	0.00		
MW-03D	1144471.839	1380005.17	555.751	556.87	556.87			8/11/2021 1232	3.82	553.05	0.00		
MW-05	1144941.0832	1380028.0321	555	555	554.76			8/11/2021 1121	0.80	553.96	0.00		No Bolts

NM - No Measurement

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2-5
GROUNDWATER ELEVATION MEASUREMENTS
ERDLE PERFORATING SITE

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-05D	1144939.0845	1380032.831	555.16	555.36	555.36			8/11/2021 0000			NP		Destroyed
MW-06	1144406.048	1379958.194	554.718	556.34	556.36			8/11/2021 1303	3.33	553.03	0.00		
MW-06D	1144340.6999	1379960.0949	553.76	555.67	555.67			8/11/2021 0000	2.95	552.72	0.00		
MW-07	1144312.6091	1380014.0676	553.89	556.48	556.24			8/11/2021 1322	3.85	552.39	0.00		
MW-07D	1144315.9844	1380009.1476	553.7	555.49	555.49			8/11/2021 1320	2.50	552.99	0.00		
MW-08	1144077.6833	1379996.2405	565.37	566.73	566.8			8/11/2021 0940	15.00	551.80	0.00		
MW-08D	1144079.8021	1380000.2228	565.25	566.65	566.65			8/11/2021 0942	14.02	552.63	0.00		
MW-09	1144035.0269	1379910.887	567.01	568.86	568.91			8/11/2021 0944	16.20	552.71	0.00		
MW-09D	1144036.4692	1379916.3978	566.76	568.86	568.86			8/11/2021 0946	16.21	552.65	0.00		
MW-10	1144352.3465	1379863.3687	553.86	557.03	556.9			8/11/2021 0000			NP		Can't Access.
MW-11	1143571.4324	1380264.4033	553.55	556.75	556.6			8/11/2021 0958	8.68	547.92	0.00		
MW-11D	1143564.8012	1380271.7065	554.05	557.81	555.09			8/11/2021 0957	9.60	545.49	0.00		

NM - No Measurement

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2-5
GROUNDWATER ELEVATION MEASUREMENTS
ERDLE PERFORATING SITE

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-12	1143932.8175	1380455.5782	554.66	557.74	557.6			8/11/2021 0926	9.80	547.80	0.00		
MW-13	1143217.5227	1380158.8209	553.71	553.79	553.4			8/11/2021 1029	5.11	548.29	0.00		
MW-13D	1143215.2691	1380165.4272	553.57	553.63	553.33			8/11/2021 1028	5.40	547.93	0.00		
MW-13DD	1143220.2769	1380149.1979	553.55	553.6	553.33			8/11/2021 1030	2.80	550.53	0.00		
MW-14	1143172.5802	1379837.6772	552.88	553.01	552.64			8/11/2021 1020	4.60	548.04	0.00		
MW-14D	1143170.4483	1379835.9639	552.96	552.97	552.78			8/11/2021 1022	0.40	552.38	0.00		
MW-15	1143189.0372	1380373.6026	553.18	553.3	553.11			8/11/2021 1101	6.40	546.71	0.00		
MW-15D	1143190.443	1380375.9638	553.22	553.28	553.09			8/11/2021 1100	4.92	548.17	0.00		
MW-16	1143362.1405	1380725.0097	553.94	553.96	553.78			8/11/2021 1006	6.25	547.53	0.00		
MW-16D	1143396.3501	1380733.8374	553.94	553.97	553.64			8/11/2021 1005	6.12	547.52	0.00		
MW-17	1143645.5477	1380795.9318	553.88	553.95	553.43			8/11/2021 1013	5.92	547.51	0.00		
MW-17D	1143644.5720	1380799.9167	554.01	554.09	553.73			8/11/2021 1010	5.94	547.79	0.00		

NM - No Measurement

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2-5
GROUNDWATER ELEVATION MEASUREMENTS
ERDLE PERFORATING SITE

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-18	1142854.0611	1380205.6380	552.34	552.25	551.84			8/11/2021 1036	4.22	547.62	0.00		
MW-18D	1142854.3377	1380200.6699	552.28	552.23	551.72			8/11/2021 1037	4.40	547.32	0.00		
MW-19	1142686.4824	1380552.2259	552.03	551.95	551.55			8/11/2021 1046	4.67	546.88	0.00		
MW-19D	1142690.2376	1380555.4785	551.98	552.02	551.43			8/11/2021 1047	4.15	547.28	0.00		
MW-20	1142988.0904	1380691.7739	553.62	553.7	553.39			8/11/2021 1054	5.35	548.04	0.00		
MW-20D	1142980.9539	1380694.6138	553.59	553.64	553.39			8/11/2021 1052	6.00	547.39	0.00		
OMW-1	1144454.6	1380038.982	555.412	558.06	558.06			8/11/2021 1246	4.20	553.86	0.00		
OMW-2	1144504.587	1380009.647	556.414	556.414	556.19			8/11/2021 1131	2.80	553.39	0.00		

NM - No Measurement

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

Table 3-1
Vertical Hydraulic Gradient Calculations
Erdle Perforating Site

Well Clusters	Well ID	Date	Measuring Point Reference Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Screen Setting (feet bgs)	Ground Elevation (ft amsl)	Midpoint of Screen Elevation (ft amsl)	Separation/ Gradient Reference	Vertical Separation (ft)	Vertical Gradient (ft/ft) 2/2/2021	Vertical Flow Direction
Well Cluster OMW-1, BMW-1D/ 1DD	OMW-1	8/11/2021	558.06	4.20	553.86	3.80 to 13.80	555.41	546.61	Between OMW-1 & BMW-1D	15.06	**(0.0013)**	**Up**
	BMW-1D	8/11/2021	557.44	3.56	553.88	19.00 to 29.00	555.56	531.56	Between BMW-1D & BMW-1DD	11.02	**0.0245**	**Down**
	BMW-1DD	8/11/2021	557.65	4.04	553.61	30.00 to 40.00	555.53	520.53	Between OMW-1 & BMW-1DD	26.08	**0.0096**	**Down**
Well Cluster OMW-2, BMW-2D/ 2DD	OMW-2	8/11/2021	556.19	2.80	553.39	4.00 to 14.00	556.41	547.41	Between OMW-2 & BMW-2D	15.28	**(0.0281)**	**Up**
	BMW-2D	8/11/2021	555.92	2.10	553.82	19.00 to 29.00	556.13	532.13	Between BMW-2D & BMW-2DD	10.92	**0.0266**	**Down**
	BMW-2DD	8/11/2021	555.95	2.42	553.53	30.00 to 40.00	556.21	521.21	Between OMW-2 & BMW-2DD	26.20	**(0.0053)**	**Up**
Well Cluster BMW-3D/ DD	BMW-3D	8/11/2021	557.60	3.50	554.10	19.00 to 29.00	555.26	531.26	Between BMW-3D & BMW-3DD	11.13	**0.0548**	**Down**
	BMW-3DD	8/11/2021	557.71	4.22	553.49	30.00 to 40.00	555.13	520.13				

amsl - elevation in feet above mean sea level

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				0N 0E	0N -20E	0N 20E	100N 0E	100N 0E
Sample ID				0N-0E (12-13)	0N-20E (11-12)	0N-20E (12-13)	100N 0E 10.5-11.0	100N 0E 13.0-13.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-13.0	11.0-12.0	12.0-13.0	10.5-11.0	13.0-13.5
Date Sampled				06/07/21	06/07/21	06/07/21	06/01/21	06/01/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190	NA	NA	NA		
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.17	0.00099 J	0.045	2.5	0.32
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.00095 J				
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190	NA	NA	NA		
Acetone	MG/KG	0.05	500	0.0051 J	0.0075 J	0.0047 J		
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500	NA	NA	NA		
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	2.0 D	0.0014 J	0.0030 J	4.4	0.077 J
Vinyl chloride	MG/KG	0.02	13					0.75
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				100N 100E	100N 20E	100N -20E	100N 40E	100N 60E
Sample ID				100N 100E 14.0-14.2	100N 20E 14.0-14.4	100N-20E (12-13)	100N 40E 14.0-14.5	100N 60E 14.0-14.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				14.0-14.2	14.0-14.4	12.0-13.0	14.0-14.5	14.0-14.5
Date Sampled				06/03/21	06/01/21	06/07/21	06/03/21	06/03/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190			NA		
1,2-Dichloroethane	MG/KG	0.02	30	0.00091 J				
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0040 J	2.5		0.017	0.025
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.0015 J	0.0015 J
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190			NA		
Acetone	MG/KG	0.05	500	0.0069 J		0.056	0.020 J	0.0056 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			0.015 J		
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500			NA		
Tetrachloroethene	MG/KG	1.3	150		2.6			
Toluene	MG/KG	0.7	500				0.0023 J	
Trichloroethene	MG/KG	0.47	200		160		0.0060	0.0019 J
Vinyl chloride	MG/KG	0.02	13	0.0010 J			0.017	0.0023 J
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				100N 80E	105N 120E	105N 140E	120N 0E	120N 100E
Sample ID				100N 80E 14.2-14.4	105N 120E 4.0-4.5	105N 140E 14.0-14.3	120N 0E 2.0-2.5	120N 100E 14.5-15.1
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				14.2-14.4	4.0-4.5	14.0-14.3	2.0-2.5	14.5-15.1
Date Sampled				06/03/21	06/04/21	06/04/21	06/01/21	06/04/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190				0.0039 J	
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0015 J		3.9	0.0027 J	0.0032 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190				0.0015 J	
Acetone	MG/KG	0.05	500	0.0079 J			0.13	0.0073 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500				0.023 J	
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0023 J			0.014	0.0012 J
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				120N 120E	120N 140E	120N 20E	120N 20E	120N -20E
Sample ID				120N 120E 14.0-14.6	120N 140E 14.0 14.3	120N 20E 3.9-4.0	120N 20E 14.5-14.9	120N-20E (2-4)
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				14.0-14.6	14.0-14.3	3.9-4.0	14.5-14.9	2.0-4.0
Date Sampled				06/04/21	06/04/21	06/01/21	06/01/21	06/07/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190			0.0096 J	1.4	NA
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		0.0019 J	0.023	2.1	0.0020 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0025 J		
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190			0.0033 J	0.37 J	NA
Acetone	MG/KG	0.05	500	0.0097 J	0.0059 J	0.065		0.17
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-			0.0062 J		
Ethylbenzene	MG/KG	1	390			0.0014 J		
Isopropylbenzene (Cumene)	MG/KG	2.3	-				0.077 J	
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					0.056
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500				0.14 J	NA
Tetrachloroethene	MG/KG	1.3	150			0.0025 J	0.12 J	
Toluene	MG/KG	0.7	500			0.0074 J		0.0050 J
Trichloroethene	MG/KG	0.47	200		0.0027 J	0.026	46	0.0034 J
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500			0.0089 J	0.48 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				120N -20E	120N 40E	120N 40E	120N 60E	120N 60E
Sample ID				120N-20E (12-13)	120N 40E 5.3-5.7	120N 40E 10.0-11.0	120N 60E 8.5-9.5	DUP-1-20210603
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-13.0	5.3-5.7	10.0-11.0	8.5-9.5	8.5-9.5
Date Sampled				06/07/21	06/03/21	06/03/21	06/03/21	06/03/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					Field Duplicate (1-1)
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190	NA	0.0033 J			
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.16	0.0050 J	1.2	0.085	0.064
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.00061 J			0.0021 J	0.0014 J
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190	NA	0.0012 J			
Acetone	MG/KG	0.05	500	0.0057 J	0.058			
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390		0.00051 J			
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500	NA				
Tetrachloroethene	MG/KG	1.3	150	0.00089 J				
Toluene	MG/KG	0.7	500		0.0013 J			
Trichloroethene	MG/KG	0.47	200	5.6 D	0.0034 J		0.020	0.022
Vinyl chloride	MG/KG	0.02	13	0.0044 J			0.0014 J	
Xylene (total)	MG/KG	1.6	500		0.0012 J			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				120N 80E	140N -20E	140N -40E	20N 0E	20N 20E
Sample ID				120N 80E 13.9-14.6	140N-20E (11-12)	140N-40E (12-13)	20N 0E 7.5-8.1	20N 20E 11.0-11.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				13.9-14.6	11.0-12.0	12.0-13.0	7.5-8.1	11.0-11.5
Date Sampled				06/03/21	06/07/21	06/08/21	06/01/21	06/02/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					0.0039 J
1,2,4-Trimethylbenzene	MG/KG	3.6	190		NA	NA		
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0037 J		0.0025 J	0.0011 J	6.3
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.0092
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190		NA	NA		
Acetone	MG/KG	0.05	500	0.010 J	0.062	0.0070 J	0.0078 J	0.027 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.024			0.015
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.0098 J			
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500		NA	NA		
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0012 J			0.0049 J	4.2
Vinyl chloride	MG/KG	0.02	13			0.0017 J		
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				20N 20E	20N 40E	20N 60E	40N 0E	40N 20E
Sample ID				DUP-2-20210602	20N 40E 13.9-14.1	20N 60E 11.0-11.5	40N 0E 13.0-13.9	40N 20E 2.5-3.0
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	13.9-14.1	11.0-11.5	13.0-13.9	2.5-3.0
Date Sampled				06/02/21	06/02/21	06/02/21	06/01/21	06/02/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	Field Duplicate (1-1)				
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500	0.0041 J				
1,2,4-Trimethylbenzene	MG/KG	3.6	190					0.0013 J
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	10	0.42	0.0094	0.0025 J	0.0042 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.011			0.0037 J	
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190					
Acetone	MG/KG	0.05	500	0.030 J			0.026 J	
Benzene	MG/KG	0.06	44				0.00033 J	
Carbon disulfide	MG/KG	2.7	-	0.017				
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500				0.0062 J	
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					0.0034 J
n-Propylbenzene	MG/KG	3.9	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.00061 J				0.0040 J
Trichloroethene	MG/KG	0.47	200	13	1.4	0.0019 J	0.0025 J	0.014
Vinyl chloride	MG/KG	0.02	13				0.0024 J	
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				40N 20E	40N 20E	40N 20E	40N 60E	60N 0E
Sample ID				DUP-1-20210602	40N 20E 4.0-5.0	40N 20E 13.5-14.1	40N 60E 13.5-14.3	60N 0E 11.0-11.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				2.5-3.0	4.0-5.0	13.5-14.1	13.5-14.3	11.0-11.5
Date Sampled				06/02/21	06/02/21	06/02/21	06/02/21	06/01/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	Field Duplicate (1-1)				
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					0.0011 J
1,2,4-Trimethylbenzene	MG/KG	3.6	190		0.0019 J			
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		0.0086	0.020	0.029	6.4
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.022
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190		0.00067 J			
Acetone	MG/KG	0.05	500		0.0073 J	0.0069 J	0.011 J	0.021 J
Benzene	MG/KG	0.06	44					0.00035 J
Carbon disulfide	MG/KG	2.7	-					0.020
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methylcyclohexane	MG/KG	-	-				0.0031 J	
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.64	0.016	0.0010 J		0.00065 J
Trichloroethene	MG/KG	0.47	200	0.053 J	0.0056 J	0.0019 J	0.0020 J	0.0065
Vinyl chloride	MG/KG	0.02	13				0.0040 J	0.0051 J
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				60N 0E	60N 20E	60N 20E	60N 40E	60N 60E
Sample ID				60N 0E 12.5-13.0	60N 20E 2.5-3.5	60N 20E 10.5-11.0	60N 40E 10.5-11.5	60N 60E 11.0-11.5
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.5-13.0	2.5-3.5	10.5-11.0	10.5-11.5	11.0-11.5
Date Sampled				06/01/21	06/02/21	06/02/21	06/02/21	06/03/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240				0.0021 J	
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190			0.048 J		
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	2.5		4.2	0.0045 J	0.62
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.00074 J	0.0016 J
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190					
Acetone	MG/KG	0.05	500				0.011 J	0.0055 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500					
Tetrachloroethene	MG/KG	1.3	150					0.0026 J
Toluene	MG/KG	0.7	500		0.63 J			
Trichloroethene	MG/KG	0.47	200	0.83		0.66		24
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				60N 80E	80N 0E	80N 20E	80N -20E	80N 40E
Sample ID				60N 80E 10.5-11.0	80N 0E 13.0-13.7	80N 20E 13.5-14.0	80N/-20E (12-13)	80N 40E 13.5-14.3
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				10.5-11.0	13.0-13.7	13.5-14.0	12.0-13.0	13.5-14.3
Date Sampled				06/04/21	06/01/21	06/02/21	06/07/21	06/02/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Volatile Organic Compounds								
1,1-Dichloroethane	MG/KG	0.27	240			0.00092 J		
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trimethylbenzene	MG/KG	3.6	190				NA	
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.38	0.0016 J	0.10	0.070	0.0020 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0029 J		
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190				NA	
Acetone	MG/KG	0.05	500		0.019 J	0.17	0.0082 J	0.015 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			0.051		
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
n-Propylbenzene	MG/KG	3.9	500				NA	
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500			0.00054 J		0.0013 J
Trichloroethene	MG/KG	0.47	200	4.6		0.0035 J	0.0036 J	0.0015 J
Vinyl chloride	MG/KG	0.02	13			1.0	0.011	
Xylene (total)	MG/KG	1.6	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-1
SUMMARY OF DETECTED COMPOUNDS IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				80N 60E	BMW-3DD	OMW-2	OMW-2
Sample ID				80N 60E 7.0-7.5	BMW-300 (13-14)	OMW-2 (3.5-4)	OMW-2 (13-14)
Matrix				Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	13.0-14.0	3.5-4.0	13.0-14.0
Date Sampled				06/03/21	06/08/21	06/08/21	06/08/21
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**				
Volatile Organic Compounds							
1,1-Dichloroethane	MG/KG	0.27	240				
1,1-Dichloroethene	MG/KG	0.33	500				
1,2,4-Trimethylbenzene	MG/KG	3.6	190		NA	NA	NA
1,2-Dichloroethane	MG/KG	0.02	30				
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0019 J	2.1		0.53 D
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.00084 J
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	190		NA	NA	NA
Acetone	MG/KG	0.05	500			0.043	0.0050 J
Benzene	MG/KG	0.06	44				
Carbon disulfide	MG/KG	2.7	-				
Ethylbenzene	MG/KG	1	390				
Isopropylbenzene (Cumene)	MG/KG	2.3	-				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			0.012 J	
Methylcyclohexane	MG/KG	-	-				
Methylene chloride	MG/KG	0.05	500				
n-Propylbenzene	MG/KG	3.9	500		NA	NA	NA
Tetrachloroethene	MG/KG	1.3	150				0.028
Toluene	MG/KG	0.7	500			0.0038 J	0.00061 J
Trichloroethene	MG/KG	0.47	200	0.0016 J	19	0.0058 J	31 D
Vinyl chloride	MG/KG	0.02	13				0.0089
Xylene (total)	MG/KG	1.6	500				

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-2
SUMMARY OF DETECTED COMPOUNDS IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			BMW-1D	BMW-1DD	BMW-2D	BMW-2D	BMW-2DD
Sample ID			BMW-1D	BMW-1DD	BMW-2D	FD-081121	BMW-2DD
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			08/12/21	08/12/21	08/11/21	08/11/21	08/11/21
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatile Organic Compounds							
1,1-Dichloroethane	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	490		170	190	
Carbon disulfide	UG/L	60		0.20 J			0.72 J
Cyclohexane	UG/L	-					0.28 J
Methylcyclohexane	UG/L	-					0.65 J
Trichloroethene	UG/L	5	2,300	1.3	130	150	0.48 J
Vinyl chloride	UG/L	2			8.0	8.7	

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-2
SUMMARY OF DETECTED COMPOUNDS IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			BMW-3D	BMW-3DD	OMW-1	OMW-2
Sample ID			BMW-3D	BMW-3DD	OMW-1	OMW-2
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			08/12/21	08/12/21	08/12/21	08/11/21
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,1-Dichloroethane	UG/L	5	0.57 J			
1,2-Dichloroethene (cis)	UG/L	5	3.2		260	27,000
Carbon disulfide	UG/L	60				
Cyclohexane	UG/L	-				
Methylcyclohexane	UG/L	-				
Trichloroethene	UG/L	5	3.3	1.9		140,000 D
Vinyl chloride	UG/L	2			99	2,200

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

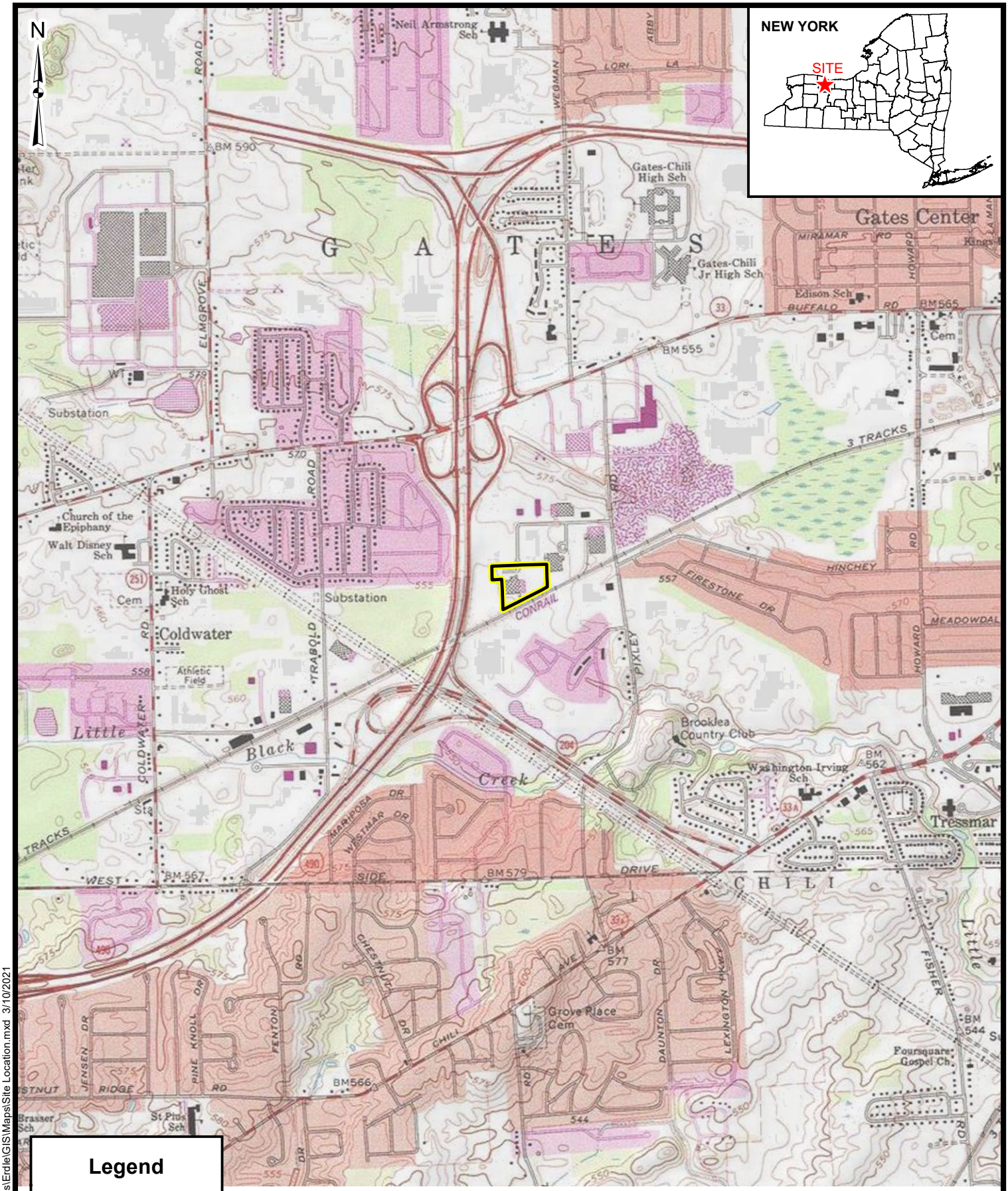
Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

FIGURES



AECOM

ERDLE PERFORATING COMPANY SITE
SITE ID NO. 828072
TOWN OF GATES, MONROE COUNTY, NEW YORK
SITE LOCATION

FIGURE 1-1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Location.mxd 3/10/2021

N

MW-5 MW-5D

MW-1D MW-1
MW-1DD MW-1A
MW-3 MW-2
MW-3A MW-2A
MW-3D MW-2D
MW-6 MW-21
MW-21D
MW-10
MW-6D MW-7
MW-7D

MW-8 MW-8D
MW-9 MW-9D

MW-12

MW-17 MW-17D
MW-11 MW-11D
MW-16D
MW-16

MW-13
MW-13DD MW-13D
MW-14 MW-15
MW-14D MW-15D

MW-020
MW-20D

MW-18D MW-18

MW-19D
MW-19

Legend

- Existing Monitoring Wells
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

250 0 250 Feet

ERDLE PERFORATING COMPANY SITE
SITE PLAN

AECOM

FIGURE 1-2

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Plan_2.mxd 6/29/2022

N

ERDLE BUILDING

140N -40E
140N -20E
120N -20E
120N 0E
120N 20E
120N 40E
120N 60E
120N 80E
120N 100E
120N 120E
120N 140E
105N 140E
105N 120E
ROAD
100N -20E
100N 0E
100N 20E
100N 40E
100N 60E
100N 80E
100N 100E
OMW-2
BMW-2DD
BMW-2D
80N -20E
80N 0E
80N 20E
80N 40E
80N 60E
60N 0E
60N 20E
60N 40E
60N 60E
60N 80E
BMW-1DD
BMW-1D
OMW-1
40N 0E
40N 20E
40N 60E
BMW-3D
BMW-3DD
20N 0E
20N 20E
20N 40E
20N 60E
0N -20E
0N 0E
0N 20E

Legend

- Recently Installed Monitoring Well
- Direct Push Soil Boring
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
PDI SAMPLING LOCATIONS

AECOM

FIGURE 2-1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PDI_Sampling_Locations.mxd 6/29/2022

N

140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, ND
120 N 20 E, ND
120 N 40 E, ND
120 N 60 E, ND
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 120 E, ND
105 N 140 E, ND
100 N -20 E, ND
100 N 0 E, 4
100 N 20 E, ND
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, ND
80 N 20 E, ND
80 N 40 E, ND
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, ND
60 N 20 E, ND
60 N 40 E, ND
60 N 60 E, ND
60 N 80 E, ND
40 N 0 E, ND
40 N 20 E, 1.9
40 N 40 E, 0.4
40 N 60 E, ND
BMW-3DD, ND
20 N 0 E, ND
20 N 20 E, ND
20 N 40 E, ND
20 N 60 E, ND
0 N -20 E, 0.2
0 N 0 E, ND
0 N 20 E, ND

Legend

- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

PID Concentration

- Not Detected
- 0-1
- 1-5
- 5-10
- 10-50
- >50

NOTE:
ND = Not Detected

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
PID RESULTS, 0'-2' BGS

AECOM

FIGURE 2-2

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_0-2ft_REV.mxd 6/29/2022

N

140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, 31.8
120 N 20 E, 0.5
120 N 40 E, ND
120 N 60 E, ND
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 120 E, 0.5
105 N 140 E, ND
100 N -20 E, ND
100 N 0 E, 0.6
100 N 20 E, 0.5
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, ND
80 N 20 E, 0.2
80 N 40 E, ND
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, ND
60 N 20 E, 2.8
60 N 40 E, ND
60 N 60 E, ND
60 N 80 E, 0.1
40 N 0 E, ND
40 N 20 E, 8.5
40 N 40 E, ND
40 N 60 E, 0.2
BMW-3DD, 0.2
20 N 0 E, 0.4
20 N 20 E, 0.8
20 N 40 E, ND
20 N 60 E, ND
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND

Legend

- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

PID Concentration

- Not Detected
- 0-1
- 1-5
- 5-10
- 10-50
- >50

NOTE:
ND = Not Detected

20 0 20 Feet

ERDLE PERFORATING
COMPANY SITE
PID RESULTS, 2'-4' BGS

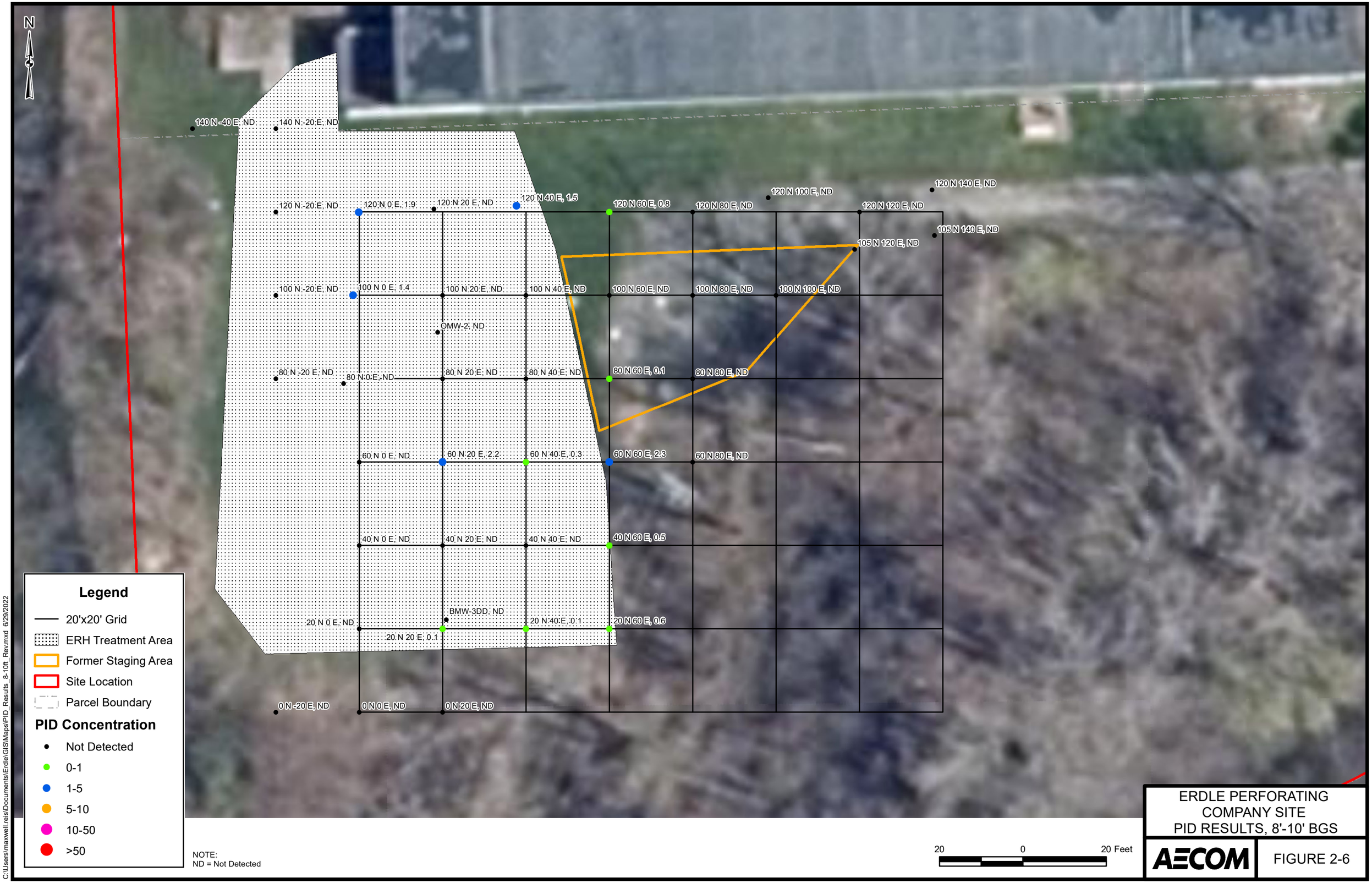
AECOM

FIGURE 2-3

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_2-4ft_REV.mxd 6/29/2022


N
140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, 7.4
120 N 20 E, 0.8
120 N 40 E, 0.7
120 N 60 E, ND
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 140 E, ND
105 N 120 E, 0.6
100 N -20 E, ND
100 N 0 E, ND
100 N 20 E, 0.8
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, 0.1
OMW-2, ND
80 N -20 E, ND
80 N 0 E, ND
80 N 20 E, ND
80 N 40 E, ND
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, ND
60 N 20 E, 4.3
60 N 40 E, 1
60 N 60 E, 1.7
60 N 80 E, ND
40 N 0 E, ND
40 N 20 E, 19.5
40 N 40 E, ND
40 N 60 E, 1.2
20 N 0 E, ND
BMW-3DD, ND
20 N 20 E, 3.9
20 N 40 E, ND
20 N 60 E, 0.6
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND
Legend
20'x20' Grid
ERH Treatment Area
Former Staging Area
Site Location
Parcel Boundary
PID Concentration
Not Detected
0-1
1-5
5-10
10-50
>50
NOTE:
ND = Not Detected
20
0
20 Feet
ERDLE PERFORATING
COMPANY SITE
PID RESULTS, 4'-6' BGS
AECOM
FIGURE 2-4
C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_4-6ft_Rev.mxd 6/29/2022


N
140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, 2.8
120 N 20 E, ND
120 N 40 E, 0.7
120 N 60 E, ND
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 140 E, ND
105 N 120 E, 0.1
100 N -20 E, ND
100 N 0 E, ND
100 N 20 E, 0.1
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, 0.1
80 N 20 E, ND
80 N 40 E, ND
80 N 60 E, 1.1
80 N 80 E, ND
60 N 0 E, 0.1
60 N 20 E, 8.2
60 N 40 E, 0.6
60 N 60 E, 7.5
60 N 80 E, ND
40 N 0 E, ND
40 N 20 E, ND
40 N 40 E, 0.4
40 N 60 E, 1.5
20 N 0 E, ND
BMW-3DD, ND
20 N 40 E, 0.5
20 N 60 E, 0.8
20 N 20 E, ND
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND
Legend
20'x20' Grid
ERH Treatment Area
Former Staging Area
Site Location
Parcel Boundary
PID Concentration
Not Detected
0-1
1-5
5-10
10-50
>50
NOTE:
ND = Not Detected
20
0
20 Feet
ERDLE PERFORATING
COMPANY SITE
PID RESULTS, 6'-8' BGS
AECOM
FIGURE 2-5
C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_6-8ft_Rev.mxd 6/29/2022


N
140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, 1.9
120 N 20 E, ND
120 N 40 E, 1.5
120 N 60 E, 0.8
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 140 E, ND
105 N 120 E, ND
100 N -20 E, ND
100 N 0 E, 1.4
100 N 20 E, ND
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, ND
80 N 20 E, ND
80 N 40 E, ND
80 N 60 E, 0.1
80 N 80 E, ND
60 N 0 E, ND
60 N 20 E, 2.2
60 N 40 E, 0.3
60 N 60 E, 2.3
60 N 80 E, ND
40 N 0 E, ND
40 N 20 E, ND
40 N 40 E, ND
40 N 60 E, 0.5
BMW-3DD, ND
20 N 0 E, ND
20 N 20 E, 0.1
20 N 40 E, 0.1
20 N 60 E, 0.6
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND
Legend
20'x20' Grid
ERH Treatment Area
Former Staging Area
Site Location
Parcel Boundary
PID Concentration
Not Detected
0-1
1-5
5-10
10-50
>50
NOTE:
ND = Not Detected
20
0
20 Feet
ERDLE PERFORATING
COMPANY SITE
PID RESULTS, 8'-10' BGS
AECOM
FIGURE 2-6
C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_8-10ft_Rev.mxd 6/29/2022

N

140 N -40 E, ND
140 N -20 E, ND
120 N -20 E, ND
120 N 0 E, ND
120 N 20 E, 0.4
120 N 40 E, 4.1
120 N 60 E, 0.4
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 120 E, ND
105 N 140 E, ND
100 N -20 E, ND
100 N 0 E, 8.6
100 N 20 E, 0.3
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, 3.9
80 N 20 E, 12.8
80 N 40 E, ND
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, 9.9
60 N 20 E, 44.3
60 N 40 E, 6.5
60 N 60 E, 51.5
60 N 80 E, 0.8
40 N 0 E, 0.6
40 N 20 E, 4.1
40 N 40 E, ND
40 N 60 E, 1
20 N 0 E, ND
BMW-3DD, ND
20 N 40 E, ND
20 N 60 E, 2
20 N 20 E, 76.3
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND

Legend

- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

PID Concentration

- Not Detected
- 0-1
- 1-5
- 5-10
- 10-50
- >50

NOTE:
ND = Not Detected

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
PID RESULTS, 10'-12' BGS

AECOM

FIGURE 2-7

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_10-12ft_Rev.mxd 6/29/2022

N

140 N -40 E, ND
140 N -20 E, NA
120 N -20 E, ND
120 N 0 E, 13.7
120 N 20 E, 1.6
120 N 40 E, 0.4
120 N 60 E, NA
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 120 E, ND
105 N 140 E, ND
100 N -20 E, ND
100 N 0 E, 17.5
100 N 20 E, ND
100 N 40 E, 0.1
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, ND
80 N -20 E, ND
80 N 0 E, 2.9
80 N 20 E, 17.9
80 N 40 E, 0.6
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, 32.8
60 N 20 E, 18.5
60 N 40 E, ND
60 N 60 E, 15.5
60 N 80 E, ND
40 N 0 E, 7.1
40 N 20 E, 17.3
40 N 40 E, ND
40 N 60 E, 0.6
BMW-3DD, 16.3
20 N 0 E, ND
20 N 20 E, 15
20 N 40 E, 6.8
20 N 60 E, ND
0 N -20 E, ND
0 N 0 E, ND
0 N 20 E, ND

Legend

- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

PIDMX12_14

- Not Detected/Not Analyzed
- 0-1
- 1-5
- 5-10
- 10-50
- >50

NOTES:
ND = Not Detected
NA = Not Analyzed, Geoprobe refused before 12' BGS

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
PID RESULTS, 12'-14' BGS

AECOM

FIGURE 2-8

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_12-14ft_Rev.mxd 6/29/2022


N
140 N -40 E, NA
140 N -20 E, NA
120 N -20 E, NA
120 N 0 E, 0.9
120 N 20 E, 7.8
120 N 40 E, ND
120 N 60 E, NA
120 N 80 E, ND
120 N 100 E, ND
120 N 120 E, ND
120 N 140 E, ND
105 N 140 E, ND
105 N 120 E, ND
100 N -20 E, NA
100 N 0 E, NA
100 N 20 E, 23.9
100 N 40 E, ND
100 N 60 E, ND
100 N 80 E, ND
100 N 100 E, ND
OMW-2, 0.2
80 N -20 E, NA
80 N 0 E, NA
80 N 20 E, NA
80 N 40 E, 2.4
80 N 60 E, ND
80 N 80 E, ND
60 N 0 E, NA
60 N 20 E, NA
60 N 40 E, NA
60 N 60 E, 1.1
60 N 80 E, ND
40 N 0 E, ND
40 N 20 E, 19.1
40 N 40 E, ND
40 N 60 E, 1.2
20 N 0 E, NA
BMW-3DD, NA
20 N 40 E, 6.8
20 N 60 E, ND
20 N 20 E, ND
0 N -20 E, NA
0 N 0 E, ND
0 N 20 E, NA
Legend
20'x20' Grid
ERH Treatment Area
Former Staging Area
Site Location
Parcel Boundary
PID Concentration
Not Detected/Not Analyzed
0-1
1-5
5-10
10-50
>50
NOTES:
ND = Not Detected
NA = Not Analyzed, Geoprobe refused before 14' BGS
20
0
20 Feet
ERDLE PERFORATING COMPANY SITE
PID RESULTS, 14'-16' BGS
AECOM
FIGURE 2-9
C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\PID_Results_14-16ft_Rev.mxd 6/29/2022

N

SEE INSET

INSET

MW-05, 553.96

OMW-2, 553.39

MW-02, NM

OMW-1, 553.86

MW-06, 553.03

MW-10, NM

80 0 80 Feet

MW-07, 552.39

MW-08, 551.80

MW-09, 552.71

MW-12, 547.80

MW-17, 547.51

MW-11, 547.92

MW-16, 547.53

MW-13, 548.29

MW-14, 548.04

MW-15, 546.71

MW-20, 548.04

MW-18, 547.62

MW-19, 546.88

553

552

551

550

549

548

547

250 0 250 Feet

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Site Location
- Parcel Boundary

ERDLE PERFORATING COMPANY SITE
GROUNDWATER ELEVATION CONTOURS
OVERBURDEN AQUIFER (8/11/21)

AECOM

FIGURE 2-10

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Groundwater_Elevation_Shallow.mxd 6/27/2022

N

SEE INSET

MW-05D, NM

MW-06D, 552.72

MW-07D, 552.99

MW-08D, 552.63

MW-09D, 552.65

MW-11D, 545.49

MW-13D, 547.93

MW-13DD, 550.53

MW-14D, 552.38

MW-15D, 548.17

MW-16D, 547.52

MW-17D, 547.79

MW-18D, 547.32

MW-19D, 547.28

MW-20D, 547.39

551

550

549

548

547

546

553

548

250 0 250 Feet

INSET

MW-01DD, 552.50

MW-01D, NM

BMW-2DD, 553.53

BMW-2D, 553.82

MW-02D, 552.87

MW-03D, 553.05

BMW-1DD, 553.61

BMW-3D, 554.10

BMW-1D, 553.88

BMW-3DD, 553.49

553

554

80 0 80 Feet

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Site Location
- Parcel Boundary

ERDLE PERFORATING COMPANY SITE
GROUNDWATER ELEVATION CONTOURS
BEDROCK AQUIFER (8/11/21)

AECOM

FIGURE 2-11

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Groundwater_Elevation_Deep.mxd 6/29/2022

N

ERDLE BUILDING

ROAD

140N -40E, 13'
140N -20E, 12'
120N -20E, 13.7'
120N 0E, 14.5'
120N 20E, 14.9'
120N 40E, 15.5'
120N 60E, 11.5'
120N 80E, 14.6'
120N 100E, 15.1'
120N 120E, 14.6'
120N 140E, 14.3'
105N 120E, 14.2'
105N 140E, 14.3'
100N -20E, 13.5'
100N 0E, 14'
100N 20E, 14.4'
100N 40E, 14.5'
100N 60E, 14.5'
100N 80E, 14.4'
100N 100E, 14.2'
OMW-2, 14.1'
BMW-2DD, 14'
BMW-2D, 13.4'
80N -20E, 13.6'
80N 0E, 13.7'
80N 20E, 14'
80N 40E, 14.3'
80N 60E, 14.2'
80 N 80 E, 14.2'
60N 0E, 13.9'
60N 20E, 13.9'
60N 40E, 13.9'
60N 60E, 14.1'
60N 80E, 14.1'
BMW-1DD, 13.8'
40N 0E, 13.8'
40N 20E, 14.1'
40 N 40 E, 14.1'
40N 60E, 14.3'
BMW-3D, 14'
BMW-3DD, 14'
20N 0E, 13.8'
20N 20E, 14.1'
20N 40E, 14.1'
20N 60E, 14.3'
0N -20E, 13.9'
0N 0E, 13.1'
0N 20E, 13.7'

Legend

Row Line Number — 80N 20E, 14' — Overburden Thickness
Column Line Number

- Soil Boring
- Monitoring Well
- Overburden Thickness 1' Contour
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
OVERBURDEN THICKNESS

AECOM

FIGURE 3-1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Overbuden_Thickness.mxd 6/29/2022

N

ERDLE BUILDING

ROAD

140N -40E, 543
140N -20E, 544
120N -20E, 541.3
120N 0E, 541.5
120N 20E, 541.1
120N 40E, 540.5
120N 60E, 544.5
120N 80E, 541.4
120N 100E, 540.9
120N 120E, 541.4
120N 140E, 541.7
105N 120E, 541.8
105N 140E, 541.7
100N -20E, 541.5
100N 0E, 542
100N 20E, 541.6
100N 40E, 541.5
100N 60E, 541.5
100N 80E, 541.6
100N 100E, 541.8
OMW-2, 542.314
BMW-2DD, 542.21
BMW-2D, 542.725
80N -20E, 541.4
80N 0E, 541.3
80N 20E, 541
80N 40E, 540.7
80N 60E, 540.8
80 N 80 E, 540.8
60N 0E, 541.1
60N 20E, 541.1
60N 40E, 541.1
60N 60E, 540.9
60N 80E, 540.9
BMW-1DD, 541.734
40N 0E, 541.2
40N 20E, 540.9
40 N 40 E, 540.9
40N 60E, 540.7
BMW-3D, 541.264
BMW-3DD, 541.13
20N 0E, 541.2
20N 20E, 540.9
20N 40E, 540.9
20N 60E, 540.7
0N -20E, 541.1
0N 0E, 541.9
0N 20E, 541.3

542 543 541 544 542 543 541 542 541 541 541

Legend

Row Line Number — 80N 20E, 541 — Top of Rock Elevation
Column Line Number

- Soil Boring
- Monitoring Well
- Top of Rock Elevation 1' Contour
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
TOP OF ROCK ELEVATION

AECOM

FIGURE 3-2

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Top_Of_Rock.mxd 6/29/2022

N

ERDLE BUILDING

ROAD

140N -20E (11' - 12')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.062			

120N 0E (2' - 2.5')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.13			

120N -20E (2' - 4')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.17			

120N -20E (12' - 13')	CRIT 1	CRIT 2	06/21			
VOCs:						
Trichloroethene	0.47	200	5.6			

100N -20E (12' - 13')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.056			

100N 0E (10.5' - 11')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	2.5			
Trichloroethene	0.47	200	4.4			

100N 0E (13' - 13.5')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	0.32			
Vinyl chloride	0.02	13	0.75			

60N 0E (11' - 11.5')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	6.4			

60N 0E (12.5' - 13')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	2.5			
Trichloroethene	0.47	200	0.83			

0N 0E (12' - 13')	CRIT 1	CRIT 2	06/21			
VOCs:						
Trichloroethene	0.47	200	2			

120N 20E (3.9' - 4')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.065			

120N 20E (14.5' - 14.9')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	2.1			
Trichloroethene	0.47	200	46			

120N 40E (5.3' - 5.7')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.058			

120N 40E (10' - 11')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	1.2			

100N 20E (14' - 14.4')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	2.5			
Tetrachloroethene	1.3	150	2.6			
Trichloroethene	0.47	200	160			

OMW-2 (13' - 14')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	0.53			
Trichloroethene	0.47	200	31			

105N 140E (14' - 14.3')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	3.9			

80N 20E (13.5' - 14')	CRIT 1	CRIT 2	06/21			
VOCs:						
Acetone	0.05	500	0.17			
Vinyl chloride	0.02	13	1			

60N 80E (10.5' - 11')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	0.38			
Trichloroethene	0.47	200	4.6			

60N 60E (11' - 11.5')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	0.62			
Trichloroethene	0.47	200	24			

60N 20E (10.5' - 11')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	4.2			
Trichloroethene	0.47	200	0.66			

20N 20E (11' - 11.5')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	10			
Trichloroethene	0.47	200	13			

20N 40E (13.9' - 14.1')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	0.42			
Trichloroethene	0.47	200	1.4			

BMW-3DD (13' - 14')	CRIT 1	CRIT 2	06/21			
VOCs:						
1,2-Dichloroethene (cis)	0.25	500	2.1			
Trichloroethene	0.47	200	19			

140N -40E

120N 0E

120N 20E

120N 40E

120N 60E

120N 80E

120N 100E

120N 120E

120N 140E

105N 120E

100N -40E

100N 0E

100N 20E

100N 40E

100N 60E

100N 80E

100N 100E

80N -20E

80N 0E

80N 40E

80N 60E

60N 40E

40N 0E

40N 20E

40N 60E

20N 0E

20N 60E

0N -20E

0N 20E

Legend

- Soil Boring
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

Depth (ft) | Criteria

Location ID — 80N 20E (13.5' - 14') | CRIT 1 | CRIT 2 | 06/21 — Date

VOCs:
Acetone | 0.05 | 500 | 0.17

Parameter — Concentration (mg/kg)

NOTES:
CRIT 1 = 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.
CRIT 2 = 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
SOIL ANALYTICAL RESULTS

AECOM

FIGURE 4-1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Soil_Analytical_Results.mxd 6/29/2022

N

ERDLE BUILDING

ROAD

OMW-2	CRIT	08/21
VOCs:		
1,2-Dichloroethene (cis)	5	27000
Trichloroethene	5	140000
Vinyl chloride	2	2200

BMW-2DD

BMW-2D	CRIT	08/21
VOCs:		
1,2-Dichloroethene (cis)	5	190
Trichloroethene	5	150
Vinyl chloride	2	8.7

BMW-1DD

OMW-1	CRIT	08/21
VOCs:		
1,2-Dichloroethene (cis)	5	260
Vinyl chloride	2	99

BMW-3D

BMW-3DD

BMW-1D	CRIT	08/21
VOCs:		
1,2-Dichloroethene (cis)	5	490
Trichloroethene	5	2300

Legend

- Monitoring Well
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

Criteria

Location ID — BMW-1D | CRIT | 08/21 — Date

VOCs:
1,2-Dichloroethene (cis) | 5 | 490

Parameter — Concentration (ug/l)

NOTE:
CRIT = NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE GROUNDWATER ANALYTICAL RESULTS

AECOM

FIGURE 4-2

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Groundwater_Analytical_Results.mxd 6/29/2022

N

ERDLE BUILDING

ROAD

140N -40E
12'-13', ND

140N -20E
11'-12', ND

120N -20E
12'-13', 5.6

120N 0E
2'-2.5', 0.014

120N 20E
14.5'-14.9', 46

120N 40E
5.3'-5.7', 0.0034

120N 60E
8.5'-9.5', 0.022

120N 80E
13.9'-14.6', 0.0012

120N 100E
14.5'-15.1', 0.0012

120N 120E
14'-14.6', ND

120N 140E
14'-14.3', 0.0027

105N 140E
14'-14.3', ND

105N 120E
4'-4.5', ND

100N -20E
12'-13', ND

100N 0E
10.5'-11', 4.4

100N 20E
14'-14.4', 160

100N 40E
14'-14.5', 0.006

100N 60E
14'-14.5', 0.0019

100N 80E
14.2'-14.4', 0.0023

100N 100E
14'-14.2', ND

OMW-2
13'-14', 31

80N -20E
12'-13', 0.0036

80N 20E
13.5'-14', 0.0035

80N 40E
13.5'-14.3', 0.0015

80N 60E
7'-7.5', 0.0016

80N 0E
13'-13.7', ND

60N 0E
12.5'-13', 0.83

60N 20E
10.5'-11', 0.66

60N 40E
10.5'-11.5', ND

60N 60E
11'-11.5', 24

60N 80E
10.5'-11', 4.6

40N 0E
13'-13.9', 0.0025

40N 20E
2.5'-3', 0.053

40N 60E
0.002

BMW-3DD
13'-14', 19

20N 60E
13.5'-14.3', 0.0019

20N 0E
7.5'-8.1', 0.0049

20N 20E
11'-11.5', 13

20N 40E
13.9'-14.1', 1.4

0N -20E
11'-12', 0.0014

0N 0E
12'-13', 2

0N 20E
12'-13', 0.003

Legend

Maximum Trichloroethene Concentartion (mg/kg)

- ND
- <1
- 1-10
- 10-50
- 50-100
- >100

TCE Isoconcentration

- 1
- 10
- 100
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

20 0 20 Feet

ERDLE PERFORATING
COMPANY SITE
SOIL TCE ISOCONCENTRATION

AECOM

FIGURE 5-1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Soil_TCE_Isocontour.mxd 6/30/2022

Depth (ft) Criteria

APPENDIX A

HISTORICAL ANALYTICAL RESULTS

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1
Sample ID				G3712-09	G3712-10	G3712-20	G3712-20ME	G4641-01
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/15/15	09/15/15	09/16/15	09/16/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**				(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	8.8	0.10	NA	NA	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0023 J	0.0020 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0424	0.0114 J		1.3 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-			0.0051 J		
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1
Sample ID				G3712-09	G3712-10	G3712-20	G3712-20ME	G4641-01
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/15/15	09/15/15	09/16/15	09/16/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**				(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.46 J				
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500			0.0016 J		
Tetrachloroethene	MG/KG	1.3	150	0.36 J				
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	53.5 D	0.024	NA	2.1 D	
Vinyl chloride	MG/KG	0.02	13			0.0194		
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1
Sample ID				G4641-02	G4641-02ME	H1146-03	H1146-03ME	H1747-01
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/14/16	01/14/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-			NA	NA	
1,1-Dichloroethane	MG/KG	0.27	240	0.0034 J				
1,1-Dichloroethene	MG/KG	0.33	500	0.0025 J				
1,2,4-Trichlorobenzene	MG/KG	3.4	-			NA	NA	
1,2-Dichloroethane	MG/KG	0.02	30			NA	NA	
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	1.9 D	NA	NA	
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0123		0.0060		
1,2-Dichloropropane	MG/KG	-	-			NA	NA	
1,3-Dichlorobenzene	MG/KG	2.4	280			NA	NA	
1,4-Dichlorobenzene	MG/KG	1.8	130			NA	NA	
2-Hexanone	MG/KG	-	-			NA	NA	
4-Methyl-2-pentanone	MG/KG	1	-			NA	NA	
Acetone	MG/KG	0.05	500	0.0298		NA	NA	
Benzene	MG/KG	0.06	44			NA	NA	
Carbon disulfide	MG/KG	2.7	-	0.0044 J		NA	NA	
Carbon tetrachloride	MG/KG	0.76	22			NA	NA	
Chloroethane	MG/KG	1.9	-			NA	NA	
Chloroform	MG/KG	0.37	350			NA	NA	
Cyclohexane	MG/KG	-	-			NA	NA	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1	ERD45-CS- 1
Sample ID				G4641-02	G4641-02ME	H1146-03	H1146-03ME	H1747-01
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/14/16	01/14/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390			NA	NA	
Isopropylbenzene (Cumene)	MG/KG	2.3	-			NA	NA	
Methyl acetate	MG/KG	-	-			NA	NA	
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			NA	NA	
Methyl tert-butyl ether	MG/KG	0.93	500			NA	NA	
Methylcyclohexane	MG/KG	-	-			NA	NA	
Methylene chloride	MG/KG	0.05	500	0.0039 J		NA	NA	
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500			NA	NA	
Trichloroethene	MG/KG	0.47	200	NA	4.8 D	NA	1.2 D	
Vinyl chloride	MG/KG	0.02	13	0.0614		0.0224		
Xylene (total)	MG/KG	1.6	500			NA	NA	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

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R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2
Sample ID				G3712-01	G3712-01ME	G3712-02	G3712-02ME	G3712-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5
Date Sampled				09/15/15	09/15/15	09/15/15	09/15/15	09/15/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					0.0215
1,1-Dichloroethene	MG/KG	0.33	500					0.0050 J
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0139		0.0843		NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.0080
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-	0.0154 J				
4-Methyl-2-pentanone	MG/KG	1	-	0.0305 J				
Acetone	MG/KG	0.05	500	NA		0.12		0.0774
Benzene	MG/KG	0.06	44	0.0013 J				
Carbon disulfide	MG/KG	2.7	-					0.0111
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2
Sample ID				G3712-01	G3712-01ME	G3712-02	G3712-02ME	G3712-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5
Date Sampled				09/15/15	09/15/15	09/15/15	09/15/15	09/15/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	NA	NA			0.0096 J
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150			0.0021 J		0.0279
Toluene	MG/KG	0.7	500	0.0184				
Trichloroethene	MG/KG	0.47	200	0.0024 J		NA	NA	18 D
Vinyl chloride	MG/KG	0.02	13					0.0258
Xylene (total)	MG/KG	1.6	500	0.0029 J				

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

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Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2
Sample ID				G4641-03	G4641-03ME	H1136-07	H1136-07ME	H1146-02
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/13/16	01/13/16	01/14/16
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					NA
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500	0.0020 J		0.0043 J		
1,2,4-Trichlorobenzene	MG/KG	3.4	-					NA
1,2-Dichloroethane	MG/KG	0.02	30					NA
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	1.2 D	NA	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0027 J		0.0047 J		
1,2-Dichloropropane	MG/KG	-	-					NA
1,3-Dichlorobenzene	MG/KG	2.4	280					NA
1,4-Dichlorobenzene	MG/KG	1.8	130					NA
2-Hexanone	MG/KG	-	-					NA
4-Methyl-2-pentanone	MG/KG	1	-					NA
Acetone	MG/KG	0.05	500	0.0321		0.0488		NA
Benzene	MG/KG	0.06	44					NA
Carbon disulfide	MG/KG	2.7	-	0.0029 J				NA
Carbon tetrachloride	MG/KG	0.76	22					NA
Chloroethane	MG/KG	1.9	-					NA
Chloroform	MG/KG	0.37	350					NA
Cyclohexane	MG/KG	-	-					NA

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 2
Sample ID				G4641-03	G4641-03ME	H1136-07	H1136-07ME	H1146-02
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/13/16	01/13/16	01/14/16
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					NA
Isopropylbenzene (Cumene)	MG/KG	2.3	-					NA
Methyl acetate	MG/KG	-	-					NA
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0079 J		0.0094 J		NA
Methyl tert-butyl ether	MG/KG	0.93	500					NA
Methylcyclohexane	MG/KG	-	-					NA
Methylene chloride	MG/KG	0.05	500	0.0037 J		0.0039 J		NA
Tetrachloroethene	MG/KG	1.3	150	0.0019 J				0.0022 J
Toluene	MG/KG	0.7	500	0.0018 J				NA
Trichloroethene	MG/KG	0.47	200	NA	2.6 D	NA	5.3 D	NA
Vinyl chloride	MG/KG	0.02	13	0.0459		0.0139		0.0025 J
Xylene (total)	MG/KG	1.6	500	0.0012 J				NA

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

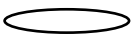
TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 3	ERD45-CS- 3	ERD45-CS- 3
Sample ID				H1146-02ME	H1747-04	G3712-04	G3712-05	G4641-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	7.0-7.5	11.0-11.5	3.0-3.5
Date Sampled				01/14/16	03/08/16	09/15/15	09/15/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)				
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-	NA				
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-	NA				
1,2-Dichloroethane	MG/KG	0.02	30	NA				
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	0.0029 J	0.0138	0.0388	0.0011 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-	NA				
1,3-Dichlorobenzene	MG/KG	2.4	280	NA				
1,4-Dichlorobenzene	MG/KG	1.8	130	NA				
2-Hexanone	MG/KG	-	-	NA				
4-Methyl-2-pentanone	MG/KG	1	-	NA				
Acetone	MG/KG	0.05	500	NA	0.021 J	0.0334	0.0727	0.010 J
Benzene	MG/KG	0.06	44	NA				
Carbon disulfide	MG/KG	2.7	-	NA			0.0019 J	
Carbon tetrachloride	MG/KG	0.76	22	NA				
Chloroethane	MG/KG	1.9	-	NA				
Chloroform	MG/KG	0.37	350	NA				
Cyclohexane	MG/KG	-	-	NA				

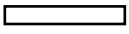
(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 2	ERD45-CS- 2	ERD45-CS- 3	ERD45-CS- 3	ERD45-CS- 3
Sample ID				H1146-02ME	H1747-04	G3712-04	G3712-05	G4641-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	7.0-7.5	11.0-11.5	3.0-3.5
Date Sampled				01/14/16	03/08/16	09/15/15	09/15/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)				
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390	NA				
Isopropylbenzene (Cumene)	MG/KG	2.3	-	NA				
Methyl acetate	MG/KG	-	-	NA				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	NA		0.0058 J	0.0152 J	
Methyl tert-butyl ether	MG/KG	0.93	500	NA				
Methylcyclohexane	MG/KG	-	-	NA				
Methylene chloride	MG/KG	0.05	500	NA				
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	NA				
Trichloroethene	MG/KG	0.47	200	2.1 D	0.0155	0.0395	0.0187	
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500	NA				

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4
Sample ID				G3712-06	G3712-06ME	G3712-07	G3712-08	G3712-08ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	13.0-13.5	13.0-13.5
Date Sampled				09/15/15	09/15/15	09/15/15	09/15/15	09/15/15
Parameter	Units	(1)	(2)		(1-2)			(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500				0.0014 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0321		0.0586	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0029 J	0.0035 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	NA		0.20	0.0213 J	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0021 J	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4
Sample ID				G3712-06	G3712-06ME	G3712-07	G3712-08	G3712-08ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	13.0-13.5	13.0-13.5
Date Sampled				09/15/15	09/15/15	09/15/15	09/15/15	09/15/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390			0.0018 J		
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.11		0.0199 J		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.0066		0.0029 J		
Trichloroethene	MG/KG	0.47	200	0.0134		0.0168	0.0094	
Vinyl chloride	MG/KG	0.02	13				0.0058	
Xylene (total)	MG/KG	1.6	500			0.0065 J		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 5	ERD45-CS- 5
Sample ID				G4641-04	G4641-04ME	H1146-04	G3712-11	G3712-11ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				12/02/15	12/02/15	01/14/16	09/16/15	09/16/15
Parameter	Units	(1)	(2)		(1-2)			(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-			NA		
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-			NA		
1,2-Dichloroethane	MG/KG	0.02	30			NA		
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	0.14	0.0368	
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0034 J		0.0012 J		
1,2-Dichloropropane	MG/KG	-	-			NA		
1,3-Dichlorobenzene	MG/KG	2.4	280			NA		
1,4-Dichlorobenzene	MG/KG	1.8	130			NA		
2-Hexanone	MG/KG	-	-			NA	0.0219 J	
4-Methyl-2-pentanone	MG/KG	1	-			NA	0.0315 J	
Acetone	MG/KG	0.05	500	0.0205 J		NA	NA	
Benzene	MG/KG	0.06	44	0.0014 J		NA		
Carbon disulfide	MG/KG	2.7	-	0.0015 J		NA		
Carbon tetrachloride	MG/KG	0.76	22			NA		
Chloroethane	MG/KG	1.9	-			NA		
Chloroform	MG/KG	0.37	350			NA		
Cyclohexane	MG/KG	-	-	0.0093		NA		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 4	ERD45-CS- 5	ERD45-CS- 5
Sample ID				G4641-04	G4641-04ME	H1146-04	G3712-11	G3712-11ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				12/02/15	12/02/15	01/14/16	09/16/15	09/16/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390			NA		
Isopropylbenzene (Cumene)	MG/KG	2.3	-			NA		
Methyl acetate	MG/KG	-	-			NA		
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			NA	NA	NA
Methyl tert-butyl ether	MG/KG	0.93	500			NA		
Methylcyclohexane	MG/KG	-	-			NA		
Methylene chloride	MG/KG	0.05	500			NA		
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.0176		NA	0.0051 J	
Trichloroethene	MG/KG	0.47	200	0.0039 J		0.0034 J	0.018	
Vinyl chloride	MG/KG	0.02	13	0.0183		0.0020 J		
Xylene (total)	MG/KG	1.6	500	0.0045 J		NA	0.0063 J	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5
Sample ID				G3712-12	G3712-13	G3712-13ME	G3712-14	G3712-14ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	13.5-14.0	13.5-14.0
Date Sampled				09/16/15	09/16/15	09/16/15	09/16/15	09/16/15
Parameter	Units	(1)	(2)			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240		0.0045 J			
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0195	NA	1.1 D	0.0773	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0019 J			
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.12	0.0232 J		0.0209 J	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.0040 J		0.0025 J	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5
Sample ID				G3712-12	G3712-13	G3712-13ME	G3712-14	G3712-14ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	13.5-14.0	13.5-14.0
Date Sampled				09/16/15	09/16/15	09/16/15	09/16/15	09/16/15
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0091 J				
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150		0.0048 J			
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0063	NA	7.8 D	NA	1.3 D
Vinyl chloride	MG/KG	0.02	13		0.0028 J			
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G4641-08	G4641-08ME	H1146-01	G3712-16	G3712-17
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				12/02/15	12/02/15	01/14/16	09/16/15	09/16/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-			NA		
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-			NA		
1,2-Dichloroethane	MG/KG	0.02	30			NA		
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.10	NA	0.0601		NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.0016 J
1,2-Dichloropropane	MG/KG	-	-			NA		
1,3-Dichlorobenzene	MG/KG	2.4	280			NA		
1,4-Dichlorobenzene	MG/KG	1.8	130			NA		
2-Hexanone	MG/KG	-	-			NA		
4-Methyl-2-pentanone	MG/KG	1	-			NA		
Acetone	MG/KG	0.05	500	0.023 J		NA	0.0886	0.0881
Benzene	MG/KG	0.06	44			NA		
Carbon disulfide	MG/KG	2.7	-			NA		
Carbon tetrachloride	MG/KG	0.76	22			NA		
Chloroethane	MG/KG	1.9	-			NA		
Chloroform	MG/KG	0.37	350			NA		
Cyclohexane	MG/KG	-	-			NA		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 5	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G4641-08	G4641-08ME	H1146-01	G3712-16	G3712-17
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				12/02/15	12/02/15	01/14/16	09/16/15	09/16/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390			NA		
Isopropylbenzene (Cumene)	MG/KG	2.3	-			NA		
Methyl acetate	MG/KG	-	-			NA		
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			NA	0.0168 J	
Methyl tert-butyl ether	MG/KG	0.93	500			NA		
Methylcyclohexane	MG/KG	-	-			NA		
Methylene chloride	MG/KG	0.05	500			NA		0.0013 J
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500			NA		
Trichloroethene	MG/KG	0.47	200	NA	1.9 D	0.0279		NA
Vinyl chloride	MG/KG	0.02	13	0.0013 J				
Xylene (total)	MG/KG	1.6	500			NA		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G3712-17ME	G3712-19	G3712-19ME	G3712-18	G4641-05
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	7.5-8.0	7.5-8.0	11.0-11.5	7.0-7.5
Date Sampled				09/16/15	09/16/15	09/16/15	09/16/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500				0.0014 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	NA	NA	0.0019 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.0084	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0835		0.0179 J	0.0443
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0061	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G3712-17ME	G3712-19	G3712-19ME	G3712-18	G4641-05
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	7.5-8.0	7.5-8.0	11.0-11.5	7.0-7.5
Date Sampled				09/16/15	09/16/15	09/16/15	09/16/15	12/02/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.0136 J			
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0015 J		0.0016 J	
Tetrachloroethene	MG/KG	1.3	150				0.0211	
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	NA	NA	NA	11 D	0.0016 J
Vinyl chloride	MG/KG	0.02	13				0.0295	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G4641-09	G4641-09ME	H1136-08	H1136-08ME	H1747-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/13/16	01/13/16	03/08/16
Parameter	Units	(1)	(2)		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	2.7 D	NA	0.65 D	
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0052 J		0.0020 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0437		0.027 J		0.0763
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	0.0040 J				
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6	ERD45-CS- 6
Sample ID				G4641-09	G4641-09ME	H1136-08	H1136-08ME	H1747-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/02/15	12/02/15	01/13/16	01/13/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					0.0167 J
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150	0.0023 J				
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	NA	8.3 D	NA	2.5 D	
Vinyl chloride	MG/KG	0.02	13	0.0077		0.010		
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 7	ERD45-CS- 7	ERD45-CS- 7	ERD45-CS- 8	ERD45-CS- 8
Sample ID				G3767-01	G3767-02	G3767-03	G3767-04	G3767-04ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				09/17/15	09/17/15	09/17/15	09/17/15	09/17/15
Parameter	Units	(1)	(2)					(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0107	0.0146	0.14	0.0224	
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0014 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0948	0.22	0.0159 J	NA	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 7	ERD45-CS- 7	ERD45-CS- 7	ERD45-CS- 8	ERD45-CS- 8
Sample ID				G3767-01	G3767-02	G3767-03	G3767-04	G3767-04ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				09/17/15	09/17/15	09/17/15	09/17/15	09/17/15
Parameter	**Units**	**(1)**	**(2)**					(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-	0.0016 J				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0199 J	0.0252 J		0.40	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0029 J			
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0014 J	0.0081	0.0496	NA	NA
Vinyl chloride	MG/KG	0.02	13			0.0295		
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 9
Sample ID				G3767-05	G3767-06	G3767-06ME	G4663-01	G3767-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/17/15	09/17/15	09/17/15	12/03/15	09/17/15
Parameter	Units	(1)	(2)			(1-2)		
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500		0.0025 J			
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0065	NA	NA	0.0455	0.0506
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0046 J			
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.19	0.0081 J		0.041	0.23
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 8	ERD45-CS- 9
Sample ID				G3767-05	G3767-06	G3767-06ME	G4663-01	G3767-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/17/15	09/17/15	09/17/15	12/03/15	09/17/15
Parameter	**Units**	**(1)**	**(2)**			(1-2)		
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0143 J				0.0593
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500	0.0025 J				0.0039 J
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.11	NA	7.2 D	0.0151	NA
Vinyl chloride	MG/KG	0.02	13		0.0041 J			
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9
Sample ID				G3767-07ME	G3767-08	G3767-08ME	G3767-09	G3767-09ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				09/17/15	09/17/15	09/17/15	09/17/15	09/17/15
Parameter	Units	(1)	(2)	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500				0.0017 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		0.0321		NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.0043 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.21		0.0187 J	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0028 J	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9
Sample ID				G3767-07ME	G3767-08	G3767-08ME	G3767-09	G3767-09ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				09/17/15	09/17/15	09/17/15	09/17/15	09/17/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.0233 J			
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0016 J		0.0017 J	
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	1.8 D	NA	NA	NA	9.4 D
Vinyl chloride	MG/KG	0.02	13				0.0033 J	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-02	G4663-03	G4663-03ME	G3767-10	G3767-10ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				12/03/15	12/03/15	12/03/15	09/18/15	09/18/15
Parameter	Units	(1)	(2)			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		0.0339 J		0.11	
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.26	0.0457 J		0.24	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.0017 J			
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS- 9	ERD45-CS- 9	ERD45-CS- 9	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-02	G4663-03	G4663-03ME	G3767-10	G3767-10ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5
Date Sampled				12/03/15	12/03/15	12/03/15	09/18/15	09/18/15
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0828			0.0399	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500				0.0056 J	
Trichloroethene	MG/KG	0.47	200	0.0015 J	NA	0.40 J	NA	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500				0.0014 J	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G3767-11	G3767-11ME	G3767-12	G3767-12ME	G3767-12ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				09/18/15	09/18/15	09/18/15	09/18/15	09/18/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500				NA	
1,1,2-Trichloroethane	MG/KG	-	-				NA	
1,1-Dichloroethane	MG/KG	0.27	240				NA	
1,1-Dichloroethene	MG/KG	0.33	500			0.0036 J	NA	
1,2,4-Trichlorobenzene	MG/KG	3.4	-				NA	
1,2-Dichloroethane	MG/KG	0.02	30				NA	
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	NA	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0267		0.0043 J	NA	
1,2-Dichloropropane	MG/KG	-	-				NA	
1,3-Dichlorobenzene	MG/KG	2.4	280				NA	
1,4-Dichlorobenzene	MG/KG	1.8	130				NA	
2-Hexanone	MG/KG	-	-				NA	
4-Methyl-2-pentanone	MG/KG	1	-				NA	
Acetone	MG/KG	0.05	500	0.0378		0.0090 J	NA	
Benzene	MG/KG	0.06	44				NA	
Carbon disulfide	MG/KG	2.7	-			0.0039 J	NA	
Carbon tetrachloride	MG/KG	0.76	22				NA	
Chloroethane	MG/KG	1.9	-				NA	
Chloroform	MG/KG	0.37	350				NA	
Cyclohexane	MG/KG	-	-				NA	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G3767-11	G3767-11ME	G3767-12	G3767-12ME	G3767-12ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				09/18/15	09/18/15	09/18/15	09/18/15	09/18/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390				NA	
Isopropylbenzene (Cumene)	MG/KG	2.3	-				NA	
Methyl acetate	MG/KG	-	-				NA	
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500				NA	
Methyl tert-butyl ether	MG/KG	0.93	500				NA	
Methylcyclohexane	MG/KG	-	-				NA	
Methylene chloride	MG/KG	0.05	500			0.0012 J	NA	
Tetrachloroethene	MG/KG	1.3	150	0.0062 J			NA	
Toluene	MG/KG	0.7	500	0.0059 J			NA	
Trichloroethene	MG/KG	0.47	200	NA	59 D	NA	20.4 D	NA
Vinyl chloride	MG/KG	0.02	13	0.0069		0.0514	NA	
Xylene (total)	MG/KG	1.6	500	0.0072 J			NA	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-04	G4663-04ME	G4663-05	G4663-06	G4663-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500				0.0028 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0185		0.0041 J	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.0063	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-	0.0044 J				
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	NA	NA	0.12	0.0412	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0012 J	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

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ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-04	G4663-04ME	G4663-05	G4663-06	G4663-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-	0.0631				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	NA		0.0151 J		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0147		0.0468	NA	2.9 D
Vinyl chloride	MG/KG	0.02	13				0.0063	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-14ME	H1136-06	H1136-06ME	H1747-07	H1747-07ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500		0.0032 J			
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	NA	NA	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0051 J		R	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0784		R	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				R	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-10
Sample ID				G4663-14ME	H1136-06	H1136-06ME	H1747-07	H1747-07ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.013 J		R	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0056 J			
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	2.2 D	NA	4.3 D	NA	2.1
Vinyl chloride	MG/KG	0.02	13		0.0078			
Xylene (total)	MG/KG	1.6	500		0.0016 J			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-11	ERD45-CS-11
Sample ID				H2422-01	H2422-01ME	H2592-01	G3767-13	G3767-14
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				04/08/16	04/08/16	04/15/16	09/18/15	09/18/15
Parameter	Units	(1)	(2)		(1-2)			
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0908			1.0	0.0594
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0523		0.0346		0.0971
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-10	ERD45-CS-10	ERD45-CS-10	ERD45-CS-11	ERD45-CS-11
Sample ID				H2422-01	H2422-01ME	H2592-01	G3767-13	G3767-14
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				04/08/16	04/08/16	04/15/16	09/18/15	09/18/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0074 J		0.0073 J		0.0083 J
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					0.0020 J
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	NA	NA		19.1 D	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500			0.0015 J		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11
Sample ID				G3767-14ME	G3767-15	G3767-15ME	G3767-15ME	G4663-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/18/15	09/18/15	09/18/15	09/18/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500			NA		
1,1,2-Trichloroethane	MG/KG	-	-			NA		
1,1-Dichloroethane	MG/KG	0.27	240			NA		
1,1-Dichloroethene	MG/KG	0.33	500		0.0048 J	NA		
1,2,4-Trichlorobenzene	MG/KG	3.4	-			NA		
1,2-Dichloroethane	MG/KG	0.02	30			NA		
1,2-Dichloroethene (cis)	MG/KG	0.25	500		NA	NA	0.78 D	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0042 J	NA		
1,2-Dichloropropane	MG/KG	-	-			NA		
1,3-Dichlorobenzene	MG/KG	2.4	280			NA		
1,4-Dichlorobenzene	MG/KG	1.8	130			NA		
2-Hexanone	MG/KG	-	-			NA		
4-Methyl-2-pentanone	MG/KG	1	-			NA		
Acetone	MG/KG	0.05	500		0.0176 J	NA		0.56
Benzene	MG/KG	0.06	44			NA		
Carbon disulfide	MG/KG	2.7	-		0.0018 J	NA		
Carbon tetrachloride	MG/KG	0.76	22			NA		
Chloroethane	MG/KG	1.9	-			NA		
Chloroform	MG/KG	0.37	350			NA		
Cyclohexane	MG/KG	-	-			NA		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11
Sample ID				G3767-14ME	G3767-15	G3767-15ME	G3767-15ME	G4663-07
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/18/15	09/18/15	09/18/15	09/18/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390			NA		
Isopropylbenzene (Cumene)	MG/KG	2.3	-			NA		
Methyl acetate	MG/KG	-	-			NA		0.0103
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			NA		0.15
Methyl tert-butyl ether	MG/KG	0.93	500			NA		
Methylcyclohexane	MG/KG	-	-			NA		
Methylene chloride	MG/KG	0.05	500		0.0016 J	NA		
Tetrachloroethene	MG/KG	1.3	150			NA		
Toluene	MG/KG	0.7	500			NA		
Trichloroethene	MG/KG	0.47	200	1.2 D	NA	13.3 D	NA	
Vinyl chloride	MG/KG	0.02	13		0.0113	NA		
Xylene (total)	MG/KG	1.6	500			NA		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11
Sample ID				G4663-08	G4663-09	G4663-09ME	H1136-05	H1136-05ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	12/03/15	12/03/15	01/13/16	01/13/16
Parameter	Units	(1)	(2)			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500		0.0014 J			
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0028 J	NA		0.0804	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0022 J		0.0016 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0759	0.0448 J		0.11	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11	ERD45-CS-11
Sample ID				G4663-08	G4663-09	G4663-09ME	H1136-05	H1136-05ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	12/03/15	12/03/15	01/13/16	01/13/16
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.011 J			0.0334	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.011	NA	NA	NA	2.1 D
Vinyl chloride	MG/KG	0.02	13		0.0019 J		0.0017 J	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				H1747-09	H1747-09ME	G3815-01	G3815-01ME	G3815-02
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	5.0-5.5	5.0-5.5	7.0-7.5
Date Sampled				03/08/16	03/08/16	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	R		0.0351		0.12
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.0012 J
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	R				0.0599
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	R				
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					0.0012 J
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-11	ERD45-CS-11	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				H1747-09	H1747-09ME	G3815-01	G3815-01ME	G3815-02
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	5.0-5.5	5.0-5.5	7.0-7.5
Date Sampled				03/08/16	03/08/16	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	R				0.0066 J
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					0.0026 J
Toluene	MG/KG	0.7	500					0.0028 J
Trichloroethene	MG/KG	0.47	200	R	NA	NA	14.5 D	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					0.0024 J

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G3815-02ME	G3815-03	G3815-03ME	G3815-04	G3815-04ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	12.8-13.3	12.8-13.3
Date Sampled				09/22/15	09/22/15	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500		0.0085		0.0144	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		NA		NA	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0184		0.0101	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0479		0.0134 J	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.0014 J			
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G3815-02ME	G3815-03	G3815-03ME	G3815-04	G3815-04ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	11.0-11.5	12.8-13.3	12.8-13.3
Date Sampled				09/22/15	09/22/15	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.0102 J			
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500		0.0033 J		0.0026 J	
Trichloroethene	MG/KG	0.47	200	137.5 D	NA	301.5 D	NA	116.4 D
Vinyl chloride	MG/KG	0.02	13		0.0019 J		0.0076	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G4663-10	G4662-01	G4662-02	G4662-02ME	G4662-15
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	13.0-13.5
Date Sampled				12/03/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	Units	(1)	(2)				(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500			NA	NA	R
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0017 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.41	0.038	0.14		R
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-			0.0033 J		
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G4663-10	G4662-01	G4662-02	G4662-02ME	G4662-15
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	13.0-13.5
Date Sampled				12/03/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**				(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0936		0.0436		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0015 J	0.0031 J	NA	1.4 D	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G4662-15ME	H1136-04	H1136-04ME	H1747-05	H1747-05ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				13.0-13.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500		0.0983	NA	NA	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0012 J		R	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280		0.0016 J			
1,4-Dichlorobenzene	MG/KG	1.8	130		0.0016 J			
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0504		R	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.0042 J			
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12	ERD45-CS-12
Sample ID				G4662-15ME	H1136-04	H1136-04ME	H1747-05	H1747-05ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				13.0-13.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				12/03/15	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**	(1-2)		(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.010 J		R	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0040 J			
Tetrachloroethene	MG/KG	1.3	150		0.0014 J			
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	NA	NA	0.90 D	NA	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500		0.0022 J			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				G3816-08	G3816-08ME	G3816-09	G3816-09ME	G3816-10
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5
Date Sampled				09/21/15	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-	0.0013 J				
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					0.0080
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	0.13		NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0049 J				0.0263
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	NA		0.17		0.0251 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					0.0091
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				G3816-08	G3816-08ME	G3816-09	G3816-09ME	G3816-10
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5	11.0-11.5
Date Sampled				09/21/15	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)		(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390	0.0022 J				
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-	0.0044 J				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.28		0.0687		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500			0.0012 J		0.0013 J
Tetrachloroethene	MG/KG	1.3	150	0.0059 J		0.0012 J		
Toluene	MG/KG	0.7	500	0.0029 J		0.0012 J		
Trichloroethene	MG/KG	0.47	200	NA	57.7 D	NA	20.6 D	NA
Vinyl chloride	MG/KG	0.02	13					0.0221
Xylene (total)	MG/KG	1.6	500	0.0143 J		0.0015 J		

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				G3816-10ME	G4663-11	G4663-12	G4662-03	G4662-03ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				09/21/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	Units	(1)	(2)	(1-2)				(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500				0.0028 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA			NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.0069	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.40	0.0441	0.0949	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0036 J	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				G3816-10ME	G4663-11	G4663-12	G4662-03	G4662-03ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				09/21/15	12/03/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)				(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.11	0.0108 J		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	51.9 D		0.0069	NA	6.8 D
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				H1136-02	H1136-02ME	H1136-02ME	H1747-06	H1747-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				01/13/16	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500		NA			
1,1,2-Trichloroethane	MG/KG	-	-		NA			
1,1-Dichloroethane	MG/KG	0.27	240		NA			
1,1-Dichloroethene	MG/KG	0.33	500	0.0025 J	NA			
1,2,4-Trichlorobenzene	MG/KG	3.4	-		NA			
1,2-Dichloroethane	MG/KG	0.02	30		NA			
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	1.0 D	0.0874	
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0099	NA		0.0023 J	
1,2-Dichloropropane	MG/KG	-	-		NA			
1,3-Dichlorobenzene	MG/KG	2.4	280		NA			
1,4-Dichlorobenzene	MG/KG	1.8	130		NA			
2-Hexanone	MG/KG	-	-		NA			
4-Methyl-2-pentanone	MG/KG	1	-		NA			
Acetone	MG/KG	0.05	500	0.0476	NA		0.11	
Benzene	MG/KG	0.06	44		NA			
Carbon disulfide	MG/KG	2.7	-	0.0053 J	NA			
Carbon tetrachloride	MG/KG	0.76	22		NA			
Chloroethane	MG/KG	1.9	-		NA			
Chloroform	MG/KG	0.37	350		NA			
Cyclohexane	MG/KG	-	-		NA			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13	ERD45-CS-13
Sample ID				H1136-02	H1136-02ME	H1136-02ME	H1747-06	H1747-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				01/13/16	01/13/16	01/13/16	03/08/16	03/08/16
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390		NA			
Isopropylbenzene (Cumene)	MG/KG	2.3	-		NA			
Methyl acetate	MG/KG	-	-		NA			
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0123 J	NA		0.0187 J	
Methyl tert-butyl ether	MG/KG	0.93	500		NA			
Methylcyclohexane	MG/KG	-	-		NA			
Methylene chloride	MG/KG	0.05	500	0.0040 J	NA			
Tetrachloroethene	MG/KG	1.3	150		NA			
Toluene	MG/KG	0.7	500		NA			
Trichloroethene	MG/KG	0.47	200	NA	14.8 D	NA	NA	
Vinyl chloride	MG/KG	0.02	13	0.0021 J	NA			
Xylene (total)	MG/KG	1.6	500		NA			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14
Sample ID				H2422-02	G3816-04	G3816-05	G3816-06	G3816-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				04/08/16	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	Units	(1)	(2)					(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0171	0.0014 J		0.0087	
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.16	0.0555	0.0134 J	0.12	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)

Concentration Exceeds (2)

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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14
Sample ID				H2422-02	G3816-04	G3816-05	G3816-06	G3816-06ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5
Date Sampled				04/08/16	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	**Units**	**(1)**	**(2)**					(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0314	0.0126 J		0.028 J	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500	0.0026 J			0.0014 J	
Tetrachloroethene	MG/KG	1.3	150		0.0244			
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0102	0.0217	0.0029 J	NA	1.9 D
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500	0.0019 J				

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14
Sample ID				G3816-07	G4662-04	G4662-04ME	H1136-01	H1136-01ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				13.0-13.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				09/21/15	12/03/15	12/03/15	01/13/16	01/13/16
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0175	NA	NA	0.0127	
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0037 J			
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0297 J	0.0991		0.0462	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	0.0041 J	0.0050 J		0.0064	
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (2)

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14	ERD45-CS-14
Sample ID				G3816-07	G4662-04	G4662-04ME	H1136-01	H1136-01ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				13.0-13.5	11.0-11.5	11.0-11.5	11.0-11.5	11.0-11.5
Date Sampled				09/21/15	12/03/15	12/03/15	01/13/16	01/13/16
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500				0.010 J	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500				0.0040 J	
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.059 J	NA	5.6 D	NA	1.2 D
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (2)

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-14	ERD45-CS-15	ERD45-CS-15	ERD45-CS-15	ERD45-CS-15
Sample ID				H1747-08	G3816-01	G3816-02	G3816-02ME	G3816-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	8.5-9.0	8.5-9.0	11.0-11.5
Date Sampled				03/08/16	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	Units	(1)	(2)				(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					0.0033 J
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0028 J	0.0289	NA	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0032 J		0.0046 J
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.46	0.51		0.0264 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	0.0031 J				0.0027 J
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-14	ERD45-CS-15	ERD45-CS-15	ERD45-CS-15	ERD45-CS-15
Sample ID				H1747-08	G3816-01	G3816-02	G3816-02ME	G3816-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	8.5-9.0	8.5-9.0	11.0-11.5
Date Sampled				03/08/16	09/21/15	09/21/15	09/21/15	09/21/15
Parameter	**Units**	**(1)**	**(2)**				(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0068 J	0.0584	0.0796		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					0.0014 J
Tetrachloroethene	MG/KG	1.3	150					0.0033 J
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0281	0.0874 J	NA	NA	NA
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-15	ERD45-CS-15	ERD45-CS-15	ERD45-CS-16	ERD45-CS-16
Sample ID				G3816-03ME	G4662-05	G4662-06	G3815-05	G3815-06
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	7.0-7.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				09/21/15	12/03/15	12/03/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)				
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA		0.0013 J		
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0262 J	0.0718	0.45	0.0144 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-			0.0017 J		
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-15	ERD45-CS-15	ERD45-CS-15	ERD45-CS-16	ERD45-CS-16
Sample ID				G3816-03ME	G4662-05	G4662-06	G3815-05	G3815-06
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	7.0-7.5	11.0-11.5	3.0-3.5	7.0-7.5
Date Sampled				09/21/15	12/03/15	12/03/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)				
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500				0.0781	
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	24.2 D	0.0090	0.0026 J	0.0101	0.0108
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-16	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17
Sample ID				G3815-07	G3815-08	G3815-08ME	G3815-09	G3815-09ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5
Date Sampled				09/22/15	09/22/15	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0053 J	NA		0.085	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.0047 J		0.0038 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.17	0.29		0.10	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-16	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17
Sample ID				G3815-07	G3815-08	G3815-08ME	G3815-09	G3815-09ME
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	3.0-3.5	3.0-3.5	7.0-7.5	7.0-7.5
Date Sampled				09/22/15	09/22/15	09/22/15	09/22/15	09/22/15
Parameter	**Units**	**(1)**	**(2)**			(1-2)		(1-2)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0204 J	0.067			
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.0812	NA	17.5 D	NA	11.3 D
Vinyl chloride	MG/KG	0.02	13		0.0016 J			
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17
Sample ID				G3815-10	G3815-10ME	G4662-07	G4662-08	G4662-09
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5
Date Sampled				09/22/15	09/22/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500	0.0283				R
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	0.0021 J		NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0654				R
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0625		0.70	0.0267 J	R
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	0.0015 J				R
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)

Concentration Exceeds (2)

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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17	ERD45-CS-17
Sample ID				G3815-10	G3815-10ME	G4662-07	G4662-08	G4662-09
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	7.0-7.5	11.0-11.5
Date Sampled				09/22/15	09/22/15	12/03/15	12/03/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500	0.0087 J		0.11		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.0018 J				
Trichloroethene	MG/KG	0.47	200	NA	69.8 D		0.0020 J	NA
Vinyl chloride	MG/KG	0.02	13	0.010				R
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-17	ERD45-CS-17	ERD45-CS-18	ERD45-CS-18	ERD45-CS-18
Sample ID				G4662-09ME	H1136-03	G3815-11	G3815-11ME	G3815-12
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5	7.0-7.5
Date Sampled				12/03/15	01/13/16	09/23/15	09/23/15	09/23/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	0.0036 J	0.11		0.0020 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0232 J	0.18		0.0387
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

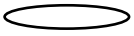
TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-17	ERD45-CS-17	ERD45-CS-18	ERD45-CS-18	ERD45-CS-18
Sample ID				G4662-09ME	H1136-03	G3815-11	G3815-11ME	G3815-12
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	3.0-3.5	7.0-7.5
Date Sampled				12/03/15	01/13/16	09/23/15	09/23/15	09/23/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500		0.0059 J	0.0294 J		
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500		0.0039 J			
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	16.3 D	0.0084	NA	0.94 D	0.0205
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

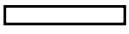
(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)



Concentration Exceeds (2)

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Only Detected Results Reported.

C:\Temp\Temp\WA-36 Erdle Perforating\dBase\EDMS.mde
Printed: 6/28/2022 12:55:02 PM
[MATRIX] = 'SO' AND [LOGDATE] <= #5/24/2018# AND [PRCCODE] = 'VOA'

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-18	ERD45-CS-18	ERD45-CS-18	ERD45-CS-18	ERD45-CS-19
Sample ID				G3815-13	G3815-13ME	G4662-10	G4662-11	G3815-14
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	11.0-11.5	3.0-3.5
Date Sampled				09/23/15	09/23/15	12/03/15	12/03/15	09/23/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500	0.0046 J				
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30				0.0015 J	
1,2-Dichloroethene (cis)	MG/KG	0.25	500	NA	NA	0.0234	0.0072	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.0188			0.0014 J	0.0055 J
1,2-Dichloropropane	MG/KG	-	-				0.0014 J	
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0185 J		0.50	0.16	0.0132 J
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-				0.0018 J	
Carbon tetrachloride	MG/KG	0.76	22				0.0015 J	
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350				0.0017 J	
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-18	ERD45-CS-18	ERD45-CS-18	ERD45-CS-18	ERD45-CS-19
Sample ID				G3815-13	G3815-13ME	G4662-10	G4662-11	G3815-14
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	11.0-11.5	3.0-3.5	11.0-11.5	3.0-3.5
Date Sampled				09/23/15	09/23/15	12/03/15	12/03/15	09/23/15
Parameter	**Units**	**(1)**	**(2)**		(1-2)			
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			0.11	0.0371	
Methyl tert-butyl ether	MG/KG	0.93	500				0.0019 J	
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150	0.0012 J				
Toluene	MG/KG	0.7	500	0.0015 J			0.0014 J	
Trichloroethene	MG/KG	0.47	200	NA	43.9 D	0.0154	0.0224	NA
Vinyl chloride	MG/KG	0.02	13	0.0119				
Xylene (total)	MG/KG	1.6	500				0.0013 J	

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-19	ERD45-CS-19	ERD45-CS-19	ERD45-CS-19	ERD45-CS-19
Sample ID				G3815-14ME	G3815-15	G3815-16	G3815-16ME	G4662-12
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/23/15	09/23/15	09/23/15	09/23/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.60 D	0.0371	0.0694		0.0039 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.0016 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500		0.0472	0.0267 J		0.0545
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-19	ERD45-CS-19	ERD45-CS-19	ERD45-CS-19	ERD45-CS-19
Sample ID				G3815-14ME	G3815-15	G3815-16	G3815-16ME	G4662-12
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.5	7.0-7.5	11.0-11.5	11.0-11.5	3.0-3.5
Date Sampled				09/23/15	09/23/15	09/23/15	09/23/15	12/03/15
Parameter	**Units**	**(1)**	**(2)**	(1-2)			(1-2)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	1.3 D	0.0821	NA	4.5 D	0.0019 J
Vinyl chloride	MG/KG	0.02	13					
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-19	ERD45-CS-19	GS-001	GS-001	GS-001
Sample ID				G4662-13	G4662-14	828072-GS001005	828072-GS001011	828072-GS001011D
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	5.0-5.0	11.0-11.0	11.0-11.0
Date Sampled				12/03/15	12/03/15	07/07/08	07/07/08	07/07/08
Parameter	Units	(1)	(2)					Field Duplicate (1-1)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500			12 J		
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240				0.61	
1,1-Dichloroethene	MG/KG	0.33	500				0.34 J	
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.0016 J	0.0030 J	110	23 JD	27
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.0457	0.0649		0.71 J	
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.0018 J			
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-19	ERD45-CS-19	GS-001	GS-001	GS-001
Sample ID				G4662-13	G4662-14	828072-GS001005	828072-GS001011	828072-GS001011D
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				7.0-7.5	11.0-11.5	5.0-5.0	11.0-11.0	11.0-11.0
Date Sampled				12/03/15	12/03/15	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**(1)**	**(2)**					Field Duplicate (1-1)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-				0.11 J	
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150			17 J	1.2	
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200		0.0034 J	2,200 D	390 D	380
Vinyl chloride	MG/KG	0.02	13			5.6 J	1.4	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-002	GS-003	GS-003	GS-004	GS-004
Sample ID				828072-GS002011	828072-GS003006	828072-GS003011	828072-GS004006	828072-GS004011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	6.0-6.0	11.0-11.0	6.0-6.0	11.0-11.0
Date Sampled				07/07/08	07/07/08	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240	0.15 J	0.051 J	0.043 J		0.41 J
1,1-Dichloroethene	MG/KG	0.33	500	0.15 J				0.58 J
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	59 D		6.2	120	65
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.16 J		0.097 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-		0.050 J			
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-		0.073 J			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-002	GS-003	GS-003	GS-004	GS-004
Sample ID				828072-GS002011	828072-GS003006	828072-GS003011	828072-GS004006	828072-GS004011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	6.0-6.0	11.0-11.0	6.0-6.0	11.0-11.0
Date Sampled				07/07/08	07/07/08	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390		0.041 J			
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-		0.068 J			
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150	1.3		0.12 J		
Toluene	MG/KG	0.7	500	0.039 J	0.058 J	0.044 J		
Trichloroethene	MG/KG	0.47	200	90 D		2.7	32	160
Vinyl chloride	MG/KG	0.02	13	2.9		1.7	8.2	2.6 J
Xylene (total)	MG/KG	1.6	500		0.061 J			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-005	GS-006	GS-006	GS-007	GS-008
Sample ID				828072-GS005011	828072-GS006007	828072-GS006011	828072-GS007010	828072-GS008011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	7.0-7.0	11.0-11.0	10.0-10.0	11.0-11.0
Date Sampled				07/07/08	07/07/08	07/07/08	07/07/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	17	24 D	42	11	9.2
1,2-Dichloroethene (trans)	MG/KG	0.19	500				0.081 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-005	GS-006	GS-006	GS-007	GS-008
Sample ID				828072-GS005011	828072-GS006007	828072-GS006011	828072-GS007010	828072-GS008011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	7.0-7.0	11.0-11.0	10.0-10.0	11.0-11.0
Date Sampled				07/07/08	07/07/08	07/07/08	07/07/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150	1.1 J	5.6 JD			
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	290	190 D	78	50 D	0.40 J
Vinyl chloride	MG/KG	0.02	13	1.1 J	2.5 JD	2.9 J	0.42 J	3.1 J
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

C:\Temp\Temp\WA-36 Erdle Perforating\dBase\EDMS.mde
Printed: 6/28/2022 12:55:03 PM
[MATRIX] = 'SO' AND [LOGDATE] <= #5/24/2018# AND [PRCCODE] = 'VOA'

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-009	GS-009	GS-010	GS-011	GS-012
Sample ID				828072-GS009011	828072-GS009013	828072-GS010013	828072-GS011009	828072-GS012007
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	13.0-13.0	13.0-13.0	9.0-9.0	7.0-7.0
Date Sampled				07/07/08	07/07/08	07/08/08	07/08/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	4.3	4.6	0.97	3.5	4.1 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.089 J				
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-009	GS-009	GS-010	GS-011	GS-012
Sample ID				828072-GS009011	828072-GS009013	828072-GS010013	828072-GS011009	828072-GS012007
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.0	13.0-13.0	13.0-13.0	9.0-9.0	7.0-7.0
Date Sampled				07/07/08	07/07/08	07/08/08	07/08/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150		0.52			
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.27 J	140 D	0.43 J	72 D	240
Vinyl chloride	MG/KG	0.02	13	2.2	1.8	0.49 J	0.12 J	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-012	GS-014	GS-014	GS-015	GS-016
Sample ID				828072-GS012012	828072-GS014006	828072-GS014013	828072-GS015007	828072-GS016006
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	6.0-6.0	13.0-13.0	7.0-7.0	6.0-6.0
Date Sampled				07/08/08	07/08/08	07/08/08	07/08/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	1.1	68	15	8.6 J	32 JD
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-012	GS-014	GS-014	GS-015	GS-016
Sample ID				828072-GS012012	828072-GS014006	828072-GS014013	828072-GS015007	828072-GS016006
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	6.0-6.0	13.0-13.0	7.0-7.0	6.0-6.0
Date Sampled				07/08/08	07/08/08	07/08/08	07/08/08	07/08/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	22 D	1,300	87 D	1,100	1,000 D
Vinyl chloride	MG/KG	0.02	13	0.074 J		0.11 J		
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-017	GS-018	GS-019	GS-020	GS-021
Sample ID				828072-GS017002	828072-GS018002	828072-GS019009	828072-GS020012	828072-GS021010
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				2.0-2.0	2.0-2.0	9.0-9.0	12.0-12.0	10.0-10.0
Date Sampled				09/22/08	09/22/08	09/22/08	09/22/08	09/22/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500			6.1		0.36
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.10 J		
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.37 J	0.18 J			
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-	0.033 J				
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-017	GS-018	GS-019	GS-020	GS-021
Sample ID				828072-GS017002	828072-GS018002	828072-GS019009	828072-GS020012	828072-GS021010
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				2.0-2.0	2.0-2.0	9.0-9.0	12.0-12.0	10.0-10.0
Date Sampled				09/22/08	09/22/08	09/22/08	09/22/08	09/22/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390	0.037 J				
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-	1.0 J	0.61	0.015 J		0.011 J
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.057 J	0.060 J			0.0087 J
Trichloroethene	MG/KG	0.47	200			3.7		
Vinyl chloride	MG/KG	0.02	13			0.48		0.12
Xylene (total)	MG/KG	1.6	500	0.145 J				

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-022	GS-023	GS-024	GS-025	GS-025
Sample ID				828072-GS022002	828072-GS023011	828072-GS024010	828072-GS025009	828072-GS025009D
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				2.0-2.0	11.0-11.0	10.0-10.0	9.0-9.0	9.0-9.0
Date Sampled				09/22/08	09/22/08	09/22/08	09/23/08	09/23/08
Parameter	Units	(1)	(2)					Field Duplicate (1-1)
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500			0.023 J		
1,2,4-Trichlorobenzene	MG/KG	3.4	-					0.10 J
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.082 J		1.5	0.33	0.47
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500	0.13 J				
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

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Printed: 6/28/2022 12:55:04 PM
[MATRIX] = 'SO' AND [LOGDATE] <= #5/24/2018# AND [PRCCODE] = 'VOA'

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-022	GS-023	GS-024	GS-025	GS-025
Sample ID				828072-GS022002	828072-GS023011	828072-GS024010	828072-GS025009	828072-GS025009D
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				2.0-2.0	11.0-11.0	10.0-10.0	9.0-9.0	9.0-9.0
Date Sampled				09/22/08	09/22/08	09/22/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**					Field Duplicate (1-1)
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-	0.40		0.024 J		
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500	0.23				
Trichloroethene	MG/KG	0.47	200			100 D		
Vinyl chloride	MG/KG	0.02	13	0.023 J				
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-025	GS-026	GS-027	GS-028	GS-029
Sample ID				828072-GS025012	828072-GS026012	828072-GS027010	828072-GS028008	828072-GS029009
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	12.0-12.0	10.0-10.0	8.0-8.0	9.0-9.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	2.6	0.60	0.50	1.0	0.073 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500					
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-025	GS-026	GS-027	GS-028	GS-029
Sample ID				828072-GS025012	828072-GS026012	828072-GS027010	828072-GS028008	828072-GS029009
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	12.0-12.0	10.0-10.0	8.0-8.0	9.0-9.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-			0.023 J		
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	26 D	16 D	26 D	3.1	4.7
Vinyl chloride	MG/KG	0.02	13			0.036 J	0.046 J	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-030	GS-031	GS-032	GS-032	GS-033
Sample ID				828072-GS030012	828072-GS031012	828072-GS032007	828072-GS032007D	828072-GS033012
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	12.0-12.0	7.0-7.0	7.0-7.0	12.0-12.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**				Field Duplicate (1-1)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.044 J	0.20	3.9	3.5	0.57
1,2-Dichloroethene (trans)	MG/KG	0.19	500			0.13 J	0.12 J	
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-030	GS-031	GS-032	GS-032	GS-033
Sample ID				828072-GS030012	828072-GS031012	828072-GS032007	828072-GS032007D	828072-GS033012
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				12.0-12.0	12.0-12.0	7.0-7.0	7.0-7.0	12.0-12.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**				Field Duplicate (1-1)	
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	0.086 J		3.5	3.1 J	3.8 J
Vinyl chloride	MG/KG	0.02	13		0.050 J	0.32	0.29 J	
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-034	GS-034	GS-035	GS-036	GS-036
Sample ID				828072-GS034003	828072-GS034006	828072-GS035009	828072-GS036005	828072-GS036012
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.0	6.0-6.0	9.0-9.0	5.0-5.0	12.0-12.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.91	2.2 J		0.50	3.8 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.029 J			
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-034	GS-034	GS-035	GS-036	GS-036
Sample ID				828072-GS034003	828072-GS034006	828072-GS035009	828072-GS036005	828072-GS036012
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.0	6.0-6.0	9.0-9.0	5.0-5.0	12.0-12.0
Date Sampled				09/23/08	09/23/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200		2.0 J		2.4	220
Vinyl chloride	MG/KG	0.02	13	0.083 J				
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-037	GS-039	GS-040	GS-041	GS-043
Sample ID				828072-GS037003	828072-GS039008	828072-GS040002	828072-GS041005	828072-GS043008
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.0	8.0-8.0	2.0-2.0	5.0-5.0	8.0-8.0
Date Sampled				09/24/08	09/24/08	09/24/08	09/24/08	03/09/09
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500					0.025 J
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240					
1,1-Dichloroethene	MG/KG	0.33	500					
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	3.9		1.1	1.2	0.63
1,2-Dichloroethene (trans)	MG/KG	0.19	500					0.081 J
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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[MATRIX] = 'SO' AND [LOGDATE] <= #5/24/2018# AND [PRCCODE] = 'VOA'

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-037	GS-039	GS-040	GS-041	GS-043
Sample ID				828072-GS037003	828072-GS039008	828072-GS040002	828072-GS041005	828072-GS043008
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				3.0-3.0	8.0-8.0	2.0-2.0	5.0-5.0	8.0-8.0
Date Sampled				09/24/08	09/24/08	09/24/08	09/24/08	03/09/09
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					
Isopropylbenzene (Cumene)	MG/KG	2.3	-					
Methyl acetate	MG/KG	-	-					0.15 J
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-					
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150					0.13
Toluene	MG/KG	0.7	500					
Trichloroethene	MG/KG	0.47	200	36	650	5.5	0.91	7.7 DJ
Vinyl chloride	MG/KG	0.02	13					0.055 J
Xylene (total)	MG/KG	1.6	500					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-044	GS-045	GS-045	GS-047	GS-047
Sample ID				828072-GS044004	828072-GS045008	828072-GS045012	828072-GS047004	828072-GS047010
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				4.0-4.0	8.0-8.0	12.0-12.0	4.0-4.0	10.0-10.0
Date Sampled				03/09/09	03/09/09	03/09/09	03/10/09	03/10/09
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
1,1,1-Trichloroethane	MG/KG	0.68	500				1.0	3.0
1,1,2-Trichloroethane	MG/KG	-	-					
1,1-Dichloroethane	MG/KG	0.27	240		0.072 J		0.19 J	0.89
1,1-Dichloroethene	MG/KG	0.33	500		0.043 J			
1,2,4-Trichlorobenzene	MG/KG	3.4	-					
1,2-Dichloroethane	MG/KG	0.02	30					
1,2-Dichloroethene (cis)	MG/KG	0.25	500	0.15 J	30 DJ	46	2.3	0.018 J
1,2-Dichloroethene (trans)	MG/KG	0.19	500		0.078 J		0.25	0.018 J
1,2-Dichloropropane	MG/KG	-	-					
1,3-Dichlorobenzene	MG/KG	2.4	280					
1,4-Dichlorobenzene	MG/KG	1.8	130					
2-Hexanone	MG/KG	-	-					
4-Methyl-2-pentanone	MG/KG	1	-					
Acetone	MG/KG	0.05	500					
Benzene	MG/KG	0.06	44					
Carbon disulfide	MG/KG	2.7	-					
Carbon tetrachloride	MG/KG	0.76	22					
Chloroethane	MG/KG	1.9	-					0.014 J
Chloroform	MG/KG	0.37	350					
Cyclohexane	MG/KG	-	-					

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-044	GS-045	GS-045	GS-047	GS-047
Sample ID				828072-GS044004	828072-GS045008	828072-GS045012	828072-GS047004	828072-GS047010
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				4.0-4.0	8.0-8.0	12.0-12.0	4.0-4.0	10.0-10.0
Date Sampled				03/09/09	03/09/09	03/09/09	03/10/09	03/10/09
Parameter	**Units**	**(1)**	**(2)**					
Volatile Organic Compounds								
Ethylbenzene	MG/KG	1	390					0.022 J
Isopropylbenzene (Cumene)	MG/KG	2.3	-				0.092 J	0.073 J
Methyl acetate	MG/KG	-	-		0.034 J		0.13 J	0.057 J
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500					
Methyl tert-butyl ether	MG/KG	0.93	500					
Methylcyclohexane	MG/KG	-	-				0.036 J	0.023 J
Methylene chloride	MG/KG	0.05	500					
Tetrachloroethene	MG/KG	1.3	150			1.1 J		
Toluene	MG/KG	0.7	500					0.079 J
Trichloroethene	MG/KG	0.47	200	0.32	0.80	150 DJ	0.26	0.042 J
Vinyl chloride	MG/KG	0.02	13		5.0	1.7 J	0.94	
Xylene (total)	MG/KG	1.6	500				0.37 J	0.29 J

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
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Only Detected Results Reported.

C:\Temp\Temp\WA-36 Erdle Perforating\dBase\EDMS.mde
Printed: 6/28/2022 12:55:05 PM
[MATRIX] = 'SO' AND [LOGDATE] <= #5/24/2018# AND [PRCCODE] = 'VOA'

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-048	SS-06	SS-07
Sample ID				828072-GS048008	828072SS-06	828072SS-07
Matrix				Soil	Soil	Soil
Depth Interval (ft)				8.0-8.0	0.0-0.9	0.0-0.8
Date Sampled				03/10/09	04/15/10	04/15/10
Parameter	**Units**	**(1)**	**(2)**			
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.68	500	0.017 J		
1,1,2-Trichloroethane	MG/KG	-	-	0.021 J		
1,1-Dichloroethane	MG/KG	0.27	240	0.094 J		
1,1-Dichloroethene	MG/KG	0.33	500	0.10 J		
1,2,4-Trichlorobenzene	MG/KG	3.4	-			
1,2-Dichloroethane	MG/KG	0.02	30			
1,2-Dichloroethene (cis)	MG/KG	0.25	500	44 DJ		0.0027
1,2-Dichloroethene (trans)	MG/KG	0.19	500	0.11 J		
1,2-Dichloropropane	MG/KG	-	-			
1,3-Dichlorobenzene	MG/KG	2.4	280			
1,4-Dichlorobenzene	MG/KG	1.8	130			
2-Hexanone	MG/KG	-	-			
4-Methyl-2-pentanone	MG/KG	1	-			
Acetone	MG/KG	0.05	500		0.011 J	
Benzene	MG/KG	0.06	44			
Carbon disulfide	MG/KG	2.7	-			
Carbon tetrachloride	MG/KG	0.76	22			
Chloroethane	MG/KG	1.9	-			
Chloroform	MG/KG	0.37	350			
Cyclohexane	MG/KG	-	-			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

Empty cell - Not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value. NA - Not analyzed.
R - The data is rejected.

Only Detected Results Reported.

TABLE A-1
SUMMARY OF HISTORICALLY DETECTED VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-048	SS-06	SS-07
Sample ID				828072-GS048008	828072SS-06	828072SS-07
Matrix				Soil	Soil	Soil
Depth Interval (ft)				8.0-8.0	0.0-0.9	0.0-0.8
Date Sampled				03/10/09	04/15/10	04/15/10
Parameter	**Units**	**(1)**	**(2)**			
Volatile Organic Compounds						
Ethylbenzene	MG/KG	1	390			
Isopropylbenzene (Cumene)	MG/KG	2.3	-			
Methyl acetate	MG/KG	-	-			
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	500			
Methyl tert-butyl ether	MG/KG	0.93	500			
Methylcyclohexane	MG/KG	-	-			
Methylene chloride	MG/KG	0.05	500			
Tetrachloroethene	MG/KG	1.3	150	1.6		
Toluene	MG/KG	0.7	500			
Trichloroethene	MG/KG	0.47	200	23 DJ		0.0069
Vinyl chloride	MG/KG	0.02	13	2.8		
Xylene (total)	MG/KG	1.6	500			

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds (1)

Concentration Exceeds (2)

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Only Detected Results Reported.

TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	GS-001	GS-002	GS-003	GS-006
Sample ID				H1136-02	828072-GS001005	828072-GS002011	828072-GS003011	828072-GS006011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	-	-	-	-
Date Sampled				01/13/16	07/07/08	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
Anthracene	MG/KG	1000	500	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	5.6	NA	NA	NA	NA	NA
Benzo(a)pyrene	MG/KG	22	1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	MG/KG	1.7	5.6	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	MG/KG	1000	500	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	MG/KG	1.7	56	NA	NA	NA	NA	NA
Carbazole	MG/KG	-	-	NA	NA	NA	NA	NA
Chrysene	MG/KG	1	56	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	MG/KG	1000	0.56	NA	NA	NA	NA	NA
Fluoranthene	MG/KG	1000	500	NA	NA	NA	NA	NA
Fluorene	MG/KG	386	500	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	MG/KG	8.2	5.6	NA	NA	NA	NA	NA
Phenanthrene	MG/KG	1000	500	NA	NA	NA	NA	NA
Pyrene	MG/KG	1000	500	NA	NA	NA	NA	NA
Metals								
Aluminum	MG/KG	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	820	400	NA	NA	NA	NA	NA
Beryllium	MG/KG	47	590	NA	NA	NA	NA	NA
Calcium	MG/KG	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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NA - Not analyzed.

Only Detected Results Reported.

TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				ERD45-CS-13	GS-001	GS-002	GS-003	GS-006
Sample ID				H1136-02	828072-GS001005	828072-GS002011	828072-GS003011	828072-GS006011
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				11.0-11.5	-	-	-	-
Date Sampled				01/13/16	07/07/08	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Metals								
Chromium	MG/KG	NS	1500	NA	NA	NA	NA	NA
Cobalt	MG/KG	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	1720	270	NA	NA	NA	NA	NA
Iron	MG/KG	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	450	1000	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.73	2.8	NA	NA	NA	NA	NA
Nickel	MG/KG	130	310	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	NA	NA	NA	NA	NA
Vanadium	MG/KG	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	2480	10000	NA	NA	NA	NA	NA
Miscellaneous Parameters								
Total Organic Carbon (TOC)	MG/KG	-	-	528	1,700	865	1,320	3,800

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-007	GS-008	SS-01	SS-02	SS-03
Sample ID				828072-GS007010	828072-GS008011	828072SS-01	828072SS-02	828072SS-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				-	-	-	-	-
Date Sampled				07/07/08	07/08/08	04/15/10	04/15/10	04/15/10
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
Anthracene	MG/KG	1000	500	NA	NA			
Benzo(a)anthracene	MG/KG	1	5.6	NA	NA			
Benzo(a)pyrene	MG/KG	22	1	NA	NA			
Benzo(b)fluoranthene	MG/KG	1.7	5.6	NA	NA			
Benzo(g,h,i)perylene	MG/KG	1000	500	NA	NA			
Benzo(k)fluoranthene	MG/KG	1.7	56	NA	NA			
Carbazole	MG/KG	-	-	NA	NA			
Chrysene	MG/KG	1	56	NA	NA			
Dibenz(a,h)anthracene	MG/KG	1000	0.56	NA	NA			
Fluoranthene	MG/KG	1000	500	NA	NA			
Fluorene	MG/KG	386	500	NA	NA			
Indeno(1,2,3-cd)pyrene	MG/KG	8.2	5.6	NA	NA			
Phenanthrene	MG/KG	1000	500	NA	NA			
Pyrene	MG/KG	1000	500	NA	NA			
Metals								
Aluminum	MG/KG	-	-	NA	NA	6,310	17,400	9,140
Arsenic	MG/KG	16	16	NA	NA	2.4	4.6	2.8
Barium	MG/KG	820	400	NA	NA	41.4	101	52.7
Beryllium	MG/KG	47	590	NA	NA		0.84	0.60
Calcium	MG/KG	-	-	NA	NA	2,030	5,330	5,070

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				GS-007	GS-008	SS-01	SS-02	SS-03
Sample ID				828072-GS007010	828072-GS008011	828072SS-01	828072SS-02	828072SS-03
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				-	-	-	-	-
Date Sampled				07/07/08	07/08/08	04/15/10	04/15/10	04/15/10
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Metals								
Chromium	MG/KG	NS	1500	NA	NA	11.1	17.7	13.7
Cobalt	MG/KG	-	-	NA	NA		5.6	5.1
Copper	MG/KG	1720	270	NA	NA	8.3	9.7	11
Iron	MG/KG	-	-	NA	NA	16,100	19,700	19,100
Lead	MG/KG	450	1000	NA	NA	3.1	13.7	6.9
Magnesium	MG/KG	-	-	NA	NA	1,890	2,850	3,350
Manganese	MG/KG	2000	10000	NA	NA	338	221	139
Mercury	MG/KG	0.73	2.8	NA	NA		0.090	0.040
Nickel	MG/KG	130	310	NA	NA	9.8	14	15.3
Potassium	MG/KG	-	-	NA	NA	597	1,430	760
Vanadium	MG/KG	-	-	NA	NA	22.7	29.9	28.7
Zinc	MG/KG	2480	10000	NA	NA	21.3	91.3	328
Miscellaneous Parameters								
Total Organic Carbon (TOC)	MG/KG	-	-	647	4,410	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

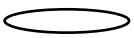
TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				SS-04	SS-05	SS-06	SS-07
Sample ID				828072SS-04	828072SS-05	828072SS-06	828072SS-07
Matrix				Soil	Soil	Soil	Soil
Depth Interval (ft)				-	-	-	-
Date Sampled				04/15/10	04/15/10	04/15/10	04/15/10
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**				
Semivolatile Organic Compounds							
Anthracene	MG/KG	1000	500	2.89			
Benzo(a)anthracene	MG/KG	1	5.6	4.92			
Benzo(a)pyrene	MG/KG	22	1	3.09			
Benzo(b)fluoranthene	MG/KG	1.7	5.6	3.49			
Benzo(g,h,i)perylene	MG/KG	1000	500	1.82			
Benzo(k)fluoranthene	MG/KG	1.7	56	2.94			
Carbazole	MG/KG	-	-	0.681			
Chrysene	MG/KG	1	56	4.36			
Dibenz(a,h)anthracene	MG/KG	1000	0.56	0.649			
Fluoranthene	MG/KG	1000	500	12.3			
Fluorene	MG/KG	386	500	0.456			
Indeno(1,2,3-cd)pyrene	MG/KG	8.2	5.6	1.82			
Phenanthrene	MG/KG	1000	500	8.73			
Pyrene	MG/KG	1000	500	8.59			
Metals							
Aluminum	MG/KG	-	-	3,940	4,000	5,950	9,340
Arsenic	MG/KG	16	16	2.7		4.0	3.6
Barium	MG/KG	820	400	20.9	21.4		65.5
Beryllium	MG/KG	47	590				0.46
Calcium	MG/KG	-	-	61,900	21,300	3,970	32,700

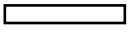
Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria (1)



Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE A-2
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN SOIL SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				SS-04	SS-05	SS-06	SS-07
Sample ID				828072SS-04	828072SS-05	828072SS-06	828072SS-07
Matrix				Soil	Soil	Soil	Soil
Depth Interval (ft)				-	-	-	-
Date Sampled				04/15/10	04/15/10	04/15/10	04/15/10
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**				
Metals							
Chromium	MG/KG	NS	1500	6.9	5.9	7.2	12.6
Cobalt	MG/KG	-	-				6.2
Copper	MG/KG	1720	270	8.6	6.3	7.2	11.1
Iron	MG/KG	-	-	9,110	8,100	9,060	16,300
Lead	MG/KG	450	1000	10.4	4.9	16.1	8.9
Magnesium	MG/KG	-	-	18,100	5,690	833	8,440
Manganese	MG/KG	2000	10000	224	216	118	387
Mercury	MG/KG	0.73	2.8			0.080	
Nickel	MG/KG	130	310	8.0	5.8	4.4	15.7
Potassium	MG/KG	-	-	912	606		1,440
Vanadium	MG/KG	-	-	9.0	11.6	16.7	18.2
Zinc	MG/KG	2480	10000	31.9	40.6	70.9	95.6
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/KG	-	-	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-1D	GPZ-1D	GPZ-1D	GPZ-1S1	GPZ-1S1
Sample ID			828072-GPZ1D014	GPZ1D01401	828072-GPZ1D014	828072-GPZ1S1008	GPZ1S100101
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	14.0-14.0	-	-
Date Sampled			01/17/08	07/23/08	07/12/12	01/17/08	07/23/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	10	15	9.8		
1,1-Dichloroethene	UG/L	5	0.23 J	0.4 J	0.32 J		
1,2-Dichloroethene (cis)	UG/L	5	46	86	83		
1,2-Dichloroethene (trans)	UG/L	5	0.36 J	1.4	2.1		
Acetone	UG/L	50			4.9 J	2.7 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60		0.34 J			0.28 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	39	87	38		
Vinyl chloride	UG/L	2	23	34	23		
Xylene (total)	UG/L	5					

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-1S1	GPZ-2D	GPZ-2D	GPZ-2D	GPZ-2S1
Sample ID			828072-GPZ1S1008	828072-GPZ2D020	GPZ2D02001	828072-GPZ2D020	828072-GPZ2S1014
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			8.0-8.0	-	-	20.0-20.0	-
Date Sampled			07/12/12	01/17/08	07/23/08	07/12/12	01/16/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5					0.32 J
1,2-Dichloroethene (trans)	UG/L	5					
Acetone	UG/L	50	1.2 J	1 J			
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5					
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-2S1	GPZ-2S1	GPZ-5D	GPZ-5D	GPZ-5D
Sample ID			GPZ2S101401	828072-GPZ2S1014	828072-GPZ5D025	GPZ5D02501	828072-GPZ5D025
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	14.0-14.0	-	-	25.0-25.0
Date Sampled			07/23/08	07/12/12	01/16/08	07/22/08	07/11/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			0.32 J	0.35 J	
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			1.7	2	1.6
1,1-Dichloroethene	UG/L	5			0.69 J	0.6 J	0.62 J
1,2-Dichloroethene (cis)	UG/L	5			150	150	100
1,2-Dichloroethene (trans)	UG/L	5			2.2	2.4	2.4
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.23 J				
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5			0.36 J		
Toluene	UG/L	5					
Trichloroethene	UG/L	5			320 D	160	120
Vinyl chloride	UG/L	2			5.8	11	7.7
Xylene (total)	UG/L	5					

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-5D	GPZ-5S	GPZ-5S	GPZ-5S	GPZ-6D
Sample ID			828072-GPZ5D025	828072-GPZ5S018	828072-GPZ5S018	828072-GPZ5S018	828072-GPZ6D028
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			25.0-25.0	-	18.0-18.0	18.0-18.0	-
Date Sampled			05/24/18	01/16/08	07/11/12	05/24/18	01/17/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	1	0.73 J	0.44 J	0.66 J	7
1,1-Dichloroethene	UG/L	5					0.82 J
1,2-Dichloroethene (cis)	UG/L	5	50	68	16	32	120
1,2-Dichloroethene (trans)	UG/L	5		0.37 J	0.31 J		0.72 J
Acetone	UG/L	50				3.4 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	20	68	1.3	3.2	19
Vinyl chloride	UG/L	2	7.5		27	1.6	27
Xylene (total)	UG/L	5					

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SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-6D	GPZ-6D	GPZ-6D	GPZ-6S	GPZ-6S
Sample ID			GPZ6D02801	828072-GPZ6D028	828072-GPZ6D028	828072-GPZ6S019	GPZ6S01901
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	28.0-28.0	28.0-28.0	-	-
Date Sampled			07/22/08	07/11/12	05/24/18	01/17/08	07/22/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	7.5	6.9	4.7		
1,1-Dichloroethene	UG/L	5	0.72 J	0.63 J			
1,2-Dichloroethene (cis)	UG/L	5	120	120	82		
1,2-Dichloroethene (trans)	UG/L	5	1.6	1.5			
Acetone	UG/L	50	1.8 J			1.7 J	2.2 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.24 J				0.33 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5				0.23 J	
Trichloroethene	UG/L	5	12	3.4	1.2 J		
Vinyl chloride	UG/L	2	20	23	17		
Xylene (total)	UG/L	5					

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GPZ-6S	GW-001	GW-002	GW-002	GW-003
Sample ID			828072-GPZ6S019	828072-GW001012	828072-GW002011	828072-GW002011D	828072-GW003011
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			19.0-19.0	-	-	-	-
Date Sampled			07/11/12	07/07/08	07/07/08	07/07/08	07/07/08
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5		4,400			
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5		620	520	550	33 J
1,1-Dichloroethene	UG/L	5		260 J	270 J	280 J	
1,2-Dichloroethene (cis)	UG/L	5		71,000 D	180,000 D	170,000 D	5,500
1,2-Dichloroethene (trans)	UG/L	5		280 J	420 J	480 J	
Acetone	UG/L	50		1,200 J		670 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5		2,300	680	760	
Toluene	UG/L	5					
Trichloroethene	UG/L	5		590,000 D	240,000 D	250,000 D	20,000
Vinyl chloride	UG/L	2		4,900	11,000	11,000	300
Xylene (total)	UG/L	5					

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GW-004	GW-006	GW-007	GW-008	GW-009
Sample ID			828072-GW004012	828072-GW006011	828072-GW007012	828072-GW008012	828072-GW009012
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/07/08	07/07/08	07/07/08	07/08/08	07/07/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					690 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	430 J	120	100 J	240 J	400 J
1,1-Dichloroethene	UG/L	5		58 J			
1,2-Dichloroethene (cis)	UG/L	5	87,000	25,000 D	32,000	110,000 D	40,000
1,2-Dichloroethene (trans)	UG/L	5		76 J	140 J	400 J	
Acetone	UG/L	50	900 J		380 J		
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5			130 J		
Tetrachloroethene	UG/L	5	500	510	400 J		
Toluene	UG/L	5					
Trichloroethene	UG/L	5	100,000 D	130,000 D	110,000 D	100,000 D	1,200,000 D
Vinyl chloride	UG/L	2	2,500	1,500	4,500	12,000	14,000
Xylene (total)	UG/L	5					

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GW-010	GW-011	GW-012	GW-013	GW-014
Sample ID			828072-GW010014	828072-GW011012	828072-GW012013	828072-GW013013	828072-GW014013
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/08/08	07/08/08	07/08/08	07/08/08	07/08/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	1,600		5,000	21,000	72,000
1,2-Dichloroethene (trans)	UG/L	5					370 J
Acetone	UG/L	50				840 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7	26 J	1.6 J	150	360 J	
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	82				
Toluene	UG/L	5					
Trichloroethene	UG/L	5	6,600		16,000	51,000	180,000
Vinyl chloride	UG/L	2	200	63	280	300 J	740 J
Xylene (total)	UG/L	5					

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			GW-015	GW-016	GW-025	GW-034	GW-035
Sample ID			828072-GW015012	828072-GW016012	828072-GW025012	828072-GW034013	828072-GW035013
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			07/08/08	07/08/08	09/23/08	09/23/08	09/23/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			1.3	0.93 J	
1,1-Dichloroethene	UG/L	5			31		
1,2-Dichloroethene (cis)	UG/L	5	32,000	14,000	12,000 D	280 D	15
1,2-Dichloroethene (trans)	UG/L	5			55	2 J	
Acetone	UG/L	50	720 J		4.2 J	4.2 J	6.3 J
Benzene	UG/L	1			0.61 J		
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5			1.4	0.58 J	0.58 J
Trichloroethene	UG/L	5	77,000	92,000	44,000 D	48	45
Vinyl chloride	UG/L	2	290 J	720	40	31	0.65 J
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-01	MW-01A	MW-01D	MW-01D	MW-01D
Sample ID			828072-MW01	828072-MW01A008	828072-MW01D021	MW01D02101	828072-MW01D021
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			9.0-9.0	8.0-8.0	-	-	21.0-21.0
Date Sampled			07/11/12	05/22/18	01/15/08	07/23/08	07/11/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			0.34 J	0.33 J	
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	19 J		1.8	2	1.2
1,1-Dichloroethene	UG/L	5	33		0.95 J	0.91 J	0.68 J
1,2-Dichloroethene (cis)	UG/L	5	5,800 D	41	180	260 D	250 D
1,2-Dichloroethene (trans)	UG/L	5	68		1.5	4.8	2.4
Acetone	UG/L	50		460 J			1.4 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60				0.31 J	
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50		120			
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	9.5 J		1	1.2	
Toluene	UG/L	5	5.3 J	11			
Trichloroethene	UG/L	5	190		190 D	270 D	100
Vinyl chloride	UG/L	2	3,000	110	11	24	41
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-01DD	MW-01DD	MW-01DD	MW-02	MW-02
Sample ID			828072-MW1DD038	MW1DD03801	828072-MW1DD038	MW002000901	828072-MW002009
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	38.0-38.0	-	9.0-9.0
Date Sampled			01/15/08	07/21/08	07/11/12	07/23/08	07/11/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1				3.5 J	
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5				20	17 J
1,2-Dichloroethene (cis)	UG/L	5				5,900 D	5,500 D
1,2-Dichloroethene (trans)	UG/L	5				66	37
Acetone	UG/L	50		3.9 J			
Benzene	UG/L	1					
Carbon disulfide	UG/L	60		0.3 J			
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5				2.5 J	
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5				3,300 D	660
Vinyl chloride	UG/L	2				170	260 J
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-02	MW-02A	MW-02D	MW-02D	MW-02D
Sample ID			828072-MW002009D	828072-MW02A008	828072-MW02D017	MW02D01701	828072-MW02D017
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			9.0-9.0	8.0-8.0	-	-	17.0-17.0
Date Sampled			07/11/12	05/22/18	01/14/08	07/23/08	07/11/12
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5				0.47 J	0.24 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			1.3	2.3	1.2
1,1-Dichloroethene	UG/L	5	8.7 J			0.24 J	
1,2-Dichloroethene (cis)	UG/L	5	4,900 D	6,000	20	72	37
1,2-Dichloroethene (trans)	UG/L	5	21		0.56 J	3.3	1.4
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	2.9 J				100
Toluene	UG/L	5					
Trichloroethene	UG/L	5	450	660	0.38 J		28
Vinyl chloride	UG/L	2	43 J	970	1.6	7.7	8.7
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-02D	MW-03	MW-03	MW-03A	MW-03D
Sample ID			828072-MW02D020	828072-MW003	828072-MW00306	828072-MW03A008	828072-MW03D013
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			20.0-20.0	-	6.0-6.0	8.0-8.0	-
Date Sampled			05/22/18	07/07/08	07/11/12	05/22/18	01/16/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					0.27 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	0.8 J				1.3
1,1-Dichloroethene	UG/L	5					0.3 J
1,2-Dichloroethene (cis)	UG/L	5	12	180,000	150,000	750	47
1,2-Dichloroethene (trans)	UG/L	5		1,100	820 J		1.2
Acetone	UG/L	50		1,400 J		950 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50				250	
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	0.6 J	500,000 D	650,000 D		17
Vinyl chloride	UG/L	2	1.4	7,400	6,500	2,000	5.6
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-03D	MW-03D	MW-03D	MW-05	MW-05
Sample ID			MW03D01301	828072-MW03D020	828072-MW03D014	828072-MW005006	MW00500601
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	20.0-20.0	14.0-14.0	-	-
Date Sampled			07/22/08	07/11/12	05/23/18	01/15/08	07/21/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	0.35 J				
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	2.5	1.9		0.93 J	0.91 J
1,1-Dichloroethene	UG/L	5	0.41 J				
1,2-Dichloroethene (cis)	UG/L	5	160	65	1,100	0.49 J	0.58 J
1,2-Dichloroethene (trans)	UG/L	5	3.7	4.4			
Acetone	UG/L	50			370 J		4 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.26 J				
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50			76 J		
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	44				
Vinyl chloride	UG/L	2	13	22	410	0.26 J	0.43 J
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-05	MW-05D	MW-05D	MW-05D	MW-06
Sample ID			828072-MW005006	828072-MW05D010	MW05D01001	828072-MW05D010	828072-MW006008
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			6.0-6.0	-	-	10.0-10.0	-
Date Sampled			05/22/18	01/14/08	07/21/08	05/21/18	01/16/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5		0.71 J	0.4 J	0.42 J	
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5					1.2
1,2-Dichloroethene (trans)	UG/L	5					
Acetone	UG/L	50	10 J				
Benzene	UG/L	1					
Carbon disulfide	UG/L	60			0.43 J		
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5			0.2 J		
Trichloroethene	UG/L	5		0.41 J			
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-06	MW-06	MW-06D	MW-06D	MW-06D
Sample ID			MW00600101	828072-MW006008	828072-MW06D015	MW06D01501	828072-MW06D015
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	8.0-8.0	-	-	15.0-15.0
Date Sampled			07/21/08	07/12/12	01/16/08	07/23/08	07/12/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			0.57 J	0.74 J	
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			1.5	2.6	1.1
1,1-Dichloroethene	UG/L	5			0.96 J	1 J	
1,2-Dichloroethene (cis)	UG/L	5	2.2	0.76 J	220 D	380	76
1,2-Dichloroethene (trans)	UG/L	5			1.8	4.8	4.7
Acetone	UG/L	50	6.1 J	2.8 J			
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.22 J			0.62 J	
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5			0.81 J	0.86 J	
Toluene	UG/L	5					
Trichloroethene	UG/L	5		1.1	310 D	490 D	0.46 J
Vinyl chloride	UG/L	2			16	38	40
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-06D	MW-07	MW-07	MW-07	MW-07D
Sample ID			828072-MW06D015	828072-MW007015	MW00701501	828072-MW007015	828072-MW07D022
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			15.0-15.0	-	-	15.0-15.0	-
Date Sampled			05/24/18	01/16/08	07/21/08	07/12/12	01/16/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					0.45 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5					1.3
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	190	0.45 J	0.36 J	0.94 J	2.1
1,2-Dichloroethene (trans)	UG/L	5					
Acetone	UG/L	50			2 J	1.7 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60			0.2 J		
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5				0.4 J	0.34 J
Toluene	UG/L	5					
Trichloroethene	UG/L	5	25				4.3
Vinyl chloride	UG/L	2	9.8			1.5	
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-07D	MW-07D	MW-08	MW-08	MW-08
Sample ID			MW07D02201	828072-MW07D022	828072-MW008023	828072-MW008023DUP	MW00802301
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	22.0-22.0	-	-	-
Date Sampled			07/21/08	07/12/12	01/16/08	01/16/08	07/24/08
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	0.28 J				
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	1.4	1	15	15	16
1,1-Dichloroethene	UG/L	5	0.2 J		6 J	6	5.7 J
1,2-Dichloroethene (cis)	UG/L	5	9.1	2.7	1,700 D	1,700 D	2,000
1,2-Dichloroethene (trans)	UG/L	5			18	15	47
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	5.1	0.39 J	870	820	640
Vinyl chloride	UG/L	2	0.46 J	0.32 J	43	41	51
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-08	MW-08	MW-08	MW-08	MW-08D
Sample ID			MW00802301D	828072-MW008023	828072-MW008023D	828072-MW008023	828072-MW08D033
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	23.0-23.0	23.0-23.0	23.0-23.0	-
Date Sampled			07/24/08	07/11/12	07/11/12	05/23/18	01/16/08
Parameter	Units	Criteria*	Field Duplicate (1-1)		Field Duplicate (1-1)		
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					1.5
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	17	10	11		1.8
1,1-Dichloroethene	UG/L	5	6.3 J	3.4 J	2.8 J		1.8
1,2-Dichloroethene (cis)	UG/L	5	2,000	1,300 D	1,400 D	390	330 D
1,2-Dichloroethene (trans)	UG/L	5	42	17	15		3.6
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					1.7
Toluene	UG/L	5					
Trichloroethene	UG/L	5	610	17	21	6.2 J	590 D
Vinyl chloride	UG/L	2	53	89	93	73	20
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-08D	MW-08D	MW-08D	MW-09	MW-09
Sample ID			MW08D03301	828072-MW08D033	828072-MW08D033	828072-MW009025	MW00902501
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	33.0-33.0	33.0-33.0	-	-
Date Sampled			07/24/08	07/11/12	05/23/18	01/16/08	07/22/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	1 J			0.2 J	0.2 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	2.6 J	0.57 J		1.4	1.4
1,1-Dichloroethene	UG/L	5	1.6 J	0.56 J		0.33 J	0.29 J
1,2-Dichloroethene (cis)	UG/L	5	330	170	280	57	53
1,2-Dichloroethene (trans)	UG/L	5	4.4 J	13		0.33 J	0.92 J
Acetone	UG/L	50					2.3 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60		0.32 J			0.2 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	1 J				
Toluene	UG/L	5					
Trichloroethene	UG/L	5	660	79	82	38	27
Vinyl chloride	UG/L	2	22	8.7		4.2	6
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-09	MW-09	MW-09D	MW-09D	MW-09D
Sample ID			828072-MW009025	828072-MW009025	828072-MW09D035	MW09D03501	828072-MW09D035
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			25.0-25.0	25.0-25.0	-	-	35.0-35.0
Date Sampled			07/11/12	05/23/18	01/16/08	07/22/08	07/11/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			0.61 J	0.79 J	
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	1.7		0.64 J	3.6	0.53 J
1,1-Dichloroethene	UG/L	5	0.51 J			1.2	0.31 J
1,2-Dichloroethene (cis)	UG/L	5	130	280	14	290 D	120
1,2-Dichloroethene (trans)	UG/L	5	0.7 J		0.42 J	3.9	20
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5			0.22 J	1.1	
Toluene	UG/L	5					
Trichloroethene	UG/L	5	59	30	44	1,100 D	41
Vinyl chloride	UG/L	2	12	34	0.88 J	30	4.6
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-09D	MW-10	MW-10	MW-10	MW-11
Sample ID			828072-MW09D035	828072-MW010015	MW01001501	828072-MW010015	828072-MW011010
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			35.0-35.0	-	-	15.0-15.0	-
Date Sampled			05/23/18	01/15/08	07/21/08	07/12/12	01/18/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5					0.74 J
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	46				14
1,2-Dichloroethene (trans)	UG/L	5	4.3				
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	4.3				
Vinyl chloride	UG/L	2	1.7				19
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-11	MW-11	MW-11D	MW-11D	MW-11D
Sample ID			MW01101201	828072-MW011010	828072-MW11D026	828072-MW11D026DUP	MW11D02601
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	10.0-10.0	-	-	-
Date Sampled			07/24/08	07/12/12	01/17/08	01/17/08	07/24/08
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	0.64 J		3.1 J	3.2 J	2.2
1,1-Dichloroethene	UG/L	5			2 J	2 J	0.67 J
1,2-Dichloroethene (cis)	UG/L	5	11	0.3 J	490 J	490 DJ	170
1,2-Dichloroethene (trans)	UG/L	5	0.21 J		3.2 J	3.7 J	1.1
Acetone	UG/L	50		3 J			1.9 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5			520 D	520 D	30
Vinyl chloride	UG/L	2	16	0.4 J	34 J	35 J	6.3
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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Only Detected Results Reported.

TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-11D	MW-11D	MW-11D	MW-12	MW-12
Sample ID			MW11D02601D	828072-MW11D026	828072-MW11D026D	828072-MW012011	MW01201101
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	26.0-26.0	26.0-26.0	-	-
Date Sampled			07/24/08	07/12/12	07/12/12	01/15/08	07/21/08
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)		Field Duplicate (1-1)		
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	2.2	1.8	2.1		
1,1-Dichloroethene	UG/L	5	0.7 J	0.95 J	1		
1,2-Dichloroethene (cis)	UG/L	5	170	270 D	260 D		
1,2-Dichloroethene (trans)	UG/L	5	1.2	3.5	3.3		
Acetone	UG/L	50			1.1 J		2 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5		0.5 J	0.43 J		
Toluene	UG/L	5					
Trichloroethene	UG/L	5	31	2.9	3.1		
Vinyl chloride	UG/L	2	6.3	12	13		
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-12	MW-13	MW-13	MW-13D	MW-13D
Sample ID			828072-MW012011	828072-MW013006	MW01300501	828072-MW13D010	MW13D01001
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			11.0-11.0	-	-	-	-
Date Sampled			07/12/12	01/18/08	07/24/08	01/18/08	07/23/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5				1.1	1.2
1,1-Dichloroethene	UG/L	5				0.35 J	0.34 J
1,2-Dichloroethene (cis)	UG/L	5				42	57
1,2-Dichloroethene (trans)	UG/L	5				0.29 J	1.2
Acetone	UG/L	50	4.6 J		8 J		
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					0.2 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5		0.71 J		19	42
Vinyl chloride	UG/L	2				3.4	5.5
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-13D	MW-13DD	MW-13DD	MW-13DD	MW-14
Sample ID			828072-MW13D010	828072-MW13DD037	MW13DD03701	828072-MW13DD037	828072-MW014015
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			10.0-10.0	-	-	37.0-37.0	-
Date Sampled			07/11/12	01/18/08	07/23/08	07/11/12	01/17/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5		0.21 J			
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	0.87 J	0.95 J	1.8	1.6	1.4
1,1-Dichloroethene	UG/L	5	0.31 J	0.27 J	0.33 J	0.36 J	0.26 J
1,2-Dichloroethene (cis)	UG/L	5	71	35	71	100	50
1,2-Dichloroethene (trans)	UG/L	5	1.3	0.22 J	1.5	0.7 J	0.24 J
Acetone	UG/L	50	2.3 J				
Benzene	UG/L	1					
Carbon disulfide	UG/L	60				1.5	
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					0.25 J
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					0.32 J
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	45	37	73	100	18
Vinyl chloride	UG/L	2	5.4	1.7	6.8	9.6	3.3
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-14	MW-14	MW-14D	MW-14D	MW-14D
Sample ID			MW01401501	828072-MW014015	828072-MW14D029	MW14D02901	828072-MW14D029
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	15.0-15.0	-	-	29.0-29.0
Date Sampled			07/22/08	07/11/12	01/17/08	07/22/08	07/11/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			0.78 J	0.71 J	0.28 J
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	1.6	1.5	1	1.1	1.4
1,1-Dichloroethene	UG/L	5	0.51 J	0.45 J	0.25 J	0.27 J	0.3 J
1,2-Dichloroethene (cis)	UG/L	5	89	140	25	22	35
1,2-Dichloroethene (trans)	UG/L	5	0.71 J	1.4		0.34 J	0.49 J
Acetone	UG/L	50		1 J			
Benzene	UG/L	1	0.25 J				
Carbon disulfide	UG/L	60	0.22 J				
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5			0.23 J		
Toluene	UG/L	5					
Trichloroethene	UG/L	5	31	63	45	38	32
Vinyl chloride	UG/L	2	7.2	24	1.5	2.2	1.5
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-15	MW-15D	MW-15D	MW-15D	MW-16
Sample ID			828072-MW015006	828072-MW15D019	MW15D01901	828072-MW15D019	828072-MW016008
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	19.0-19.0	-
Date Sampled			01/18/08	01/17/08	07/24/08	07/12/12	01/18/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	1	2.4 J	2.5 J	2	
1,1-Dichloroethene	UG/L	5	0.3 J	1.2 J	1 J	0.91 J	
1,2-Dichloroethene (cis)	UG/L	5	170	260	250	290 D	
1,2-Dichloroethene (trans)	UG/L	5	1.8	2 J	5.2	2.2	
Acetone	UG/L	50				1.1 J	
Benzene	UG/L	1	0.97 J				
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10	0.83 J				
Methylcyclohexane	UG/L	-	0.4 J				
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5	0.94 J				
Trichloroethene	UG/L	5	33	410	50	51	
Vinyl chloride	UG/L	2	11	15	12	19	
Xylene (total)	UG/L	5	0.68 J				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-16	MW-16	MW-16D	MW-16D	MW-17
Sample ID			MW01600101	828072-MW016008	MW16D01901	828072-MW16D019	828072-MW017007
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	8.0-8.0	-	19.0-19.0	-
Date Sampled			07/23/08	07/12/12	07/22/08	07/12/12	01/17/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			2	0.56 J	
1,1-Dichloroethene	UG/L	5			1.2		
1,2-Dichloroethene (cis)	UG/L	5			230 D	23	
1,2-Dichloroethene (trans)	UG/L	5			2.6	0.48 J	
Acetone	UG/L	50			1.7 J	1.2 J	
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5			14	0.29 J	
Vinyl chloride	UG/L	2			11	31	
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-17	MW-17D	MW-17D	MW-17D	MW-18
Sample ID			MW01700701	828072-MW17D018	MW17D01801	828072-MW17D018	828072-MW018009
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	18.0-18.0	-
Date Sampled			07/22/08	01/17/08	07/21/08	07/12/12	01/15/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5		0.21 J	0.25 J		3.2
1,1-Dichloroethene	UG/L	5					0.8 J
1,2-Dichloroethene (cis)	UG/L	5		15	11	4.4	380 D
1,2-Dichloroethene (trans)	UG/L	5		0.44 J	0.43 J		1.4 J
Acetone	UG/L	50	12				
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.2 J				0.88 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5		0.61 J	0.31 J		0.92 J
Vinyl chloride	UG/L	2		7.8	14	4.5	18
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-18	MW-18	MW-18D	MW-18D	MW-18D
Sample ID			MW01800901	828072-MW018009	828072-MW18D019	MW18D01901	828072-MW18D019
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	9.0-9.0	-	-	19.0-19.0
Date Sampled			07/24/08	07/12/12	01/17/08	07/24/08	07/12/12
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	3.6	2	1.7 J	1.6	1.2
1,1-Dichloroethene	UG/L	5			0.62 J	0.67 J	
1,2-Dichloroethene (cis)	UG/L	5	320	54	280	180 D	180
1,2-Dichloroethene (trans)	UG/L	5	5	1.3	1.5 J	2.6	1.7
Acetone	UG/L	50		1.3 J			1.1 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60	0.6 J			0.37 J	
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5		0.31 J			
Toluene	UG/L	5					
Trichloroethene	UG/L	5		0.23 J	26	8.9	
Vinyl chloride	UG/L	2	120	55	19	12	34
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-19	MW-19	MW-19	MW-19D	MW-19D
Sample ID			828072-MW019006	MW01900601	828072-MW01900603	828072-MW19D014	MW19D01401
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			01/15/08	07/23/08	03/11/09	01/15/08	07/22/08
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	0.87 J			0.22 J	0.35 J
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	0.56 J			4.7	7.8
1,2-Dichloroethene (trans)	UG/L	5					0.26 J
Acetone	UG/L	50					2.3 J
Benzene	UG/L	1					
Carbon disulfide	UG/L	60		0.26 J			0.21 J
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5					0.24 J
Vinyl chloride	UG/L	2	0.27 J	4.6		10	33
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-19D	MW-20	MW-20D	MW-20D	MW-21
Sample ID			828072-MW19D014	828072-MW02000603	MW20D01901	828072-MW20D019	828072-MW021012
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			14.0-14.0	-	-	19.0-19.0	12.0-12.0
Date Sampled			07/12/12	03/11/09	07/22/08	07/12/12	05/24/18
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5			0.42 J		0.78 J
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	2.1		1.8	1.1	33
1,2-Dichloroethene (trans)	UG/L	5					
Acetone	UG/L	50	1.4 J			1.7 J	
Benzene	UG/L	1			0.62 J		
Carbon disulfide	UG/L	60			0.33 J		
Chloroform	UG/L	7			0.39 J		
Cyclohexane	UG/L	-			0.57 J		
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-			0.81 J		
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5			1		
Trichloroethene	UG/L	5			0.22 J		6.2
Vinyl chloride	UG/L	2	14		1.6	0.54 J	12
Xylene (total)	UG/L	5			1.08 J		

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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Concentration Exceeds Criteria

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NA - Not analyzed.

Only Detected Results Reported.

TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			MW-21D	MW-21D	PS- 1	PS- 7	PS- 8
Sample ID			828072-MW21D020	828072-MW21D020 DUP	828072-PS001	828072-PS007	828072-PS008
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			20.0-20.0	20.0-20.0	-	-	-
Date Sampled			05/24/18	05/24/18	12/04/07	12/07/07	12/07/07
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloroethane	UG/L	1					
1,1-Dichloroethane	UG/L	5	0.79 J	0.72 J			
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	48	46			
1,2-Dichloroethene (trans)	UG/L	5					
Acetone	UG/L	50					
Benzene	UG/L	1					
Carbon disulfide	UG/L	60					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5	3.5	3.6			
Vinyl chloride	UG/L	2	2.1	2.1			
Xylene (total)	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE A-3
SUMMARY OF HISTORICALLY DETECTED VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID			PS-11	PS-12	PS-13	PS-14
Sample ID			828072-PS011	828072-PS012	828072-PS013	828072-PS014
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			12/04/07	12/03/07	12/03/07	12/03/07
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	5				
1,1,2-Trichloroethane	UG/L	1				
1,1-Dichloroethane	UG/L	5				
1,1-Dichloroethene	UG/L	5				
1,2-Dichloroethene (cis)	UG/L	5				
1,2-Dichloroethene (trans)	UG/L	5				
Acetone	UG/L	50				
Benzene	UG/L	1				
Carbon disulfide	UG/L	60				
Chloroform	UG/L	7				
Cyclohexane	UG/L	-				
Methyl ethyl ketone (2-Butanone)	UG/L	50				
Methyl tert-butyl ether	UG/L	10				
Methylcyclohexane	UG/L	-				0.46 J
Methylene chloride	UG/L	5				
Tetrachloroethene	UG/L	5				
Toluene	UG/L	5				0.35 J
Trichloroethene	UG/L	5				
Vinyl chloride	UG/L	2				
Xylene (total)	UG/L	5				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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Only Detected Results Reported.

TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-01D	MW-03D	MW-05	MW-05	MW-05D
Sample ID				828072-MW01D021	828072-MW03D013	828072-MW005006	828072-MW005006	828072-MW05D010
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	6.0-6.0	-
Date Sampled				01/15/08	01/16/08	01/15/08	05/22/18	01/14/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	NA	NA	NA	2.9	NA
2-Methylnaphthalene	UG/L	-	-				NA	
Benzo(b)fluoranthene	UG/L	0.002	-				NA	
Benzo(g,h,i)perylene	UG/L	-	-				NA	
bis(2-Ethylhexyl)phthalate	UG/L	5	-				NA	
Chrysene	UG/L	0.002	-				NA	
Fluoranthene	UG/L	50	-				NA	
Phenanthrene	UG/L	50	-				NA	
Phenol	UG/L	1	-				NA	
Pyrene	UG/L	50	-				NA	
Metals								
Aluminum	UG/L	-	-			205	NA	
Barium	UG/L	1000	-	143	131	23.5	NA	136
Calcium	UG/L	-	-	160,000	153,000	313,000	NA	134,000
Iron	UG/L	300	-	1,450	8,030	1,150	NA	4,290
Magnesium	UG/L	35000	-	48,700	47,800	154,000	NA	45,900
Manganese	UG/L	300	-	105	248	612	NA	149
Potassium	UG/L	-	-	3,450	3,270	2,040	NA	3,240
Sodium	UG/L	20000	-	460,000	459,000	195,000	NA	471,000
Zinc	UG/L	2000	-	52.3	39.3	21.7	NA	

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-01D	MW-03D	MW-05	MW-05	MW-05D
Sample ID				828072-MW01D021	828072-MW03D013	828072-MW005006	828072-MW005006	828072-MW05D010
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	6.0-6.0	-
Date Sampled				01/15/08	01/16/08	01/15/08	05/22/18	01/14/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	328	338	NA	NA	NA
Chloride	MG/L	2.50E+05	-	696	743	NA	NA	NA
Nitrate-Nitrogen	MG/L	10000	-			NA	NA	NA
Nitrite-Nitrogen	MG/L	1000	-			NA	NA	NA
pH	S.U.	-	-	7.03	7.1	NA	NA	NA
Sulfate (as SO4)	MG/L	2.50E+05	-	95.9	85	NA	NA	NA
Sulfide	MG/L	50	-		3.43	NA	NA	NA
Total Dissolved Solids	MG/L	-	-	1,730	1,710	NA	NA	NA
Total Organic Carbon (TOC)	MG/L	-	-	3.11	2.94	NA	NA	NA
Dissolved Gases								
Carbon dioxide	MG/L	-	-	61	54	NA	NA	NA
Ethane	UG/L	-	-	0.71 J	0.96 J	NA	NA	NA
Ethene	UG/L	-	-	0.31 J	0.5 J	NA	NA	NA
Methane	UG/L	-	-	300 D	320 D	NA	NA	NA
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	NA	NA	NA	11 J	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	NA	NA	NA	29 B	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	NA	NA	NA	3.5	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	NA	NA	NA	8.2	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10	NA	NA	NA	2.3	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-01D	MW-03D	MW-05	MW-05	MW-05D
Sample ID				828072-MW01D021	828072-MW03D013	828072-MW005006	828072-MW005006	828072-MW05D010
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	6.0-6.0	-
Date Sampled				01/15/08	01/16/08	01/15/08	05/22/18	01/14/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10	NA	NA	NA	6.1	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	NA	NA	NA	11	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-05D	MW-06D	MW-07D	MW-08	MW-08
Sample ID				828072-MW05D010	828072-MW06D015	828072-MW07D022	828072-MW008023	828072-MW008023DUP
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				10.0-10.0	-	-	-	-
Date Sampled				05/21/18	01/16/08	01/16/08	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					Field Duplicate (1-1)
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	0.12 J	NA	NA	NA	NA
2-Methylnaphthalene	UG/L	-	-	NA				
Benzo(b)fluoranthene	UG/L	0.002	-	NA				
Benzo(g,h,i)perylene	UG/L	-	-	NA				
bis(2-Ethylhexyl)phthalate	UG/L	5	-	NA				
Chrysene	UG/L	0.002	-	NA				
Fluoranthene	UG/L	50	-	NA				
Phenanthrene	UG/L	50	-	NA				
Phenol	UG/L	1	-	NA				
Pyrene	UG/L	50	-	NA				
Metals								
Aluminum	UG/L	-	-	NA				
Barium	UG/L	1000	-	NA	147	142	430	439
Calcium	UG/L	-	-	NA	158,000	162,000	148,000	139,000
Iron	UG/L	300	-	NA	5,650	4,540	2,240	2,090
Magnesium	UG/L	35000	-	NA	48,500	50,400	48,500	45,200
Manganese	UG/L	300	-	NA	156	120	83.3	76.7
Potassium	UG/L	-	-	NA	3,260	3,450	3,320	3,120
Sodium	UG/L	20000	-	NA	461,000	474,000	411,000	391,000
Zinc	UG/L	2000	-	NA	62.5	31.5		

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-05D	MW-06D	MW-07D	MW-08	MW-08
Sample ID				828072-MW05D010	828072-MW06D015	828072-MW07D022	828072-MW008023	828072-MW008023DUP
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				10.0-10.0	-	-	-	-
Date Sampled				05/21/18	01/16/08	01/16/08	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					Field Duplicate (1-1)
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	NA	341	339	350	351
Chloride	MG/L	2.50E+05	-	NA	747	730	647	684
Nitrate-Nitrogen	MG/L	10000	-	NA				
Nitrite-Nitrogen	MG/L	1000	-	NA				
pH	S.U.	-	-	NA	7.01	7.02	7.1	7.07
Sulfate (as SO4)	MG/L	2.50E+05	-	NA	90.5	89.6	77.7	77.9
Sulfide	MG/L	50	-	NA		1.12		
Total Dissolved Solids	MG/L	-	-	NA	1,720	1,740	1,540	1,500
Total Organic Carbon (TOC)	MG/L	-	-	NA	3.15	3.1	3.37	3.2
Dissolved Gases								
Carbon dioxide	MG/L	-	-	NA	67	66	56	60
Ethane	UG/L	-	-	NA	0.94 J	0.4 J	5.6	5.5
Ethene	UG/L	-	-	NA	1		6.9	6.9
Methane	UG/L	-	-	NA	280 D	340 D	160 D	160 D
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	0.7 J	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	26 B	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	2.9	NA	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	8.6	NA	NA	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10		NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
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Only Detected Results Reported.

TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-05D	MW-06D	MW-07D	MW-08	MW-08
Sample ID				828072-MW05D010	828072-MW06D015	828072-MW07D022	828072-MW008023	828072-MW008023DUP
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				10.0-10.0	-	-	-	-
Date Sampled				05/21/18	01/16/08	01/16/08	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					Field Duplicate (1-1)
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10	1.7 J	NA	NA	NA	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	10	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-08	MW-08D	MW-08D	MW-09	MW-09D
Sample ID				828072-MW008023	828072-MW08D033	828072-MW08D033	828072-MW009025	828072-MW09D035
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				23.0-23.0	-	33.0-33.0	-	-
Date Sampled				05/23/18	01/16/08	05/23/18	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	1.1	NA	0.53	NA	NA
2-Methylnaphthalene	UG/L	-	-	NA		NA	NA	
Benzo(b)fluoranthene	UG/L	0.002	-	NA		NA	NA	
Benzo(g,h,i)perylene	UG/L	-	-	NA		NA	NA	
bis(2-Ethylhexyl)phthalate	UG/L	5	-	NA		NA	NA	
Chrysene	UG/L	0.002	-	NA		NA	NA	
Fluoranthene	UG/L	50	-	NA		NA	NA	
Phenanthrene	UG/L	50	-	NA		NA	NA	
Phenol	UG/L	1	-	NA		NA	NA	
Pyrene	UG/L	50	-	NA		NA	NA	
Metals								
Aluminum	UG/L	-	-	NA		NA	NA	
Barium	UG/L	1000	-	NA	143	NA	NA	144
Calcium	UG/L	-	-	NA	147,000	NA	NA	134,000
Iron	UG/L	300	-	NA	2,520	NA	NA	1,670
Magnesium	UG/L	35000	-	NA	44,900	NA	NA	39,900
Manganese	UG/L	300	-	NA	113	NA	NA	96.4
Potassium	UG/L	-	-	NA	3,090	NA	NA	2,810
Sodium	UG/L	20000	-	NA	459,000	NA	NA	431,000
Zinc	UG/L	2000	-	NA	69.8	NA	NA	102

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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NA - Not analyzed.

Only Detected Results Reported.

TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-08	MW-08D	MW-08D	MW-09	MW-09D
Sample ID				828072-MW008023	828072-MW08D033	828072-MW08D033	828072-MW009025	828072-MW09D035
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				23.0-23.0	-	33.0-33.0	-	-
Date Sampled				05/23/18	01/16/08	05/23/18	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	NA	332	NA	327	301
Chloride	MG/L	2.50E+05	-	NA	811	NA	742	38.4
Nitrate-Nitrogen	MG/L	10000	-	NA		NA		3.51
Nitrite-Nitrogen	MG/L	1000	-	NA		NA		
pH	S.U.	-	-	NA	6.97	NA	7.01	7
Sulfate (as SO4)	MG/L	2.50E+05	-	NA	89.2	NA	83.5	35
Sulfide	MG/L	50	-	NA		NA		
Total Dissolved Solids	MG/L	-	-	NA	1,700	NA	430	1,620
Total Organic Carbon (TOC)	MG/L	-	-	NA	3.09	NA	3.43	3.67
Dissolved Gases								
Carbon dioxide	MG/L	-	-	NA	71	NA	64	60
Ethane	UG/L	-	-	NA	0.93 J	NA	0.95 J	0.36 J
Ethene	UG/L	-	-	NA	1.5	NA	0.31 J	
Methane	UG/L	-	-	NA	310 D	NA	240 D	180 D
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	0.41 J	NA	0.74 J	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	44 B	NA	27 B	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	0.89 J	NA	2.4	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	4.3	NA	7.5	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10		NA		NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

Empty cell - not detected. D - Result reported from a secondary dilution analysis. J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-08	MW-08D	MW-08D	MW-09	MW-09D
Sample ID				828072-MW008023	828072-MW08D033	828072-MW08D033	828072-MW009025	828072-MW09D035
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				23.0-23.0	-	33.0-33.0	-	-
Date Sampled				05/23/18	01/16/08	05/23/18	01/16/08	01/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10		NA	1.5 J	NA	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	7.3	NA	10	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria (1)

Concentration Exceeds Criteria (2)

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TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-11D	MW-11D	MW-13	MW-13D	MW-13DD
Sample ID				828072-MW11D026	828072-MW11D026DUP	828072-MW013006	828072-MW13D010	828072-MW13DD037
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/18/08	01/18/08	01/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**		Field Duplicate (1-1)			
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	NA	NA	NA	NA	NA
2-Methylnaphthalene	UG/L	-	-					
Benzo(b)fluoranthene	UG/L	0.002	-			0.56 J		
Benzo(g,h,i)perylene	UG/L	-	-			0.47 J		
bis(2-Ethylhexyl)phthalate	UG/L	5	-		0.37 J			
Chrysene	UG/L	0.002	-			0.39 J		
Fluoranthene	UG/L	50	-			0.75 J		
Phenanthrene	UG/L	50	-			0.48 J		
Phenol	UG/L	1	-				0.56 J	
Pyrene	UG/L	50	-			0.54 J		
Metals								
Aluminum	UG/L	-	-					
Barium	UG/L	1000	-	182	183	39.3	138	145
Calcium	UG/L	-	-	145,000	148,000	153,000	132,000	147,000
Iron	UG/L	300	-	2,160	2,210	4,270	3,350	1,000
Magnesium	UG/L	35000	-	43,700	44,300	37,100	41,600	42,000
Manganese	UG/L	300	-	115	118	385	300	86
Potassium	UG/L	-	-	3,070	3,110	2,000	3,070	2,920
Sodium	UG/L	20000	-	397,000	398,000	96,500	365,000	417,000
Zinc	UG/L	2000	-	31.6	31.8			68.6

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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Sample ID				828072-MW11D026	828072-MW11D026DUP	828072-MW013006	828072-MW13D010	828072-MW13DD037
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/18/08	01/18/08	01/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**		Field Duplicate (1-1)			
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	329	NA	NA	295	335
Chloride	MG/L	2.50E+05	-	705	NA	NA	624	696
Nitrate-Nitrogen	MG/L	10000	-		NA	NA		
Nitrite-Nitrogen	MG/L	1000	-		NA	NA		
pH	S.U.	-	-	7.01	NA	NA	7.05	7.01
Sulfate (as SO4)	MG/L	2.50E+05	-	84.5	NA	NA	64.6	103
Sulfide	MG/L	50	-		NA	NA		
Total Dissolved Solids	MG/L	-	-	1,550	NA	NA	1,370	1,580
Total Organic Carbon (TOC)	MG/L	-	-	4.59	NA	NA	2.05	2.98
Dissolved Gases								
Carbon dioxide	MG/L	-	-	64	NA	NA	53	65
Ethane	UG/L	-	-	1.8	NA	NA	1	0.83 J
Ethene	UG/L	-	-	1.4	NA	NA		
Methane	UG/L	-	-	280 D	NA	NA	640 D	110 D
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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Sample ID				828072-MW11D026	828072-MW11D026DUP	828072-MW013006	828072-MW13D010	828072-MW13DD037
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/18/08	01/18/08	01/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**		Field Duplicate (1-1)			
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10	NA	NA	NA	NA	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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Only Detected Results Reported.

TABLE A-4
SUMMARY OF HISTORICALLY DETECTED NON-VOCs IN GROUNDWATER SAMPLES
PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-14	MW-14D	MW-15D	MW-16	MW-17
Sample ID				828072-MW014015	828072-MW14D029	828072-MW15D019	828072-MW016008	828072-MW017007
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/17/08	01/18/08	01/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	NA	NA	NA	NA	NA
2-Methylnaphthalene	UG/L	-	-					
Benzo(b)fluoranthene	UG/L	0.002	-					
Benzo(g,h,i)perylene	UG/L	-	-					
bis(2-Ethylhexyl)phthalate	UG/L	5	-					
Chrysene	UG/L	0.002	-					
Fluoranthene	UG/L	50	-					
Phenanthrene	UG/L	50	-					
Phenol	UG/L	1	-					
Pyrene	UG/L	50	-					
Metals								
Aluminum	UG/L	-	-					
Barium	UG/L	1000	-	289	148	152	76.7	104
Calcium	UG/L	-	-	128,000	144,000	155,000	195,000	136,000
Iron	UG/L	300	-	445	1,270	1,330		
Magnesium	UG/L	35000	-	48,800	42,300	47,400	47,400	50,900
Manganese	UG/L	300	-	367	94.1	100	14.3	48.9
Potassium	UG/L	-	-	5,360	2,890	3,210		8,660
Sodium	UG/L	20000	-	429,000	438,000	428,000	52,200	7,600
Zinc	UG/L	2000	-		105	50.3	38.2	20.2

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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Location ID				MW-14	MW-14D	MW-15D	MW-16	MW-17
Sample ID				828072-MW014015	828072-MW14D029	828072-MW15D019	828072-MW016008	828072-MW017007
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/17/08	01/18/08	01/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	298	312	249	389	482
Chloride	MG/L	2.50E+05	-	727	752	733	76.9	18.6
Nitrate-Nitrogen	MG/L	10000	-				34.3	9.87
Nitrite-Nitrogen	MG/L	1000	-					0.12
pH	S.U.	-	-	7.38	7.04	6.98	6.78	7.01
Sulfate (as SO4)	MG/L	2.50E+05	-	83.1	92.6	93.6	138	54.2
Sulfide	MG/L	50	-					
Total Dissolved Solids	MG/L	-	-	1,590	1,590	1,660	858	596
Total Organic Carbon (TOC)	MG/L	-	-	3.39	3.46	2.99	6.98	3.29
Dissolved Gases								
Carbon dioxide	MG/L	-	-	25	28	19	129	94
Ethane	UG/L	-	-	9.6	0.58 J	1.5 J		0.38 J
Ethene	UG/L	-	-	0.66 J		0.89 J		
Methane	UG/L	-	-	120 D	140 D	210 D		1.1 J
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Criteria (2)- Recommended Screening Level - New York State Drinking Water Quality Council (DWQC), January 2019

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-14	MW-14D	MW-15D	MW-16	MW-17
Sample ID				828072-MW014015	828072-MW14D029	828072-MW15D019	828072-MW016008	828072-MW017007
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/17/08	01/17/08	01/18/08	01/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10	NA	NA	NA	NA	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-17D	MW-18	MW-18D	MW-19	MW-19D
Sample ID				828072-MW17D018	828072-MW018009	828072-MW18D019	828072-MW019006	828072-MW19D014
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/15/08	01/17/08	01/15/08	01/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Semivolatile Organic Compounds								
1,4-Dioxane	UG/L	-	1	NA	NA	NA	NA	NA
2-Methylnaphthalene	UG/L	-	-		0.36 J			
Benzo(b)fluoranthene	UG/L	0.002	-					
Benzo(g,h,i)perylene	UG/L	-	-					
bis(2-Ethylhexyl)phthalate	UG/L	5	-					
Chrysene	UG/L	0.002	-					
Fluoranthene	UG/L	50	-					
Phenanthrene	UG/L	50	-		0.39 J			
Phenol	UG/L	1	-					
Pyrene	UG/L	50	-					
Metals								
Aluminum	UG/L	-	-					
Barium	UG/L	1000	-	92.8	192	174	92.9	78.5
Calcium	UG/L	-	-	115,000	258,000	148,000	107,000	125,000
Iron	UG/L	300	-	1,020	2,030	591		862
Magnesium	UG/L	35000	-	31,900	47,600	45,200	30,600	36,900
Manganese	UG/L	300	-	98.3	72.6	108	27.3	121
Potassium	UG/L	-	-	2,890	18,500	3,340	6,840	2,670
Sodium	UG/L	20000	-	111,000	303,000	400,000	8,970	47,700
Zinc	UG/L	2000	-	94.9				526

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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Sample ID				828072-MW17D018	828072-MW018009	828072-MW18D019	828072-MW019006	828072-MW19D014
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/15/08	01/17/08	01/15/08	01/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Miscellaneous Parameters								
Alkalinity	MG/L	-	-	342	268	345	315	338
Chloride	MG/L	2.50E+05	-	190	766	678	42.1	104
Nitrate-Nitrogen	MG/L	10000	-				3.57	
Nitrite-Nitrogen	MG/L	1000	-					
pH	S.U.	-	-	7.02	7.52	6.99	7.32	6.96
Sulfate (as SO4)	MG/L	2.50E+05	-	72.5	68.9	102	35.6	81.8
Sulfide	MG/L	50	-					
Total Dissolved Solids	MG/L	-	-	750	1,760	1,580	1,560	614
Total Organic Carbon (TOC)	MG/L	-	-	3.72	8.89	3.74	3.36	3.5
Dissolved Gases								
Carbon dioxide	MG/L	-	-	65	16	71	30	74
Ethane	UG/L	-	-	0.48 J	1.6 J	1.2	1.3	
Ethene	UG/L	-	-			0.38 J		
Methane	UG/L	-	-	84	110	130 D	3.7	43
Per- and Polyfluoroalkyl Substances								
Perfluorobutanesulfonic acid (PFBS)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	-	100	NA	NA	NA	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	-	10	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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PRE-DESIGN INVESTIGATION
ERDLE PERFORATING SITE

Location ID				MW-17D	MW-18	MW-18D	MW-19	MW-19D
Sample ID				828072-MW17D018	828072-MW018009	828072-MW18D019	828072-MW019006	828072-MW19D014
Matrix				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)				-	-	-	-	-
Date Sampled				01/17/08	01/15/08	01/17/08	01/15/08	01/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**					
Per- and Polyfluoroalkyl Substances								
Perfluorooctanoic acid (PFOA)	NG/L	-	10	NA	NA	NA	NA	NA
Perfluoropentanoic acid (PFPeA)	NG/L	-	100	NA	NA	NA	NA	NA

Criteria (1)- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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APPENDIX B

PRE-DESIGN INVESTIGATION WORK PLAN

AECOM

May 13, 2021

Mr. Benjamin Rung, PE
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E
625 Broadway, 12th Floor
Albany, NY 12233-7016

RE: Contract No. D009803, WA-36
Pre-Design Investigation Work Plan
Erdle Perforating Site No. 828072

Dear Mr. Rung:

AECOM USA, Inc. (AECOM) is pleased to submit this Pre-Design Investigation (PDI) Work Plan for field activities at the Erdle Perforating Site (Site). The Site is located at 100 Pixley Industrial Parkway in the Town of Gates, Monroe County, New York (Tax ID: 118.20-2-95.1, current owner: Falcon Industries). Figure 1 presents the Site Location Plan.

The Site is approximately 9.2 acres and is bounded on the south by CSX railroad tracks and an undeveloped wooded area further south of the railroad tracks, on the north and east by light industry and on the west by open land and Interstate 490. The Site contains one 84,000 square foot facility building which was constructed in 1968. The main site feature is this occupied facility building which is surrounded by an asphalt parking area to the north and grass and wooded areas to the south, east and west. The Site and surrounding developed areas are serviced by public water. A townhouse development (Hidden Valley Development) is located approximately 800 feet south of the Site. The property and land south of the Site are fairly low lying, with areas of intermittent stagnant water. A drainage swale is located along the west side of the Site parcel. The drainage swale passes under the railroad tracks, through the undeveloped wooded land south of the Site and eventually along the western edge of the Hidden Valley Development to a small pond located along the western edge of the development.

The Site is currently active and is zoned for industrial purposes including manufacturing and processing and is currently active. Site occupants include a manufacturer of various types of perforated sheet metal products. The surrounding parcels to the north, east and west, which include both undeveloped and developed properties, are also zoned for industrial purposes. The undeveloped and developed areas located south of the CSX railroad tracks are zoned for one-family residential. The Site Plan is presented as Figure 2.

The scope of work described in this PDI Work Plan includes the following activities:

- Soil boring advancement;
- Overburden and bedrock monitoring well installation;
- Soil sampling;
- Water level and non-aqueous phase liquids (NAPL) thickness measurement;
- Groundwater sampling; and,
- NAPL sampling (if present).

Locations of the planned soil borings and monitoring wells are shown on Figure 3 (locations may change based on physical access constraints and soil boring findings.

This PDI Work Plan will be used in conjunction with the *Health and Safety Plan* (HASP) and *Generic Field Activity Plan* (FAP) for Work Assignments under Standby Engineering Services Contract D009803-36, which are included as Attachments 1 and 2, respectively. Please refer to these plans for descriptions of routine field procedures, field forms, and quality assurance procedures.

GEOLOGY

Overburden Geology

Overburden in the vicinity of the Site is described as unconsolidated glacial till deposits consisting of silty fine sands and clays, with some small fine sand lenses and a sandy/gravel layer above bedrock in boring logs completed by MACTEC Engineering and Consulting, P.C. (MACTEC) (MACTEC, 2012a). Soils between the Erdle property and the pond at the Hidden Valley Development are mapped by the Natural Resource Conservation Service as glaciolacustrine, glaciofluvial, or deltaic deposit specifically: 1) Lamson very fine sandy loam – very poorly drained, 2) Claverack loamy fine sand – moderately well drained, and Cosad loamy fine sand – somewhat poorly drained.

Bedrock Geology

Bedrock at the Site is mapped as Lockport Group – limestone/dolostone. Bedrock is encountered seven to 18 feet below ground surface (bgs) at the Site. Based on geologic information from the Gates Quarry, located approximately 8,000 feet east of the Site, shallow bedrock in the vicinity of the Site likely consists of the Oak Orchard Member or Penfield Member of the Lockport Group, both lower Silurian dolostones. Well logs from the Site indicate that shallow bedrock is fractured and water bearing. Borings completed during the MACTEC Remedial Investigation (RI) indicated that bedrock consisted of gray to light gray dolostone/limestone with some light grayish brown layers. The rock was characterized as medium grained with vugs, fossils, and some styolites. Fractures were noted as primarily horizontal and paralleling the apparent bedding plane (due to minimal staining, there was little difference noted between fractures and mechanical breaks along horizontal bedding planes). The rock quality designation (RQD) indicated that the rock was fairly competent with calculated RQD values ranging from 83 to 100% (MACTEC, 2012a).

Hydrogeology

Overburden groundwater in the historic source area on the south side of the Site building is interpreted to flow southwest towards the drainage swale adjacent to the Site. Bedrock groundwater at the Site is interpreted to flow primarily to the south. Depth to groundwater at the Site was measured at 1 to 2 feet bgs adjacent to the south side of the Erdle building, which is approximately 554 feet above mean sea level. Based on the shallow depth to groundwater and the shallow depth of the drainage swale, the drainage swale may be acting as a discharge point for shallow groundwater to surface water, although the silt/clay nature of the overburden may be confining/limiting this movement. Hydraulic conductivity tests (slug tests) were not conducted at the Site for either the overburden or bedrock wells during the RI but were performed at monitoring wells located approximately 120 feet downgradient from the Site. Based on groundwater gradients across and south of the Site, calculated overburden groundwater flow velocities varied from 16 feet/year in monitoring well MW-14 to 172 feet per year in monitoring well MW-19, with a geometric mean of 50 feet/year in the four overburden wells for which hydraulic conductivity were calculated. The corresponding hydraulic conductivity values ranged from 0.001 centimeters per second (cm/sec) to 0.012 cm/sec. Based on field observations during groundwater sampling of overburden wells, hydraulic conductivities in the area previously treated with electrical resistivity heating (ERH) at the Site are expected to be lower than these ranges. Based on groundwater gradients across and south of the Site, calculated shallow bedrock groundwater flow velocities varied from 371 feet/year in monitoring well MW-17D to 1826 feet per year in monitoring well MW-14D, with a geometric mean of 962 feet/year in the five bedrock wells for which hydraulic conductivity was calculated. The corresponding hydraulic conductivity values ranged from 0.002 cm/sec to 0.010 cm/sec (MACTEC, 2012a).

SITE HISTORY

Background

Erdle constructed its facility in 1968 on what was then farmland. Erdle used a variety of lubricants in its perforating processes which were removed from the finished product through the use of degreasing solvents, such as trichloroethene (TCE). From the early 1970s to 1987 Erdle collected spent TCE degreasing solvent in a 2,000 gallon underground storage tank (UST) prior to shipping off-site for disposal. The TCE

UST was located adjacent to the southwestern edge of the building. Erdle also stored waste oils in a UST next to the TCE UST. In February 1987, the TCE UST failed a pressure test and was determined to have leaked into the subsurface. Subsequent soil and groundwater sampling confirmed that Site soil and groundwater had been impacted by TCE. The TCE tank and several other tanks (including the waste oils tank formerly adjacent to the TCE UST) on the property were removed in 1987 along with approximately 100 cubic yards of contaminated soil. Erdle provided a report on these removals to the New York State Department of Environmental Conservation (NYSDEC, Department) in July 1987 which resulted in the site being listed as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites.

Investigation and Remedial History

The following narratives provide a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Primary Site Investigation and Remedial Reports:

- 1987: Leaking UST identified and removed, along with contaminated soil (Day, 1987).
- 1987: Site listed as Class 2 site in Registry of Inactive Hazardous Waste Disposal Sites (NYSDEC, 2010b).
- October 24, 1994: Consent Order B8-0185-87-05, signed by Erdle Perforating Company (NYSDEC, 2010b).
- 1995: Phase I Site Investigation, completed by Erdle Perforating Company (Radian, 1995).
- 1996: Phase II Site Investigation, completed by Erdle Perforating Company (NYSDEC, 2010b).
- 1997: Installation of a dual phase extraction system as an interim remedial measure (IRM), by Erdle Perforating Company (NYSDEC, 2010b).
- 1998: Remedial Alternatives Feasibility Study, completed by Erdle Perforating Company (Radian, 1998).
- 1999: Installation of off-site groundwater monitoring wells, completed by Erdle Perforating Company (NYSDEC, 2010b).
- 2002: Dual phase extraction system shut down, by Erdle Perforating Company (NYSDEC, 2010b).
- 2005: Off-site limited SVI study, by Erdle Perforating Company (NYSDEC, 2010b).
- 2006: Erdle Perforating Company Site referred to State Superfund by NYSDEC (NYSDEC, 2006).
- 2007: Off-site SVI study performed by NYSDEC (EA Engineering, 2007).
- 2008-2010 Remedial Investigation/Feasibility Study (RI/FS) completed by MACTEC for the NYSDEC (included installation of additional sub-slab depressurization systems [SSDSs]) (MACTEC, 2010).
- July 2012: Baseline groundwater sampling completed by MACTEC for the NYSDEC (MACTEC, 2012b).
- June 2013: SSDSs installed at 391 Upper Valley Road and 394 Upper Valley Road, by Mitigation Tech (MACTEC, 2013).
- December 8, 2014: Dual phase extraction system removed by TRS (MACTEC, 2017).
- January 2015 - June 2015: ERH system components installed, by TRS (MACTEC, 2017).
- June 26, 2015 - April 2016: ERH system operated and maintained by TRS (MACTEC, 2017).
- May 2018: Post ERH groundwater sampling (MACTEC, 2018).
- May 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2019).
- November 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020a).
- June 2020: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020b).

Erdle performed several RI activities, including installation and sampling of on-site and off-site groundwater monitoring wells, conducting a FS and installing a dual phase extraction system as an IRM to attempt to extract contaminated groundwater and vapor from the source area. The dual phase extraction system was installed in 1997 and operated for less than one year with minimal effect (MACTEC, 2010). NYSDEC retained MACTEC in 2007 to conduct an RI at the Site to define the nature and distribution of any contamination resulting from previous activities at the Site. The RI activities were conducted from 2007 to 2010 and included the following activities:

- Historical site data review,
- Soil boring and monitoring well installations,
- Sampling of pore water point installations for VOC analysis,
- Stream piezometer installation,
- Sampling of groundwater from overburden and bedrock monitoring wells for VOC, semi-volatile organic compounds (SVOCs), and metals analysis,
- Sampling of soil for VOC, SVOCs, metals, pesticides, and PCB analysis,
- Sampling of soil vapor, indoor air, and outdoor air for VOC analysis, and
- Qualitative exposure assessment – Public Health Evaluation.

Based on the groundwater and soil sampling, the disposal of hazardous waste resulted in the contamination of groundwater and soil. The Site primary contaminants of concern are VOCs, including TCE and its associated breakdown products cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). Based on the SVI sampling conducted during the heating seasons of 2007, 2008, 2009, and 2010, the disposal of hazardous waste resulted in contamination of soil vapor. The site contaminants of concern in soil vapor and indoor air are VOCs, including TCE and its associate breakdown products cis-1,2-DCE, and VC. To address current and/or potential indoor air contamination from VOCs associated with SVI, 10 SSDSs were installed at residential locations as IRMs between 2007 and 2010 during and after the completion of the MACTEC RI. Two additional residential SSDSs were installed in 2013 as a result of annual SVI monitoring (MACTEC, 2013). No further action was deemed necessary for the remaining 43 residential structures sampled (MACTEC, 2013).

Based on surface water sampling conducted by the Monroe County Department of Public Health in June 2007, no site-related surface water contamination of concern was identified; No Standards, Criteria, or Guidance (SCGs) were exceeded for VOCs in surface water, indicating that VOC impacted groundwater has not impacted the surface water within the drainage swales or retention pond. Sediment samples were not collected from the wooded area located downgradient of the soil source area because the area is only intermittently wet, and no standing water was observed. Samples were not collected within the drainage swale because it is dredged regularly by the town Department of Public Works. Soil samples collected within the wooded area did not reveal detected concentrations exceeding SCGs, indicating no site-related sediment contamination of concern.

Following completion of the RI/FS, the Record of Decision (ROD) outlined the selected remedy for the Site:

- Installation of an *in-situ* ERH system, including heating of soil and groundwater to volatilize VOC contamination and vapor recovery extraction wells for vapor recovery with ex-situ vapor treatment
- Potential implementation of an *in-situ* enhanced biodegradation program depending on the effectiveness of the ERH remedial action at the contaminant source area
- Institutional controls in the form of an environmental easement for the controlled property
- Site Management Plan (NYSDEC, 2010b)

An *in-situ* ERH system was installed and operated from June 2015 to April 2016. The goal of the remedial action was the cleanup of source area soils to meet the New York State Codes Rules and Regulations Part 375 Soil Cleanup Objectives for the protection of groundwater. The post remedial action soil confirmation samples indicated that the goals of the source area remediation were met. Although post ERH soil samples indicated the soils met the soil cleanup objectives, groundwater sampling conducted in May 2018 and May 2019 indicated that contaminants (primarily chlorinated compounds) were still present in groundwater at and downgradient from the Site at concentrations above New York State Standards (MACTEC, 2018 and 2019). As a result, six new wells were installed (IW-1 to IW-6). RemOx® SR+ISCO cylinders (a mix of potassium permanganate and sodium persulfate cylinders provided by Carus Corporation) were placed in the new wells and in four existing wells (MW-8, MW-8D, MW-9, and MW-9D) to oxidize the remaining contaminants present in groundwater.

REMAINING CONTAMINATION

The remaining contamination at the Site consists of primarily chlorinated compounds, specifically TCE and daughter products, in groundwater. Residual soil contamination could also be present around the perimeter of the ERH treatment area. Remaining off-Site contamination consists of groundwater and soil vapor contamination.

Soil

No soil samples results exceeded the Restricted Use Soil Cleanup Objectives (SCOs), Protection of Groundwater after completion of the remedial action (MACTEC, 2017).

Sediment

Sediment is not a medium of concern at this Site.

Groundwater

Groundwater sampling was conducted just prior to the ERH operations in April 2015 to establish a baseline prior to implementation of the remedial action. Operation of the ERH system was conducted from June 2015 through April 2016. Following the ERH operations, in May 2016 groundwater sampling of the ERH treatment area wells was conducted (MACTEC, 2017). In May 2018, groundwater sampling was conducted at the request of the NYSDEC to further evaluate the effectiveness of the ERH treatment at select site wells (MACTEC, 2018). The May 2018 evaluation indicated that concentrations continued to exceed groundwater standards, however, total chlorinated VOC (CVOC) groundwater concentrations in the overburden source area at monitoring well MW-3A decreased from 409,700 micrograms per liter (µg/L) in April 2015 to 2,750 µg/L in May 2018. CVOC concentrations in most of the source area monitoring wells decreased since 2015, except for monitoring well MW-3D, which increased since the completion of the ERH treatment from a total CVOC concentration of 57.5 µg/L in 2015 to 1,520 µg/L in May 2018. Nine wells downgradient of the former source area were also sampled in 2018. Although total CVOCs concentrations in most wells decreased since 2012 (prior to the ERH treatment), concentrations in some of the wells remained consistent or increased over the same time period (MACTEC, 2018). In general, groundwater concentrations decreased at most monitored locations in and downgradient of the source area as reported pre- and post-ERH treatment; however, New York Class GA groundwater standards were exceeded at many locations at and downgradient of the Site. Further, degradation of TCE to cis-1,2- DCE and VC is generally observed; however, based on the wells sampled, degradation was occurring at differing rates (MACTEC, 2018).

1,4-dioxane was historically used as a stabilizer and corrosion inhibitor for certain chlorinated solvents, particularly TCE (United States Environmental Protection Agency [USEPA], 2014), but its presence had not previously been evaluated at the Site. Four wells (MW-5, MW-5D, MW-8, and MW-8D were sampled for 1,4-dioxane during the May 2018 sampling event). New York State has not published standards or guidance values for 1,4-dioxane, so the results were compared to the USEPA Regional Screening Levels (RSLs) from May 2016 for residential tap water, 0.46 µg/L. 1,4-dioxane was detected in all four of the wells sampled. Three of the four detections exceeded the RSL, with the highest concentration (2.9 µg/L) detected in the upgradient well MW-5 (MACTEC, 2018).

Additional groundwater sampling was conducted in May 2019 and November 2019. Concentrations of CVOCs detected in November 2019 in groundwater at and downgradient from the Site are similar to those detected in 2018 and May 2019, with continued elevated concentrations of TCE and daughter products in the former source area (monitoring well MW-2A). Although concentrations were slightly lower in wells downgradient from the Site, this may just represent seasonal variation. VOC concentrations, the continued presence of chemical oxidant in the placement wells, and field parameters did not indicate the chemical oxidant had traveled far from where it was placed, or affected a large area (MACTEC, 2020a).

Data from the June 2020 groundwater sampling event show that CVOC concentrations in groundwater were similar to those detected from the last sampling event; although several wells further downgradient from the Site had lower concentrations, including MW-17D, MW-11 and MW-11D, MW-16D, and MW-19D.

The New York Class GA groundwater standards for CVOCs are currently exceeded at many locations at and downgradient of the Site, although degradation of TCE to cis-1,2-DCE and VC is generally observed.

Surface Water

Surface water is not a medium of concern at this Site.

Soil Vapor

Soil vapor sampling was not conducted at the Erdle facility during the RI due to the active manufacturing processes. During the RI, TCE was identified at concentrations as high as 150 mg/kg in soil below the far southwest corner of the Site building; however, this may have been reduced during the ERH soil remedy.

Soil vapor sampling was conducted at 55 residential properties located downgradient of the Site in the Hidden Valley Development prior to the soil remedy. Groundwater concentrations in the vicinity of the residential properties were similar in 2020 as prior to the 2015 source area soil remedy.

Based on the soil vapor/indoor air results, 12 residential properties were mitigated with SSDSs and no further action was deemed necessary at the remaining 43 residences.

PRE-DESIGN INVESTIGATION

Purpose of the PDI

The purpose of the PDI is to identify remaining source areas at the Site and to determine if NAPL are present in overburden and/or bedrock. It is possible that impacted overburden soil remains at the Site. The PDI will be focused in the area of the former spills and areas immediately adjacent to the ERH area.

Scope of Work

The scope of work consists of the following tasks:

- Task 1 – Advancement of Soil Borings and Soil Sampling
- Task 2 – Installation of Monitoring Wells and Soil Sampling
- Task 3 – Monitoring Well Development
- Task 4 – Water Level and NAPL Thickness Measurement
- Task 5 – Groundwater and NAPL Sample Collection
- Task 6 – Investigation Derived Waste (IDW) Handling
- Task 7 – Report Preparation

The work tasks are further described below.

Task 1 –Advancement of Soil Borings and Soil Sampling

A 20-foot by 20-foot grid will be established within a 140-foot by 100-foot area south of the Erdle building, nearby where the former UST was positioned, as shown on Figure 3. We anticipate that the grid area will cover approximately 1,400 square feet and contain a total of 48 grid nodes. At each node, a soil boring will be advanced to bedrock using a direct push technology (DPT) drill rig (e.g., Geoprobe®). If a node location is inaccessible to the DPT drill rig, a hand driven shallow soil boring will be advanced. DPT soil borings will be advanced to the bedrock surface (anticipated to be approximately 15 feet bgs); whereas, hand driven shallow borings will be completed to three feet bgs.

Soil sampling will be conducted continuously to classify subsurface material. All soil samples will be visually described and classified, inspected for signs of contamination, and screened with a photoionization detector (PID) for the presence of organic vapors by a qualified geologist. Soil cuttings will be contained in DOT approved 55-gallon drums. Boreholes will be backfilled with bentonite chips.

One to two soil samples from each soil boring will collected and submitted for analysis of Target Compound List (TCL) VOCs + 10 tentatively identified compounds (TICs) via USEPA Method 8260C, as summarized in Table 1. Samples for laboratory analysis will be collected as follows:

- Hand driven shallow soil borings:
  - One soil sample will be collected from the interval with the greatest observed potential Site-related impacts; if no potential impacts are observed, the soil sample will be collected from the interval directly above groundwater.
- DPT soil borings:
  - One soil sample will be collected from the interval with the greatest observed potential Site-related impacts; if no potential impacts are observed, the soil sample will be collected from the interval directly above groundwater.
  - One soil sample will be collected from the interval immediately above the bedrock surface.

The procedures for Task 2 are described in Sections 5.2.1 of the FAP.

Task 2 – Installation of Monitoring Wells and Soil Sampling

A total of eight monitoring wells will be installed at three locations (Figure 3), as follows:

- Location 1: overburden monitoring well OMW-1, shallow bedrock monitoring well BMW-1D, and intermediate bedrock monitoring well BWM-1DD
- Location 2: overburden monitoring well OMW-2, shallow bedrock monitoring well BMW-2D, and intermediate bedrock monitoring well BWM-2DD
- Location 3: shallow bedrock monitoring well BMW-3D and intermediate bedrock monitoring well BWM-3DD

Soil will be visually described and classified, inspected for signs of contamination, and screened with a photoionization detector (PID) for the presence of organic vapors by a qualified geologist. The bedrock cores will be visually described by the qualified geologist and include a calculation of RQD. All soil cuttings, drilling water, and rock cores will be contained in DOT approved 55-gallon drums.

The procedures for Task 3 are described in Sections 3.1, 3.3 and 4.5 of the FAP. Soils will be logged following the procedures described in Sections 5.2 of the FAP.

Overburden Monitoring Wells

The borings for the two overburden wells will be advanced to the bedrock surface using the direct-push rig equipped with 4 1/4-inch inner diameter (ID) hollow stem augers (HSA). Soil samples will be continuously collected using a Macrocore or split-spoon sampler. One soil sample for laboratory analysis will be collected from the interval with the greatest observed potential Site-related impacts; if no potential impacts are observed, the soil sample will be collected from the interval directly above groundwater. Additionally, one soil sample will be collected at the interval immediately above the bedrock surface. The soil sample will be submitted for analysis of TCL VOCs + 10 TICs via USEPA Method 8260C as summarized in Table 1.

Overburden wells will terminate at the top of bedrock and will be constructed with a 10-foot, 2-inch ID #10 slot stainless-steel continuous wrap screen attached to Schedule 40 polyvinyl chloride (PVC) riser. All overburden wells will be completed with flush-mount curb boxes.

Bedrock Monitoring Wells

The borings for the six bedrock wells will be advanced to the bedrock surface using 6 1/4-inch ID HSA. At the location where an overburden well will not be installed (Location 3), the boring will be advanced to the bedrock surface using 6 1/4-inch HSA while continuously collecting soil samples using a split-spoon sampler and two soil samples for laboratory analysis will be collected as described for the overburden soil borings described above.

Upon reaching the bedrock surface, the augers will be removed, and a temporary 6-inch diameter casing will be installed. A 5 7/8-inch ID rotary bit will then be used to drill 3- to 5-foot long rock socket. A 4-inch diameter permanent steel casing will then be set into the rock socket and grouted with a cement/bentonite grout. The grout will be allowed to cure for at least 24 hours. After the grout has cured, the boring will be continuously cored to the target depth of 20 feet below bedrock surface bgs for the shallowest bedrock monitoring well and approximately 30 to 40 feet into bedrock for the deeper bedrock monitoring well using an HQ core barrel.

The six bedrock monitoring wells will be constructed with a 10-foot, 2-inch ID #10 slot stainless steel continuous wrap screen with a 2-foot stainless steel riser beneath the screen as a sump attached to a 2-inch ID, Schedule 40 PVC riser to the ground surface. All bedrock wells will be completed with flush-mount curb boxes.

Task 3 – Monitoring Well Development

All new monitoring wells will be developed following the procedures described in Section 4.6 of the FAP.

Task 4 – Water Level and NAPL Thickness Measurement

A comprehensive round of water levels will be collected in all monitoring wells shown on Figures 2 and 3 and measure NAPL thickness in wells determined to have NAPL. The procedures for Task 5 water level and NAPL thickness measurement are described in Sections 4.2 and 4.3 of the FAP.

Task 5 – Groundwater and NAPL Sample Collection

Groundwater samples will be collected from the eight new monitoring wells and submitted for analysis of VOCs + 10 TICs via USEPA Method 8260C, as indicated on Table 1.

For monitoring wells without NAPL, groundwater samples will be collected using the procedures described in Section 4.7.1 through 4.7.3 of the FAP. For monitoring wells identified as containing NAPL, the procedures described in Sections 4.7.4 and 4.7.5 of the FAP will be used.

If NAPL is observed during the comprehensive measurement round described in Task 4, a NAPL sample will be collected and analyze for parameters listed in Table 1, so adjusted water levels can be calculated, and the potentiometric surface can be mapped. The procedures for Task 5 NAPL sample collection are described in Sections 4.7.4 of the FAP.

Task 6 – IDW Handling

IDW generated during the PDI field activities will handled using the procedures described in Section 8.2 of the FAP.

One soil and one aqueous sample from IDW will be collected and submitted for laboratory analysis of waste characterization parameters as indicated on Table 1.

Task 7 – Report Preparation

The PDI Report will be submitted as a draft report within 60 days after analytical data are received from the laboratory. Data will be validated in accordance with *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability Summary Reports* (NYSDEC, 2010a).

A final version of the report will be submitted within 2 weeks after the Department's comments on the draft report are received by AECOM. The report will include the following:

a. A description of field activities conducted;
b. A summary of previous investigations;
c. A site map depicting relevant site features;
d. Figure(s) depicting soil borings, monitoring wells, and key site features;
e. Figures depicting sample locations with non-compliance of standards, guidance and criteria (SCG) values for soil, soil vapor, and groundwater analytical data collected;
f. A discussion of analytical results;

g. Figure depicting groundwater elevation contours;
h. Data summary tables of detected compounds with SCGs listed and non-compliance values highlighted;
i. Field notes and/or daily activity logs;
j. Photographs taken during field activities;
k. Boring logs;
l. Monitoring well construction logs;
m. Monitoring well purging and sampling logs with water quality measurements (as applicable);
n. Manifests and/or bills of lading signed by the disposal facility documenting the proper disposal of IDW;
o. Survey field notes and site sketches;
p. A revised survey drawing;
q. A Data Usability Summary Report (DUSR) (including Form 1s) containing only data from the fieldwork;
r. Design parameters; and
s. Conclusions.

General Notes

Category B deliverables are required for all soil, groundwater, and NAPL samples. A DUSR will be prepared.

Figures

Figure 1 – Site Location
Figure 2 – Site Plan
Figure 3 – Proposed Sampling Locations

Tables

Table 1 – Summary of Analytical Parameters

Attachments

Attachment 1 - HASP
Attachment 2 – Generic FAP
Attachment 3 – Glossary of Acronyms and Abbreviations
Attachment 4 – References

Closing

AECOM appreciates serving the Department with this challenging and interesting project. If you have any questions or comments, please call me at (716) 923-1120.

Sincerely,

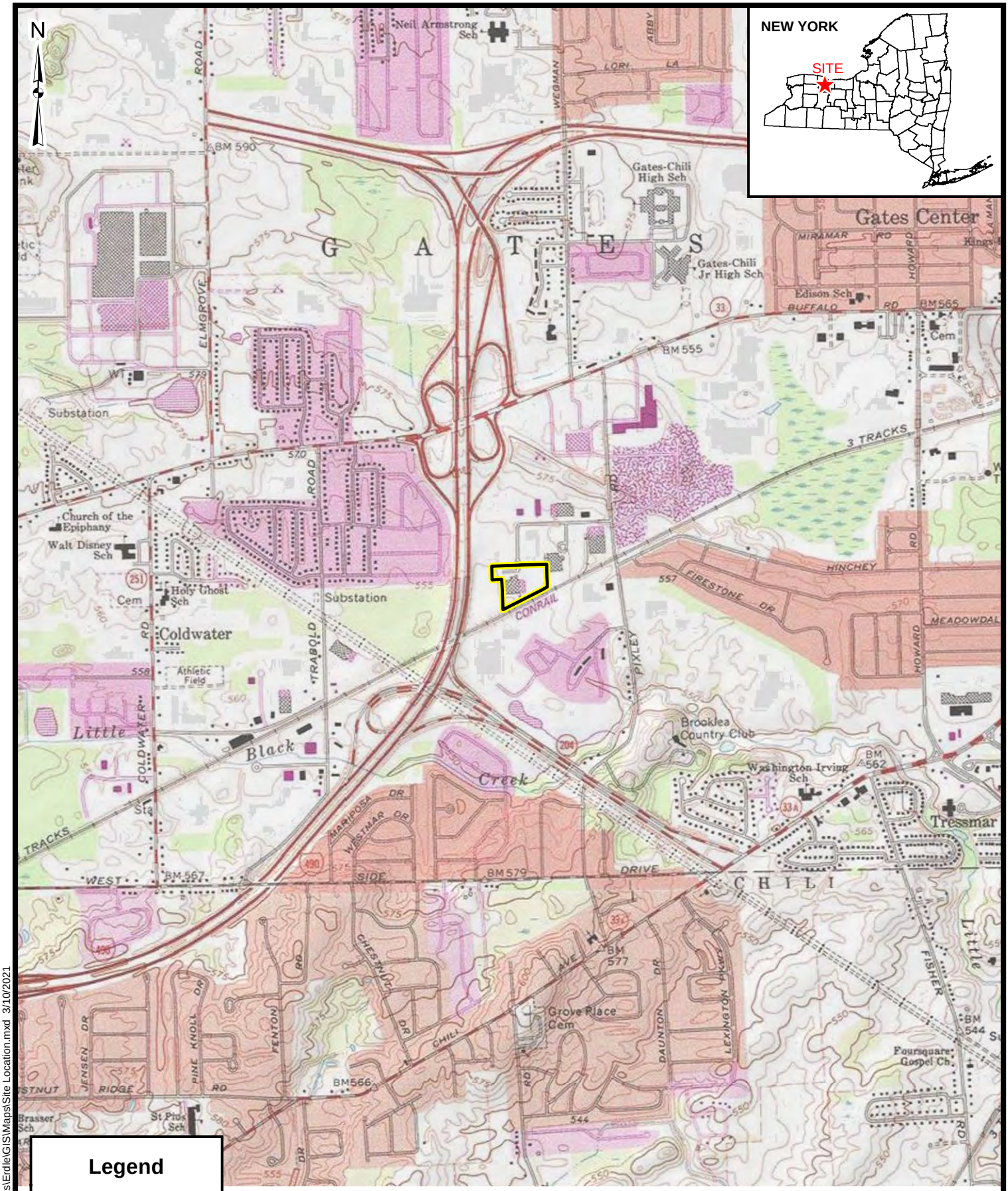
AECOM USA, Inc.



Michael Gutmann, PG
Project Manager

Enc.
cc: Tamara Raby, PG – AECOM
George Kisluk - AECOM
60644886 C-1

FIGURES



Legend

Site Boundary

Sources: USGS 1:24,000-scale topographic map, 7.5 x 7.5 Minute Quadrangles: Rochester West, 1994; West Henrietta, 1994

2,000 0 2,000 Feet

AECOM

ERDLE PERFORATING COMPANY SITE
SITE ID NO. 828072
TOWN OF GATES, MONROE COUNTY, NEW YORK
SITE LOCATION

FIGURE 1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Location.mxd 3/10/2021



C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Plan_2.mxd 4/30/2021

ERDLE PERFORATING COMPANY SITE
SITE PLAN

AECOM

FIGURE 2

N

MW-5
MW-5D
MW-1D
MW-1
MW-1DD
MW-1A
BMW-2D/DD & OMW-2
MW-2D
MW-3
MW-2
MW-3D
MW-2A
MW-3A
BMW-3D/DD
BMW-1D/DD & OMW-1
MW-6
MW-21
MW-21D
MW-10
MW-6D
MW-7D
MW-7

Legend

- Proposed Geoprobe Soil Boring
- Proposed Monitoring Well
- Existing Monitoring Wells
- 20'x20' Grid
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

NOTES:
1. Proposed monitoring well locations may be adjusted based on field screening and geoprobe analytical results.
2. BMW-#D/DD - shallow/intermediate bedrock monitoring well pair.
3. OMW-# - overburden monitoring well.

100 0 100 Feet

ERDLE PERFORATING COMPANY SITE
PROPOSED SAMPLES

AECOM

FIGURE 3

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Proposed_Samples_2.mxd 5/13/2021

TABLES

TABLE 1
ERDLE PERFORATING, SITE No. 828072
NYSDEC WA D009803-36
SAMPLE ANALYTICAL PROGRAM

Analytical Methods*	Samples	QC						Total No of Samples
		Field Dup	MS	MSD	Equipment/ Rinse Blank	Field Blank	Trip Blank	
Soils								
Direct Push/Hand Driven Soil Boring Soils								
TCL Volatiles + 10 TICs by 8260C	72	4	4	4	0	0	0	84
Monitoring Well Split Spoon Soil Samples								
TCL Volatiles + 10 TICs by 8260C	6	1	1	1	0	0	0	9
Groundwater (new wells only)								
TCL Volatiles + 10 TICs by 8260C	8	1	1	1	0	0	1	12
NAPL*								
TCL Volatiles + 10 TICs by 8260C	1	0	0	0	0	0	0	1
TCL Semivolatiles + 20 TICs by 8270D	1	0	0	0	0	0	0	1
TCL PCBs by 8082A	1	0	0	0	0	0	0	1
Fuel Fingerprint by 310-13	1	0	0	0	0	0	0	1
Flashpoint by 1010	1	0	0	0	0	0	0	1
Density	1	0	0	0	0	0	0	1
Waste Characterization								
Full TCLP	2	0	0	0	0	0	0	2
Ignitability	2	0	0	0	0	0	0	2
Corrosivity	2	0	0	0	0	0	0	2
Reactivity	2	0	0	0	0	0	0	2

MS - Matrix Spike
MSD - Matrix Spike Duplicate
TCL - Target compound List
TCLP - Toxicity Characteristics Leaching Procedure
TICs - Tentatively Identified Compounds

APPENDIX C

FIELD NOTES

TITLE

PROJECT

Continued from page

- Date - 6/1/21
- Personnel - Sean P. Connelly (Arcosa)
- Weather - 59°F - Cloudy
- Project - Erdle Perforating Company - 100 Pixley Industrial Parkway, Rochester NY.
- Project # - 60644886 Task 3

- 0800 - Arrive @ Pine Environmental Rochester to pick up PID, QRae + field supplies
- 0815 - Depart Pine for Erdle Job site
- 0827 - Arrive @ Erdle. Begin prepping for days activities. Will begin Geoprobe borings. Will begin soil borings + NW corner of marked out grid. Will advance borings to bedrock @ each grid node w/ continuous classification + PID screening. 1-2 samples will be collected based on any signs of impact/contamination. If no contamination/impact present, will collect sample from soil above water level. All samples will be analyzed for VOC's - 8260C.
- 0845 - Nothnagle arrives on site + begins to unload Geoprobe.

↑ Edge of building

N 120N, 0E	120N 20E	120N 40E	120N 60E	120N 80E	120N 100E	120N 120E	120N 140E
100N 0E	100N 20E	100N 40E	100N 60E	100N 80E	100N 100E	100N 120E	100N 140E
80N 0E	80N 20E	80N 40E	80N 60E	80N 80E	80N 100E	80N 120E	80N 140E
60N 0E	60N 20E	60N 40E	60N 60E	60N 80E	60N 100E	60N 120E	60N 140E
40N 0E	40N 20E	40N 40E	40N 60E	40N 80E	40N 100E	40N 120E	40N 140E
20N 0E	20N 20E	20N 40E	20N 60E	20N 80E	20N 100E	20N 120E	20N 140E
0N 0E	0N 20E	0N 40E	0N 60E	0N 80E	0N 100E	0N 120E	0N 140E

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page

- Date - 6/1/21
- Weather - 63°F, partly cloudy

- 0923 - Will begin lining up on 120N, 0E location. Due to previous investigations + 811 call, will go straight to ~~tomtebo~~ geoprobe, no hand clearing.

- Using a Geoprobe 7822DT. Driller: Thom Mangestida, Driller assistant: Jason Ensing (Nothnagle)

- 0925 - Begin geoprobing 120N, 0E

Depth	PID	Rec	Description
0-4		3.5	0-1 - light brown, soil (topsoil)
0.0			1-1.2 - Grey pulverized rock
0.5			1.2-2 - light brown silt w/ little gravel
1.0			
1.5			
2.0			
2.5	2-2.5 (31.8ppm)		2-~~2.8~~ 4.2 - Dark brown to black clayey silt w/little gravel (sample 2-2.5 31.8 ppm 6/1/21 @ 0935
3.0			
3.5			
4-8		100%	
4.0	6.1		~~2.8-4.2~~
4.5	7.4		4.2-8.5 - Brownish red clay w/ little silt
5.0	1.2		
5.5	0.8		
6.0	0.0		8.5-9.0 - Dark brown to black, moist, silty sand w/ little clay. Small gravel/rocks
6.5	0.0		
7.0	0.0		
7.5	2.8		
8.0	1.2		
8-12		100%	9.0-12.5 - Brownish red clay, dry, stiff w/ grey lenses. low PID hits throughout
8.0			
9.0	1.9		
10.0	0.0		
11.0	↓		
12.0	0.0		

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PROPRIETARY INFORMATION

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PROJECT

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- Date - 6/1/21

120N, 0E Continued. 0953 Refusal @ 14.5

Depth	To Rec	PID	Description
12-14	100		Same as 9-12.5
12.0		1.3	12.5 - ~~13~~ 13.5 - Brown to black,
12.5		5.7	moist, silty clay w/ little sand
13.0		13.7	+ grey lenses.
13.5		4.2	13.5 - 14.5 - Grey, moist,
14.0		0.9	~~silty sand w/ little clay~~ clay w/ very fine to ~~medium~~ fine sand.
14-16	100		

Refusal @ 14.5

- Will backfill w/ cuttings up to 2' BGS. 0-2' = Bentonite

- 1020 - Begin geoprobing 100N, 0E

Depth	To Rec	PID	Description
0-4	3.5/4.0'		0-0.8 - Brown, dry topsoil w/ little gravel.
0			
0.5		0.5	0.8-1.2 - Grey pulverized rock/gravel layer
1.0			
1.5		4.0	1.2-1.8 - Brown, moist silt ~~fill~~ w/ very fine to fine sand
2.0			
2.5			
7.0/3.1		0.6	1.8-5.0 - Dark brown to black, moist, becoming wet @ 3.1, silty clay
3.5			
4.0			
4-8	100%		5.0-11.2 - Reddish brown, dry clay
4.5		0.0	
5.0			
5.5			11.2-14.0 - Grey moist clay w/ very fine to fine sand (sticky) w/ little gravel
6.0			
6.5			
7.0			
7.5			- ΔC 13.0
8.0		0.0	

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TITLE PROJECT

Continued from page

- Date - 6/1/21
- Weather - 68°F. Mostly Cloudy

100N, 0E Continued.

Depth	% Rec	PID	Description
8-12	100		
8.5			
9.0			
9.5		1.4	
10.0		6.7	
10.5		7.8	Sample 10.5-11.0 @ 1040
11.0		8.6	
11.2		1.6	
11.5		2.8	
12.0		0.0	
12-16	50%		
12.5			- Same as above, becoming saturated 13.0-13.5
13.0			
13.5		17.5	Sample 13.0-13.5 @ 1048
14.0			

Refusal @ 14.0

- 1045 - Completed backfilling 100N, 0E.
- 1056 - Began drilling @ 50N, 0E. Continued on next page

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/1/21
- Weather - 70°F. Mostly Cloudy

50N, 0E

Depth	% Rec	PID	Description
0-4	7.5/4.0		
0.0		0.0	0 - 1.2 - Brown, moist silty topsoil w/ little gravel + organics
0.5			
1.0			
1.5			1.2 - 1.7 - Dark brown to black, moist silt w/ very fine to fine sand and little gravel
2.0			
2.5			
3.0			
3.5		1.0	
3.8			
4.0			1.7 - 3.8 - Dark brown to black moist silty clay w/ little sand becoming very moist/wet @ 2.6-3.0
4-8	3.7/4.0		
4.5		0.0	
5.0			
5.9		0.0	
6.0		0.1	
6.5		0.0	3.8 - 10.5 Reddish brown clay w/ grey mottling.
7.0			
7.5			
8.0		0.0	
8-12	1.5/4.0		10.5 - 13.7 Reddish light brown ~~silty~~ clay ~~&~~ moist w/ ~~little~~ very fine sand. w/ ~~a~~ small ~~to~~ gravel from 13.1 - 13.7
8.5			
9.0			
9.5			
10.0			
10.5		0.5	
11.0		3.9	
11.5		3.7	
12.0			
12-16			
12.5			
13.0	2.9		Refusal @ 13.7
13.5	1.5		
13.7	1.7		

Refusal @ 13.7

Sample 13.0 - 13.7 @ 1115

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TITLE PROJECT

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- Date - 6/1/21
- Weather - 71°F, mostly cloudy

- 1120 - Completed 50N, 0E boring & will begin to backfill then move to 60N, 0E

- 1132 - Begin drilling 60N, 0E

60N, 0E

Depth	% Rec	PID	Description
0-4	2.5/4.0		0.0 - 1.8 - Moist, brown silty topsoil w/ little gravel
0.0		0.0	
0.5			
1.0			
1.5			1.8 - 2.1 - Grey pulverized rock / gravel layer
2.0			2.1 - 2.9 - Dark brown, moist sandy silt w/ little gravel
2.5			
3.0			
3.5			2.9 - 4.3 - Dark brown to black silty clay w/ wood debris from 3.2 -> 3.6
4.0		0.0	
4-8	3.5/4.0		
4.5		0.0	4.3 - 5.3 - Reddish brown clay w/ grey mottling w/ organics in the mottling.
5.0			
5.5			
6.0			
6.5			5.3 - 11.4 - Reddish brown clay w/ grey mottling
7.0			
7.5			
8.0		0.0	

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- Date - 6/1/21
- Weather -

60N, 0E Continued

Depth	% Rec	PID	Description
8-12	1.0/4.0 (25%)		
8.5			11.4 - 13.9 light grey, moist clay w/ very fine to fine sand (strong)
9.0			
9.5			13.7 - 13.9 - some clay w/ gravel / small to medium rock
10.0			
10.5			
11.0		9.9	Sample from 11 - 11.5 @ 1148
11.5		9.8	
12.0			
12-16			Sample from 12.5 - 13.0 @ 1153
12.5		32.9	
13.0		31.7	Refusal @ 13.9'
13.5		12.4	
~~14.0~~	13.9	6.8	
~~14.5~~			
~~15.0~~			
~~15.5~~			
16.0			

- 1155 - Completed drilling & patching 60N, 0E.
- 1200 - Breaking for lunch
- 1238 - Resumed work. Will move to 40N, 0E and begin drilling
- 1243 - Began drilling 40N, 0E

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PROPRIETARY INFORMATION

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- Date - 6/1/21
- Weather - 72°F, partly cloudy.

40N, 0E Refusal 13.8

Depth	% Rec	PID
0-4	75%	
0.0		0.0
0.5		
1.0		
1.5		
2.0		
2.5		
3.0		
3.5		
4.0		0.0
4-8	100%	
4.5		0.0
5.0		
5.5		
6.0		
6.5		
7.0		
7.5		
8.0		0.0
8-12	60%	
8.5		0.0
9.0		0.0
9.5		0.0
10.0		0.2
10.5		0.0
11.0		0.6
11.5		0.3
12.0		0.0
12-16	0 45%	
12.5		1.8
13.0		0.9
13.5		7.1
13.8		5.0

Description

0 - 1.1 - Brown, moist silty topsoil w/ little gravel + organics

1.1 - 2.2 - Grey, pulverized rock/gravel layer

2.2 - 3.3 - Black, moist sandy silt w/ little clay

3.3 - 4.7 - Brown ~~sandy~~ very fine to fine silty sand

4.7 - 8.0 - Reddish brown moist clay w/ grey mottling

8.0 - 9.0 - Dark brown, saturated fine to medium sand

9.0 - 12.7 - Same as 4.7 - 8.0

12.7 - 13.8 - Same as 11.4 - 13.9 on 60N, 0E

Sample 13.0 - 13.9 @ 1305

Refusal @ 13.8

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PROPRIETARY INFORMATION

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- Date - 6/1/21
- Weather - 73°F, Mostly Cloudy

- 1308 - Completed drilling / backfilling 40N, 0E. Will move to 20N, 0E.
- - Began drilling 20N, 0E. Refusal @ 13.8'

Depth	% Rec	PID
0-4	50%	
0.0		0.0
0.5		
1.0		
1.5		
2.0		0.0
2.5		0.4
3.0		0.0
3.5		
4.0		0.0
4-8		
4.5		0.0
5.0		
5.5		
6.0		
6.5		
7.0		
7.5		
8.0		0.0
8-12	50%	
8.5		0.0
9.0		
9.5		
10.0		
10.5		
11.0		
11.5		0.0
12.0		
12-16	1%	

Description

0 - 1.9 - Brown moist silty topsoil w/ little gravel + organics

1.9 - 2.8 - Grey pulverized rock/gravel layer

2.8 - 4.4 - light brown, moist sand w/ little silt

4.4 - 8.1 - Reddish brown clay w/ grey mottling

8.1 - 10.0 - Dark brown to grey saturated sand

10.0 - 13.8 - Same as 12.7 - 13.8 on 40N, 0E

Will sample clay layer above water / sand layer 7.5 - 8.1 @ 1335

Refusal @ 13.8'

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/1/21
- Weather - 75°F, Mostly Cloudy

- 1340 - Completed boring + backfilling 120N, 20E. Will relocate to 120N, 20E + begin drilling
- - Began drilling 120N, 20E

120N, 20E Refusal @ 14.9

Depth	% Rec	PID	Description
0-4	2.9/4.0	0.0	0.0 - 1.7. Brown, moist, silty topsoil w/ little gravel + organics
0.0			
0.5			
1.0			
1.5			
2.0			
2.5			
3.0			
3.5		0.5	
4.0		0.8	
4-8	75%		
4.0		0.0	
4.5			
5.0			
5.5			
6.0			
6.5			
7.0			
7.5			
8.0		0.0	

1.7 - 2.3 - Grey pulverized rock/gravel layer
2.3 - 2.8 - Brown, moist, very fine to fine sand w/ little silt
2.8 - 3.3 - Grey pulverized rock/gravel layer
3.3 - 3.9 - Brown, wet fine to medium sand.
3.9 - 4.0 - Black, moist fine to medium sand. Possible staining
Sample 3.9-4.0 @ 1400
4.0 - 4.7 - Brown, wet/ saturated sandy clay w/ some gravel.
4.7 - 5.8 - Brown, moist ~~fine to medium~~ clay fine to medium sand
5.8 - 9.8 - Reddish brown clay w/ grey mottling

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- Date - 6/1/21
- Weather - 75°F, mostly cloudy

120N, 20E Continued

Depth	% Rec	PID	Description
8-12	50%		9.8 - 14.9 - Grey, moist clay w/ small to medium gravel from 14.7 - 14.9
8.5			
9.0			Sample from 14.5-14.9 @ 1425
9.5			
10.0			
10.5			
11.0		0.3	
11.5		0.4	
12.0		1.6	
12-16	25%		
12.5			
13.0			
13.5			
14.0		3.8	
14.5		5.4	
~~14.0~~	14.7	6.9	
~~15.5~~	14.9	7.8	
~~16.0~~			

- 1405 - Completed drilling. Refusal @ 14.9
- 1933 - Began relocating to 100N, 20E. Will continue on next page
- 1936 - Began drilling 100N, 20E.

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TITLE PROJECT

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- Date - 6/1/21
- Weather - 75°F, mostly cloudy

100N, 20E Refusal @ 14.4

Depth	To Rec	PID	Description
0-4	2.5/4.0		0.0 - 1.9 - Brown, moist silty topsoil w/ little gravel and organics
0.0		0.0	
0.5			1.9 - 2.5 - Grey pulverized rock/gravel layer
1.0			2.5 - 2.7 - Moist, brown silty sand
1.5			2.7 - 3.0 - Rock/gravel layer
2.0			3.0 - 3.8 - Moist brown silty sand
2.5			3.8 - 4.8 - Dark black to brown fine to medium sand w/ little silt + clay w/ wood debris
3.0			
3.5			4.8 - 11.2 - Reddish brown clay w/ grey + black mottling / dessication cracks
4.0		0.0	
4.8	3.5/4.0		11.2 - 14.4 - Grey moist clay w/ sand w/ gravel / broken bedrock from 14.1 - 14.4
4.5			
5.0		0.3	
5.5		0.4	
6.0		0.5	Will sample 14.0 - 14.4 @ 1454
6.5		0.1	
7.0		0.0	
7.5		0.0	
8.0		0.0	
8-12	1.5/4.0		
8.5		0.0	
9.0		↓	
9.5		0.0	
10.0		0.3	
10.5		0.0	
11.0			
11.5			
12.0		0.0	
12-16			
14.1		- 23.9	
14.4		- 16.5	

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/1/21
- Weather - 75°F, Mostly Cloudy

- 1550 - Will begin to pack up equipment for the day.

Daily Summary 6/1/21

Boring ID	Sample ID	Time	PID	Total Depth / Refusal
120N, 0E	2.0 - 2.5	0935	31.8	14.5'
100N, 0E	10.5 - 11.0	1040	8.6	14.0
	13.0 - 13.5	1048	17.5	
80N, 0E	13.0 - 13.7	1115	2.9	13.7
60N, 0E	11.0 - 11.5	1148	9.9	13.9
	12.5 - 13.0	1153	32.9	
40N, 0E	13.0 - 13.9	1305	7.1	13.8
20N, 0E	7.5 - 8.1	1335	0.0	13.8
120N, 20E	14.5 - 14.9	1425	7.8	14.9
100N, 20E	14.0 - 14.4	1454	23.9	14.4
120N, 20E	3.9 - 4.0	1400	0.8	14.9

11 - Total samples collected

- 1520 - NDI crew left site
- 1530 - S. Connelly off site. Commute home.

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/2/21
- Weather - 59°F, Partly cloudy
- Personnel - Sean P. Connolly (Steam)
  - Thom (NDI)
  - (NDI)

- 0745 - NDI crew arrives on site
- 0755 - S. Connolly on site. Perform H/S meeting. Prep for days activities (continue soil borings). Will begin on 80N, 20E
- 0815 - Begin boring 80N, 20E

80N, 20E Refusal @ 14.0

Depth	% Rec	PID	Description
0-4	75%		0-1.2 - Brown, moist topsoil silty w/ little gravel + organics
0.0			1.2-1.7 - Grey, pulverized
0.5			rock/gravel layer
1.0			1.7 - 2.5 - Dark brown, moist
1.5			silty sand w/ little gravel
2.0			2.5 - 3.3 - Dark brown to
2.5			black, wet silty sand w/
3.0			little clay
3.5		0.2	3.3 - 4.5 - Grey, wet fine
4.0			to medium sand w/ little clay
4.5	100%		4.5 - 10.0 - Reddish brown, moist
5.0			clay
5.5			10.0 - 14.0 - Grey moist
6.0			clay w/ little sand w/
6.5			gravel / broken bedrock
7.0			from 13.5 - 14.0'
7.5			- Becoming wet from
8.0			12.5 - 14.0'

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TITLE PROJECT

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- Date - 6/2/21
- Weather - 63°F, mostly cloudy

80N, 20E (Continued)

Depth	% Rec	PID	Description
8-12	50		
8.5			
9.0			
9.5			
10.0			
10.5		4.1	
11.0		12.8	
11.5		0.5	
12.0		2.0	
12-16	50%		Sample from
12.5		0.5	13.5 - 14.0 @ 0835
13.0		0.8	
13.5		9.3	
14.0		17.9	
14.5			Refusal @ 14.0
15.0			
15.5			
16.0			

- 0829 - Completed 80N, 20E boring. Refusal @ 14.0'
- 0845 - Setting up on 40N, 20E. Skipping 60N, 20E for now. Will try to knock out borings in tallgrass to avoid mosquitos / before it gets too hot.
- 0847 - Begin drilling 40N, 20E. Log begins on next page.

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TITLE PROJECT

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- Date - 6/2/21
- Weather - 64°F, mostly cloudy

40N, 20E

Depth	% Rec	PID	Description
0-4	2.5/4.0		0-1.6 - Brown, moist silty topsoil w/ little gravel & organics
0.0		~~0.0~~	
0.5			
1.0			1.6 - 2.0 - Grey, clay, pulverized rock/gravel layer
1.5		0.9	
2.0			
2.5		8.5	
3.0		3.5	2.0 - 2.6 - Dark brown to black, moist, silty sand w/ little to some gravel.
3.5		1.9	
4.0		1.4	
4-8	100%	sample w/	
4.0		10.2 dup @	2.6 - 2.8 - Same as 1.6-2.0
~~4.5~~		11.8 2.5-3.0 @ 0857	
5.0		19.5 DUP-1-20210602	2.8 - 3.2 - Black, wet, silty sand w/ little clay
5.5			
6.0			
6.5		sample	and little gravel ~~becoming~~
7.0		4.0 5.0	~~wet from~~
7.5		w/ms/msd @	3.2 - 5.0 - Dark brown, wet
8.0		0906	fine to medium sand w/
8-12	50%		little silt
8.5		~~10.2~~	
9.0		~~11.8~~	5.0 - 14.1 - Reddish brown, moist
9.5		~~19.5~~	clay.
10.0		4.1 ~~Sample~~	
10.5		0.2 ~~w/ms/msd~~	
11.0		1.3 @	Δ @ 12 - 14.1 - Saturated
11.5		3.0	sand above clay w/ sheen on water. Not
12.0		2.7	actual/native
12 - 14	25%		soil (fluid)
13.5		17.3	Sample
~~13.5~~ 14.0		19.1	13.5 - 14.1

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DISCLOSED TO AND UNDERSTOOD BY DATE @ 0920

PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/2/21
- Weather - 66°F, partly cloudy.

~~40N, 20E (Continued)~~

- 0915 - Completed 40N, 20E leaving. Refusal @ 14.1'
- 0933 - Began setting up on 20N, 20E
- 0935 - Began drilling 20N, 20E

20N, 20E Refusal @ 14.1'

Depth	% Rec	PID	Description
0-4	1.7/4.0'		0-2.8 - Brown, moist, silty topsoil w/ little gravel & organics
0.0			
0.5			
1.0			2.8 - 3.0 - Grey clay, pulverized rock/gravel layer
1.5			
2.0			
2.5			
3.0		0.2	3.0 - 5.2 - Black moist silt w/ very fine to medium sand
3.5		0.8	
4.0		3.9	
4-8	100%		
4.0		0.2	5.2 - 8.3 - Reddish brown moist clay
4.5		0.1	
5.0		0.0	
5.5			8.3 - 9.0 - Grey, ~~moist~~ wet sand (possible water level Δ)
6.0			
6.5			
7.0			~~9.0~~
7.5		0.0	
8.0			

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- Date - 6/2/21
- Weather - 68°F, partly cloudy

20N 20E (Continued)

Depth	% Rec	PID	Description
8-12			9.0 - 14.1 - Reddish brown moist clay
8.0		0.0	
8.5		0.1	
9.0		0.0	
9.5			Sample 11-11.5 @ 0952 w/ Dup DUP-2-20210602
10.0		0.5	
10.5		2.3	
11.0		48.5	
11.5		~~8.5~~ 76.3	
12.0		15.0	
12-16	0.5/4.0		
12.0			
12.5			
13.0			
13.5			
14.0			
14.5			
15.0			
~~15.5~~			
16.0			

- 0945 - Completed 20N, 20E boring refusal @ 14.1'
- 1005 - Began drilling on 20N, 40E. Boring log on next page

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TITLE PROJECT

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- Date - 6/2/21
- Weather - 69°F, partly cloudy

20N, 40E Refusal @ 14.1

Depth	% Rec	PID	Description
0-4	75%		1-1.3 - Brown, moist silty topsoil w/ little gravel + organics
0.0		0.0	
0.5			
1.0			1.3 - 1.6 - Grey, dry pulverized rock/gravel layer
1.5			
2.0			1.6 - ~~2.5~~ - Black, moist silt w/ very fine to fine sand
2.5			
3.0			
3.5			
4.0		0.0	
4-8	100%		2.5 - 5.7 - Grey, moist becoming wet @ 3.6', fine to medium sand
4.0		0.0	
4.5			
5.0			
5.5			5.7 - 8.0 - Reddish brown, moist clay
6.0			
6.5		0.0	
7.0		0.5	- Wet sand w/ water + slight sheen between 8.0 - 11.5 (Fluff)
7.5		0.1	
8.0		0.1	
8-12	0.5/4.0		8.0 - 14.1 - Grey, wet/saturated fine to medium sand w/ little gravel and broken rock (bedrock) from 13.9 - 14.1
8.0			
8.5			
9.0			
9.5			
10.0			Sample 13.9 - 14.1 @ 1020
10.5			
11.0			refusal @ 14.1
11.5			
12.0			
12-16	1.0/4.0		
14.0			
14.5			

depth	PID
~~PID~~ 13.9	3.7
14.0	6.8
14.1	2.3

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/2/21
- Weather - 72°F, Partly cloudy

- 1015 - Completed 20N, 40E boring. Refusal @ 14.1'. Will perform diagnostic on ~~data~~ rig then continue
- 1050 - Begin 20N, 60E boring

20N, 60E Refusal @ 14.3

Depth	% Rec	PID	Description
0-4	50%		2.0 - 2.5 - Grey, dry, gravel fill w/ little silt + organics
0.0		0.0	
0.5			
1.0			
1.5			2.5 - 3.8 - Yellow brown, moist becoming wet @ 3.0', fine to medium sand
2.0			
2.5			
3.0			
3.5			3.8 - ~~4.0~~ - Reddish brown moist clay w/ sand to medium rocks throughout
4.0		0.0	
4-8	3.5/4.0		
4.0			
4.5			
5.0		0.6	8.0 - ~~13.9~~ - Brown, moist fine to medium sand w/ little gravel throughout ~~SPC~~ surrounded by wet brown sand + water from 8.0 - 11.5
5.5		0.3	
6.0		0.3	
6.5		0.1	
7.0		0.1	
7.5		0.8	
8.0		6.0	
8-12	3.0/4.0		
8.0			
8.5			- Sample 11.0 - 11.5 @ 1108
9.0			
9.5		0.6	
10.0		0.1	
10.5		0.1	
11.0		0.3	
11.5		1.0	
12.0		0.0	

12-16	Rec	PID	Description
12.0	8.4/4	0.0	13.9 - Grey, moist clay w/ broken rocks (bedrock) @ 14.1 - 14.3
12.5			
13.0			
14.5			
15.0		0.0	

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- Date -
- Weather -

- 1100 - Completed 20N, 60E boring. Refusal @ 14.3'
- 1123 - Begin 40N, 60E boring

40N, 60E Refusal @ 14.3

Depth	% Rec	PID	Description
0-4	75%		0 - 1.6 - Grey, dry gravel fill w/ little sand + silt
0.0			
0.5			
1.0			
1.5			1.6 - 2.4 - Black, moist silt w/ very fine sand w/ little gravel + organics
2.0			
2.5			
3.0		0.2	
3.5			
4.0		0.4	2.4 - 3.6 - Grayish Brown, moist fine to medium sand becoming wet @ 3.3 - 3.6
4-8	3.5/4.0		
4.0			
4.5		0.9	
5.0		1.2	3.6 - 12.0 - Reddish brown, moist clay w/ some mottling + trace gravel throughout
5.5		0.4	
6.0		0.2	
6.5		0.7	
7.0		0.7	
7.5		1.5	12.0 - 14.3 - Grey, ~~brown~~ wet, medium to coarse sand w/ trace gravel throughout Refusal @ 14.3
8.0		0.5	
8-12	1.5/4.0		
8.0			
8.5			
9.0			
9.5			
10.0			
10.5		0.0	
11.0		0.0	
11.5		1.0	
12.0		0.1	

12-16	Coffee 1.5/4.0	PID	Description
12.0			
12.5			Sample 12.5 - 14.3 @ 1142
13.0		0.6	
13.5		0.4	
14.0		1.2	
14.3		0.1	

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- Date - 6/2/21
- Weather - 75°F, mostly cloudy

- 1136 - Completed 40N, 60E boring. Refusal @ 14.3
- 1150 - Will break for lunch
- 1250 - Will begin drilling 40 N, 40E

40N, 40E

Depth	% Rec	PID	Description
0-4	3.5/4.0		0-0.8 - Brown, moist silty topsoil w/ little gravel + organics
0.0		0.0	
0.5		↓	
1.0		0.0	
1.5 (1.2)		0.4	0.8 - 2.2 - Grey, dry pulverized rock/gravel layer
2.0		0.0	
2.5		↓	
3.0		↓	
3.5		↓	
4.0		0.0	2.2 - 2.1 - Black, moist silt w/ very fine to fine sand. Trace gravel throughout
4-8	3.5/4.0		
4.0		0.0	
4.5			
5.0		↓	2.1 - 3.2 - Yellow, brown moist, fine to medium sand
5.5		↓	
6.0		0.0	
6.5		0.4	
7.0		0.0	3.2 - 8.0 - Reddish brown, moist clay w/ grey mottling
7.5		0.3	
8.0		0.1	

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- Date - 6/2/21
- Weather - 75°F, mostly cloudy

40N, 40E (Continued)

Depth	% Rec	PID	Description
8-12	3.5/4.0		
8.0			8.0 - 14.1 - Same as 3.2 - 8.0. Sand + water in the macro liner above red/brown clay.
8.5			
9.0			
9.5			
10.0			
10.5			No sample taken on 40N, 40E
11.0			
11.5		0.0	
12.0		0.0	
12-16	0.0/4		
12.0	0%		
12.5			
13.0			
13.5			
14.0			
14.5			
15.0			
15.5			
16.0			

- 1305 - Completed 40N, 40E boring. Refusal @ 14.1. Will move to 60N, 20E
- 1325 - Begin boring 60N, 20E.

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- Date - 6/2/21
- Weather - 75°F, mostly cloud, slight breeze

60N, 20E

Refusal 13.9

Depth	% Rec	PID	Descriptions
0-4	75%		0.0-1.2 - Brown moist silty topsoil w/ little gravel + organics
0.0			
0.5			
1.0			1.2 - 2.8 - Brown, moist silty sand w/ gravel / pulverized rocks throughout
1.5			
2.0 → 2.1 -		2.5	
2.5		2.5	
3.0		1.8	2.8 - 3.5 - Black, moist, clayey silt w/ little sand (sticky)
3.5	2.8	Sample 2.5 @ 1333 w/ms/msed	
4.0	1.4		
4-8	100%		
4.0		1.2	3.0 - 3.9 - Reddish brown, moist fine to medium sand w/ little silt
4.5		4.3	
5.0		2.3	
5.5		3.8	
6.0		5.2	3.9 - 10.6 - Reddish brown moist clay w/ grey mottling throughout
6.5		1.7	
7.0		1.8	
7.5		0.4	
8.0		0.0	10.6 - 13.3 - Grey, moist, silty clay w/ fine to medium sand becoming wet from 13.0 - 13.3 w/ little gravel throughout
8-12	~~100 To 75%~~ 2.5/4.0		
8.0			
8.5		1.4	
9.0		1.1	
9.5		2.2	Sample 10.5 - 11.0 @ 1347
10.0		3.3	
10.5 → 10.6 → 12.4		18.6	
11.0		44.3	
11.5		16.6	
12.0		15.5	

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- Date - 6/2/21
- Weather - Same

60N, 20E (Cont)

Depth	% Rec	PID	Descriptions
12.16	50% (1.9/4.0)		~~13.3 - 15.0 - Refusal brown, wet fine to medium sand w/ little silt~~
12.0		11.2	
12.5		5.6	
13.0		2.0	
13.5		2.0	13.3 - 13.9 - Grey, moist clay / stiff w/ pulverized bedrock @ bottom
~~14.0~~ 13.9		2.3	
14.5			Refusal @ 13.9
15.0			
15.5			
16.0			

- 1342 - Completed 60N, 20E. Refusal @ 13.9. Will set up on 60N, 40E
- 1407 - Begin drilling 60N, 40E

60N 40E

Depth	% Rec	PID	Descriptions
0-7	2.7/4.0		0.0 - 1.5 - Brown moist silty topsoil w/ little gravel + organics (roots)
0.0		0.0	
0.5			
1.0			
1.5			1.5 - 2.0 - Black, moist sandy silt (Fill) w/ gravel throughout
2.0			
2.5			
3.0			
3.5			2.0 - 2.7 - Brown moist fine to medium sand
4.0		0.0	
			2.7 - 3.2 - Black / wet, clayey silt w/ little sand

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- Date - 6/2/21
- Weather - 75°F, mostly cloudy

60N, 40E (Continued) Refusal @ 13.9

Depth	% Rec	PID	Description
4-8	75%		
4.0			3.2-3.5 - Same as ~~above but~~ 2.0-2.7
4.5			
5.0		1.0	
5.5		0.4	3.5-11.3 - Reddish brown clay w/ grey mottling throughout, becoming very w/saturated @ 8.0'
6.0		0.4	
6.5		0.3	
7.0		0.6	
7.5		0.2	
8.0		0.3	
8-12	2.5/4.0		
8.0		0.0	11.3-13.9 - Grey moist silty clay w/ fine to medium sand w/ little gravel throughout
8.5			
9.0			
9.5			
10.0			Refusal @ 13.9
10.5		3.2	
11.0		6.5	Sample 10.5-11.5 @ 1430
11.5		2.5	
12.0			
12-16	Ord.		
12.0		0.0	
12.5		↓	
13.0			
13.5		0.0	
14.0			
14.5			

- 1415 - Completed 60N, 40E boring. Refusal @ 13.9
- 1522 - Will begin 80N, 40E boring

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- Date - 6/2/21
- Weather - 75°F, mostly cloudy

80N, 40E

Depth	% Rec	PID	Description
0-4	75%		
0.0		0.0	0-1.5 - Brown, moist silty Topsoil w/ little gravel + organics / roots
0.5			
1.0			
1.5			1.5-2.7 - Grey, dry pulverized rock/gravel layer.
2.0			
2.5		↓	
3.0			
3.5		0.0	2.7-2.9 - Brown, moist very fine to medium sand w/ little silt
4.0			
4-8	100%		
4.5		0.0	2.9-4.5 - Black moist sandy silt w/ little clay
5.0			
5.5			
6.0			
6.5		↓	4.5-5.3 - Reddish brown clay w/ little gravel throughout + grey mottling
7.0			
7.5			
8.0		0.0	
8-12			
8.0		0.0	5.3-7.7 - Grey, saturated, fine to medium silty sand Δ from 5.3-7.7
8.5			
9.0			
9.5			
10.0			
10.5			7.7-12.0 - Same as 4.5-5.3
11.0			
11.5		↓	
12.0		0.0	

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TITLE PROJECT

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- Date - 6/2/21
- Weather - 25°F, mostly cloudy

80N 40E (Continued) Refusal @ 14.3

Depth	% Rec	PID	Description
12-14	1.0/4.0 25%	0.0	12.0 - 14.3 - Dark Grey, moist sandy silt w/ little clay. Trace gravel throughout
12.0			
12.5			
13.0			
13.5		0.6	
14.0		1.8	Sample 13.5 - 14.3 @ 1545
14.3		2.4	

-

- 1537 - Completed 80N, 40E boring. Refusal @ 14.3'
- 1555 - NDI crew off site.
- 1600 - S. Connolly off site. Will head to Pine Environmental to pick up more nitrile gloves
- 1621 - Arrive @ Pine Environmental
- 1630 - Depart Pine Environmental for home.

Daily Construction Summary for 6/2/21

Boring ID	Sample ID	Time	PID	Total Depth
80N 20E	13.5 - 14.0	0835	17.9	14.0'
40N 20E	2.5 - 3.0	0857	8.5	14.1
	DUP-1-20210602	-	-	
	4.0-5.0 MS/MSD	0906	19.5	
	13.5 - 14.1	0920	19.1	
20N 20E	11.0 - 11.5	0950	76.3	14.1
	DUP-2-20210602	-	-	
20N 40E	13.9 - 14.1	1020	6.8	14.1
20N 60E	11.0 - 11.5	1108	1.0	14.3
40N 60E	13.5 - 14.3	1142	1.2	14.3
40N 40E	No samples taken	-	0.4@1.2 0.4@6.5	14.1
40N 20E	10.5 - 11.0	1247	44.3	13.9
	2.5 - 3.5 MS/MSD	1333	2.5	
60N 40E	10.5 - 11.5	1430	6.5	13.6
	13.5 - 14.3	1545	2.4	14.3

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/3/21
- Weather - 63°F, light rain
- Personnel - Sean P. Connolly (Arcoma)

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- 0815 - Arrive on site. Perform H/S meeting. Will setup on 100N, 40E
- 0835 - Begin drilling 100N, 40E

100N, 40E

Depth	% Rec	PID	Description
0-4	75%		0.0 - 1.1 - Brown, moist silty Topsoil w/ little gravel and organics (roots)
0.0		0.0	
0.5			
1.0			
1.5			1.1 - 1.5 - Grey, dry, sandy pulverized rock/gravel layer
2.0			
2.5			1.5 - ~~2.0~~ 1.7 - Dark grey, moist sandy silt w/ trace gravel
3.0			
3.5			
4.0		0.0	
4-8	100%		1.7 - 2.8 - Reddish brown, moist, fine to medium sand w/ trace gravel throughout
4.0		0.0	
4.5			
5.0			2.8 - 3.4 - Grey, wet, fine to medium sand.
5.5			
6.0			
6.5			3.4 - ~~4.0~~ 4.3 - Grey moist silty clay
7.0			
7.5			4.3 - ~~8.0~~ 8.0 - Reddish brown ~~4.0 - 4.3~~ - moist clay
8.0		0.0	

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- Date - 6/3/21
- Weather - 62°F, Cloudy

100N, 40E (Continued) 0850 Lake Level

Depth	% Rec	PID	Description
8-12	100%		8.0 - 8.6 - Dark grey, wet fine to medium sand w/little silt
8.0			
8.5			
9.0			
9.5			8.6 - 9.2 - Reddish brown moist clay
10.0			
10.5			
11.0		0.1	9.2 - 9.9 - Same as 8.0 - 8.6
11.5		0.1	
12.0			9.9 - 11.8 - Reddish brown moist clay
12-16	2.5/4.0		
12.0			
12.5			11.8 - 14.0 - Grey moist silty clay w/ trace sand starting @ 11.9
13.0			
13.5			
14.0			
14.5			14.0 - 14.5 - Grey, wet silty sand w/ trace sand throughout

Sample 14.0-14.5 @ 0900

Refusal @ 14.5

- 0850 - Completed 100N, 40E Boring. Refusal @ 14.5
- 0907 - Begin drilling 120N, 40E Boring log on next page

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- Date - 6/3/21
- Weather - 63°F, Cloudy

120N, 40E 0920 Refusal @ 15.2'

Depth	% Rec	PID	Description
0-4	75%		0.0 - 1.2 - Brown, moist silty topsoil w/ trace sand and organics (roots)
0.0		0.0	
0.5			
1.0			
1.5			1.2 - 1.6 - Grey, dry pulverized rock/gravel layer
2.0			
2.5			
3.0			1.6 - 4.8 - Reddish brown moist, fine to medium sand
3.5			
4.0		0.0	
4-8	3.5/4.0		
4.0			4.8 - 5.0 - Grey, dry pulverized rock/gravel w/ fine to medium sand
4.5			
5.0 → 5.3		0.7	
5.5			
6.0 → 5.7		0.4	5.0 - 5.3 - Same as 1.6 - 4.8 Sample 5.3-5.7 @ 0920
6.5			
7.0			
7.5		0.1	
8.0		0.7	5.3 - 5.7 - Black moist, sandy silt w/ organics/roots throughout.
8-12	75%		
8.0			
8.5			
9.0		0.8	5.7 - 6.0 - Grey, moist, silty sand
9.5		1.5	
10.0		4.1	
10.5		1.3	6.0 - 10.0 - Reddish brown moist clay w/ grey mottling throughout. Hard/stiff matrix
11.0		2.8	
11.5		1.5	
12.0		0.4	

Sample 10.0-11.0 @ 0934 w/ MS/MSD

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- Date - 6/3/21
- Weather - 63°F, Cloudy

120N, 40E (Continued)

Depth	% Rec	PID	Description
12-16	50%		10.0 - 11.0 - Reddish, grey moist silty clay w/ trace sand, malleable matrix
12.0		0.0	
12.5			
13.0			
13.5			11.0 - 15.5 - Grey, silty clay w/ trace fine sand throughout. Becoming w/ saturated moist 13.5'
14.0			
14.5			
15.0			
15.5		0.0	

Retract @ 15.5

- 0920 - Completed 120N, 40E boring w/ retract @ 15.5'
- 0948 - Begin drilling 120N, 60E

120N, 60E

Depth	% Rec	PID	Description
0-4	75%		
0.0		0.0	0.0 - 1.3 - Brown, moist silty topsoil w/ little sand + organics (roots) throughout
0.5			
1.0			
1.5			1.3 - 1.6 - Grey, clay pulverized rock/gravel layer w/ fine to medium brown sand
2.0			
2.5			
3.0			
3.5			
4.0		0.0	1.6 - 3.9 - Reddish brown moist, fine to medium sand
			3.9 - 5.3 - Black, moist sandy silt w/ organics throughout

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- Date - 6/3/21
- Weather - 63°F, light rain

120N, 60E (Continued) Retract @ 11.5

Depth	% Rec	PID	Description @ 0955
4-8	75%	0	
4.0		0.0	
4.5			
5.0			5.3 - 5.7 - Grey moist medium to fine sand w/ little clay
5.5			
6.0			5.7 - 10.7 - Reddish brown clay w/ grey mottling throughout (stiff/hard matrix)
6.5			
7.0			
7.5			
8.0		0.0	Δ around 8' (saturated grey sand surrounding reddish brown clay)
8-12	100%		
8.0		0.1	10.7 - 11.5 - Grey silty clay w/ trace sand + gravel throughout. (very sticky/malleable matrix)
8.5		0.8	
9.0		0.3	
9.5		0.5	
10.0		0.2	Sample 8.5-9.5 @ 1007 w/ Duplicate
10.5	10.7	0.4	Dup-1-20210603
11.0		0.0	
11.5			
12.0			
12-16			
12.0			- 0955 - Completed 120N, 60E. Retract @ 11.5
12.5			- 1019 - Will begin 100N, 60E boring. Boring log starts on next page
13.0			
13.5			
14.0			
14.5			
15.0			
15.5			
16.0			

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- Date - 6/3/21
- Weather : 63°F, light rain

100N, 60E Retrieved @ 14.5 @ 1030

Depth	% Rec	PID	Description
0-4	75%		0.0 - 1.3 - Brown, moist silty Topsoil w/ gravel and organics throughout
0.0			
0.5		0.0	
1.0			
1.5			1.3 - 1.7 - Gray, clay, pulverized rock/gravel layer w/ fine to medium sand
2.0			
2.5			
3.0			
3.5			
4.0		0.0	1.7 - 2.0 - Brown, moist silty sand w/ trace gravel and organics throughout
4-8	100%		
4.0		0.0	
4.5			
5.0			2.0 - 3.5 - Reddish brown, moist, fine to medium sand w/ trace gravel throughout.
5.5			
6.0			
6.5			
7.0			
7.5			3.5 - 4.3 - Black, moist sandy silt w/ trace clay.
8.0		0.0	
8-12	2.5/4.0		
8.0			
8.5			4.3 - 9.7 - Reddish brown clay w/ gray mottling throughout. (Hard/stiff matrix)
9.0			
9.5		0.0	
10.0			
10.5			9.7 - 14.5 - Gray, moist, silty clay w/ trace sand and gravel throughout. (sticky/malleable matrix)
11.0			
11.5			
12.0		0.0	

Δ around 8-9

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- Date - 6/3/21
- Weather - 64°F, cloudy

100N, 60E (continued)

Depth	% Rec	PID	Description
12-16	25%		
12.0			
12.5			Sample 14.0-14.5 @ 1036
13.0			
13.5		0.0	
14.0		↓	Retrieved @ 14.5
14.5		0.0	

- 1030 - Completed 100N, 60E boring w/ retrieval @ 14.5'
- 1055 - Will begin drilling 80N, 60E

80N, 60E

Depth	% Rec	PID	Description
0-4	75%		0.0 - 1.1 - Brown, moist, silty topsoil w/ trace gravel + organics throughout
0.0			
0.5			
1.0			
1.5			1.1 - 1.5 - Gray, clay pulverized rock/gravel layer w/ fine to medium sand
2.0			
2.5			
3.0			
3.5			1.5 - 2.0 - Reddish brown silty fine to medium sand w/ trace clay
4.0			
			2.0 - 2.9 - Greyish brown, moist little fine to medium sand w/ ~~trace~~ clay + trace gravel throughout

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PROPRIETARY INFORMATION

Continued from page

- Date - 6/3/21
- Weather - 66°F, Cloudy

50N 60E

Depth	To Ref	PID
4-8		
4.0		
4.5		
5.0		
5.5		
6.0		
6.5		
7.0		
7.5		
8.0		
8-12	75%	
8.0		0.0
8.5		
9.0		
9.5		
10.0		
10.5		
11.0		
11.5		
12.0		0.0
12-16		
12.0		0.0
12.5		
13.0		
13.5		
14.0		
14.5		
15.0		
15.5		
16.0		

Sond. 60E (Continued) Refusal @ 14.2 @ 1105

Description

2.9 - 3.5 - Black moist sandy silt w/ trace clay w/ organics throughout

Sample 7.0-7.5 @ 1110

3.5 - 4.0 - Brown, moist fine to medium sand

4.0 - 11.0 - Reddish brown moist clay w/ grey mottling throughout

11.0 - 14.2 - Grey moist silty clay w/ trace sand and gravel throughout (sticky / malleable matrix) becoming wet around 13.5

Refusal @ 14.2

- 1105 - Completed 50N 60E boring w/ refusal @ 14.2
- 1213 - Will begin 60N 60E boring

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PROPRIETARY INFORMATION

Continued from page

- Date - 6/3/21
- Weather - 66°F, cloudy slight rain

60N 60E

Depth	To Ref	PID
0-4	50%	
0.0		0.0
0.5		
1.0		
1.5		
2.0		
2.5		
3.0		
3.5		
4.0		0.0
4-8	3.5/4.0	
4.0		
4.5		0.2
5.0		1.7
5.5		0.8
6.0		5.4
6.5		7.5
7.0		4.0
7.5		2.2
8.0		2.3
8-12	2.0/4.0 50%	
8.0		
8.5		
9.0		
9.5		
10.0		
10.5	Sample 11-11.5 @ 1229	29.2
11.0		51.5
11.5		45.0
12.0		15.5

Description

0.0 - 2.2 - Brown, moist silty topsoil w/ trace sand and organics

2.2 - 2.7 - Grey, dry pulverized rock/gravel layer w/ fine to medium sand

2.7 - 2.9 - Black moist silty sand w/ little clay

2.9 - 4.0 - Reddish brown moist fine to medium silty sand

4.0 - ~~13.2~~ 13.1 - Reddish brown moist clay w/ grey mottling throughout

Δ 8-9

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/3/21
- Weather - 70°F, Cloudy

60N 60E (Continued) Refusal @ 14.1

Depth	% Rec	PID	Description
12-16	25%		
12.0			
12.5			
13.0		1.1	13.1 - 14.1 - Grey moist silty clay w/ trace sand and gravel throughout
13.5		0.6	
14.0		0.0	
14.5			
15.0			
15.5			
16.0			

Refusal @ 14.1

- 1230 - Completed 60N 60E boring w/ Refusal @ 14.1
- 1255 - Will begin 120N, 80E boring

120N, 80E

Depth	% Rec	PID	Description
0-4	3.5/4.0		
0.0		0.0	
0.5			
1.0			
1.5			
2.0			
2.5			
3.0			
3.5			
4.0		0.0	

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- Date - 6/3/21
- Weather - 70°F, Cloudy

120N, 80E (Continued)

Depth	% Rec	PID	Description
4-8	~~3.5/4.0~~		
4.0	75%	0.0	0.0 - 1.0 - Brown → dark brown, moist sandy silty topsoil w/ organics
4.5			
5.0			
5.5			
6.0			1.0 - 1.9 - Dark brown, moist fine to medium sand w/ little clay
6.5			
7.0			
7.5			
8.0		0.0	1.9 - 6.4 - Brown, moist medium to coarse sand
8-12	50%		
8.0		0.0	
8.5			6.4 - 6.7 - Black, moist sandy silt w/ trace clay + organics throughout
9.0			
9.5			
10.0			
10.5			6.7 - 7.1 - Grey, wet fine to medium sand
11.0			
11.5			
12.0		0.0	7.1 - 11.0 - Reddish brown moist clay w/ grey mottling throughout. Δ f'
12-16			
12.0		0.0	
12.5			
13.0			11.0 - 13.2 - Grey, moist silty clay w/ trace sand + gravel
13.5			
14.0			
14.5		0.0	13.2 - 13.9 - Same as 6.7-7.1
15.0			13.9 - 14.6 - Same as 11.0 - 13.2 Sample 13.9-14.6 @ 1312
15.5			
16.0			

Refusal @ 14.0

- 1305 - Completed 120N, 80E w/ Refusal @ 14.0

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PROPRIETARY INFORMATION

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-Date - 6/3/21
-Weather - 70°F, Cloudy

-1321 - Begin drilling 100N, 80E
100N, 80E

Depth	% Rec	PID	Description
0-4	3.5/4.0	0.0	0.0 - 1.2 - Grey dry Fill w/ gravel + rocks & sand
4-8	100%	0.0	1.2 - 1.8 - Black, moist sandy silt
8-12	50%	0.0	1.8 - 3.0 - Reddish brown moist, medium to coarse ~~silty~~ sand
		0.0	3.0 - 3.4 - Black, moist ~~clayey silt~~ sandy silt w/ trace clay + organics throughout.
		0.0	3.4 - 3.8 - Grey moist sandy silt w/some clay
		0.0	3.8 - 4.2 - Grey moist, medium to coarse silty sand
		0.0	4.2 - 14.0 - Reddish brown moist clay w/ grey mottling throughout + trace small gravel
		0.0	Δ 8-9

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PROPRIETARY INFORMATION

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-Date - 6/3/21
-Weather - 70°F, Cloudy

100N, 80E (Continued) Refusal @ 14.4

Depth	% Rec	PID	Description
12-16	0.4/4.0	0.0	14.0 - 14.2 - Reddish brown, wet, medium to coarse sand.
		0.0	14.2 - 14.4 - Grey moist silty clay w/ trace sand + gravel
			Sample 14.2 - 14.4 @ 1340

-1335 - Completed 100N, 80E boring w/ refusal @ 14.4
-1350 - Will begin 80N, 8E boring

80N, 80E

Depth	% Rec	PID	Description
0-4	75%	0.0	0.0 - 1.7 - Grey, dry fill w/ gravel / rocks + medium to coarse sand
		0.0	1.7 - 2.5 - Black, moist sandy silt
		0.0	2.5 - 3.3 - Dark brown, moist sandy silt w/ little clay. Wood debris throughout
		0.0	3.5 - 4.6 - Black, moist sandy silt w/ trace clay and organics throughout

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PROPRIETARY INFORMATION

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- Date - 6/7/21
- Weather - 70°F, Cloudy

50N 50E (Continued)

Depth	% Rec	PID	Description
4-8	3.5/4.0		
4.0			
4.5		0.0	4.6 - 11.5 - Reddish brown, moist clay w/ gray mottling + trace small gravel throughout
5.0			
5.5			
6.0			
6.5			
7.0			
7.5			11.5 - 14.2 - Gray moist silty clay w/ trace sand + gravel
8.0		0.0	
8-12	100%		
8.0		0.0	
8.5			
9.0			Refusal @ 14.2
9.5			No recovery on 12-16 run
10.0			No sample
10.5			
11.0			
11.5			
12.0		0.0	
12-16	0%		
12.0			
12.5			
13.0			
13.5			- 1400 - Completed 50N 50E boring w/ Refusal @ 14.2', No recovery No sample.
14.0			
14.5			
15.0			
15.5			- 1417 - Will begin 100N 100E boring. Boring log on next page
16.0			

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TITLE PROJECT

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- Date - 6/7/21
- Weather - 72°F, Cloudy, slight breeze

100N 100E Refusal @ 14.2 @ 1430

Depth	% Rec	PID	Description
0-4	3.8/4.0		
0.0			0.0 - 1.3 - Grey clay, FILL w/ gravel + rocks w/ medium to course sand
0.5		0.0	
1.0			
1.5			1.3 - 1.9 - Black moist sandy silt
2.0			
2.5			
3.0			1.9 - 3.1 - Reddish brown moist medium to course sand
3.5			
4.0		0.0	
4-8	100%		3.1 - 4.5 - Brownish gray, moist medium to course sand
4.0		0.0	
4.5		0.1	
5.0		0.0	
5.5			4.5 - 11.4 - Reddish brown moist clay w/ gray mottling + silt/sand Lenses throughout
6.0			
6.5			
7.0			
7.5			
8.0		0.0	
8-12	1.7/4.0		Δ 8 - 10.7, Saturated (wet) medium to course sand (Flush)
8.0			
8.5			
9.0			
9.5			
10.0			
10.5		0.0	11.4 - 14.2 - Gray moist silty clay w/ trace sand + gravel
11.0			
11.5			
12.0		0.0	

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TITLE PROJECT

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- Date - 6/3/21
- Weather - 72°F, Cloudy, slight breeze
100N 100E (Continued)

Depth	% Rec	PID	Description
12.16	0.2 / 4.0		
12.0			
12.5			
13.0			
13.5			
14.0 → 14.2		0.0	Sample 14.0-14.2 @ 1438
14.5		0.0	
15.0			
15.5			Refusal @ 14.2
16.0			

- 1430 - ~~Finish~~ Completed 100N 100E boring w/ refusal @ 14.2
- 1510 - NDI onsite offsite.

Daily Construction Summary 6/3/21

Boring ID	Sample ID	Time	PID	Total Depth
100N 40E	14.0-14.5	0900	0.0	14.5
120N 40E	10.0-11.5 MS/MSD	0934	4.1	15.5
120N 60E	8.5-9.5	1007	0.8	11.5
	DUP-1-20210603	-	-	
100N 60E	14.0-14.5	1036	0.0	14.5
80N 60E	7.0-7.5	1110	1.1	14.2
60N 60E	11.0-11.5	1229	51.5	14.1
120N 80E	13.9-14.6	1312	0.0	14.6
100N 80E	14.2-14.4	1340	0.0	14.4
80N 80E	No sample taken	-	0.0	14.2
100N 100E	14.0-14.2	1438	0.0	14.2

- 1530 - S. Connelly offsite

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/4/21
- Weather - 64°F, Mostly Cloudy
- Personnel - Sean P. Connelly (Arcom)
- Thom Mongeluzzo (WDI)

- 0755 - Arrive on site. Thom Mongeluzzo already on site. It will be just Thom today, Jason has a doctors appointment. Will perform HAS meeting.
- 0813 - Will begin drilling 60N 80E boring

Refusal @ 14.1

Depth	% Rec	PID	Description
0.0	75%		0.0 - 1.2 - Dark brown, moist silty topsoil w/ trace gravel + organics throughout
0.0			
0.5			
1.0			
1.5			1.2 - 1.7 - Grey, dry, pulverized rock/gravel layer (FILL)
2.0			
2.5 - 2.8 → 0.1			w/ low to medium silty sand
3.0			Dark
3.5			1.7 - 2.3 - Brown, moist, sandy silt
4.0			
4.8	75%		
4.0			2.3 - 3.0 - Black, moist sandy silt w/ little clay. Wood debris from 2.8 - 3.0
4.5			
5.0		0.0	
5.5			
6.0			3.0 - 3.6 - Grey, wet, medium to course sand
6.5			
7.0			
7.5			3.6 - 5.0 - Dark brown, wet medium to course sand
8.0		0.0	

5.0 - 13.9 - Reddish brown moist clay w/ some gravel + trace sand throughout

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PROPRIETARY INFORMATION

TITLE

PROJECT

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- Date - 6/4/21
- Weather - 68°F mostly cloudy

(Continued)

Depth	% Rec	PID	Description
5-12	50%		
5.0			Δ @ 8'-9'
5.5			
6.0			Sample 10.5-11.0
6.5			@ 0825
7.0			
7.5			13.9 - 14.1 - Gray moist silty clay w/trace sand + gravel. Broken bedrock @ 14.1
8.0		0.5	
8.5		0.8	
9.0		0.0	
9.5		0.0	
10-16	25%		
10.0		0.0	
10.5			
11.0		0.0	
11.5			
12.0			
12.5			
13.0			
13.5			
14.0		0.0	
14.5			

- 0830 - Completed 60W 50E boring. Refusal @ 14.1
- 0912 - Will begin 120N, 100E

120N, 100E

Depth	% Rec	PID	Description
0-4	2.5/4.0		
0.0		0.0	0.0 - 1.6 - Brown, moist silty topsoil w/fine to medium silty sand
0.5			
1.0			
1.5			1.6 - 2.6 - light brown moist fine to medium sand w/trace gravel throughout
2.0			
2.5			
3.0			
3.5		0.0	
4.0			

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PROPRIETARY INFORMATION

TITLE

PROJECT

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- Date - 6/4/21
- Weather - 72°F, sunny w/slight breeze

120N 100E (Continued)

Depth	% Rec	PID	Description
4-8	3.2/4.0	0.0	2.6 - 3.6 - Reddish brown moist, fine to medium sand
4.0			
4.5			3.6 - 4.2 - Black, moist sandy silt w/trace clay and organics/wood debris throughout
5.0			
5.5			
6.0			
6.5			
7.0			
7.5			4.2 - 9.5 - Reddish brown, moist clay w/ gray mottling / silt/sand Limit throughout.
8.0		0.0	
8-12	2.5/4.0		Δ 8-9
8.0		0.0	
8.5			
9.0			
9.5			9.5 - 15.1 - Grey, moist silty clay w/trace sand and gravel
10.0			
10.5			
11.0			
11.5			
12.0		0.0	
12.16	0.75/4.0		Sample 14.5 - 15.1 @ 0950
12.0			
12.5			
13.0			
13.5			
14.0	14.5	0.0	
14.5	15.0	0.0	
15.0	15.1	0.0	
15.5			
16.0			

- 0925 - Completed 120N, 100E boring. Refusal 15.1

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/4/11
- Weather - 72°F, Sunny w/ slight breeze

- 0950 - Will begin 120N, 120E boring

120N, 120E

Depth	% Rec	PID	Description
0-4	75%		0.0 - 2.0 - Brown, moist sandy silt ~~silty sand~~ topsoil w/ organics/roots throughout
0.0			
0.5			
1.0		0.0	
1.5			2.0 - 2.8 - Brown, moist fine to medium sand
2.0			
2.5			
3.0			2.8 - 5.5 - Black moist sandy silt w/trace clay
3.5		0.0	w/organics/roots throughout
4.0			
4-8	3.5/4.0		
4.0		0.0	5.5 - 6.0 - Same as 2.0-2.8
4.5			
5.0			6.0 - 11.7 - Reddish brown moist clay w/ grey mottling + trace gravel throughout
5.5			
6.0			
6.5			
7.0			- ~~Soft~~ Clay surrounded by brown saturated ~~brown~~, fine to medium sand from 8 - 11.5
7.5			
8.0		0.0	
8-12	75%		
8.0		0.0	11.7 - 14.6 - Grey moist silty clay w/ trace sand + gravel throughout
8.5			
9.0			
9.5			
10.0			
10.5			
11.0			
11.5			
12.0		0	

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/4/11
- Weather - 72, mostly sunny

120N, 120E (Continued)

Depth	% Rec	PID	Description
12-16	50%		
12.0		0.0	
12.5			
13.0			
13.5			Sample from 14.0 - 14.6 @ 10:10
14.0			
14.5 → 14.6		0.0	
15.0			
15.5			
16.0			

- 1005 - Completed 120N, 120E w/ refusal @ 14.6'
- 1035 - Will begin 120N, 140E boring

120N, 140E

Depth	% Rec	PID	Description
0-7	75%		
0.0		0.0	0.0 - 1.1 - Brown, moist sandy silt topsoil w/ organics/roots throughout
0.5			
1.0			
1.5			1.1 - 1.6 - Dark brown moist silty sand w/ trace gravel throughout
2.0			
2.5			
3.0		0.1	
3.5		0.0	1.6 - 1.9 - ~~Reddish~~ Brown moist, fine to medium sand
4.0		0.0	
			1.9 - 3.5 - Black moist sandy silt w/ trace clay w/ ~~organics~~ wood chunks/ debris throughout

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PROPRIETARY INFORMATION

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PROJECT

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Date - 6/4/21

- Weather - Sunny

120N 140E (Continued) Refusal @ 14.3

Depth	% Rec	PID
4-8	100%	
4.0		0.0
4.5		
5.0		
5.5		
6.0		
6.5		
7.0		
7.5		
8.0		
8-12	0.0/7.0	
8.0	0%	
8.5		
9.0		
9.5		
10.0		
10.5		
11.0		
11.5		
12.0		
12-16	1.0/4.0	
12.0	25%	0.0
12.5		
13.0		
13.5		
14.0	14.3	0.0
14.5		
15.0		
15.5		
16.0		

Description

3.5 - 4.6 - Grey moist fine to medium sand

13.0

4.6 - 8.0 sic - Reddish brown moist clay w/ grey mottling + silt Gravel throughout

▲ Water @ 7.5

8.0 - ~~13.0~~ - ~~Grey, moist saturated, fine to medium sand becoming moist @~~

spc 6/4/21

13.0 - 14.3 - Grey moist silty clay w/ trace sand + gravel throughout

sample 14.0 - 14.3 @ 1050

Refusal @ 14.3

- 1050 - Completed 120N, 140E boring w/ refusal @ 14.3

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PROPRIETARY INFORMATION

TITLE

PROJECT

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- Date - 6/4/21

- Weather - 73°F, mostly sunny

- 1210 - Will begin 105N, 140E

105N, 140E Refusal @ 14.3

Depth	% Rec	PID
0-4	2.5/4.0	
0.0		0.0
0.5		
1.0		
1.5		
2.0		
2.5		
3.0		
3.5		
4.0		0.0
4-8	100%	
4.0		0.0
4.5		
5.0		
5.5		
6.0		
6.5		
7.0		
7.5		0.0
8.0		
8-12	0.5/4.0	
8.0		
8.5		
9.0		
9.5		
10.0		
10.5		
11.0		
11.5		0.0
12.0		0.0

Description

0 - 1.3 - Gravel fill

1.3 - 1.7 - Brown, moist fine to medium sand w/ little silt

1.7 - 2.1 - Black, fine to medium sand w/ little silt

2.1 - 7.3 2.3 - 2.9 - Reddish brown fine to medium sand w/ trace gravel

2.3 - 2.7 2.4 - 3.4 - Black moist sandy silt w/ trace clay

2.7 - 3.6 3.4 - 4.1 - Brown, moist fine to medium silty sand w/ trace clay

3.6

4.1 - 5.4 - Brown, moist medium to course sand. becoming wet from 4.3 - 5.4

4.3 - 14.3 - Reddish brown moist clay w/ grey mottling + silt/sand lenses throughout

* Brown wet > saturated medium to course sand from 4.0 - 7.5 (Flutt)

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/4/21
- Weather - 79°F Mostly Sunny

105N, 140E (Continued)

Depth	% Rec	PID	Description
12-16	0.5 / 4.0		
12.0			
12.5			
13.0			Refusal @ 14.3
13.5			Sample from 14.0-14.3
14.0		0.0	@ 1230
14.5		0.0	

- 1230 - Completed 105N, 140E w/ refusal @ 14.3
- 1300 - Will begin 105N, 120E boring

105N 120E

Depth	% Rec	PID	Description
0-4	75%		0.0 - 2.0 - Gravel Fill
0.0			
0.5			2.0 - 2.3 - Black moist ~~silty~~ fine to medium sand w/trace silt
1.0		0.0	
1.5		↓	
2.0			
2.5		0.5	2.3 - 3.4 - Reddish brown
3.0		0.0	medium to coarse sand
3.5		↓	
4.0		0.0	3.4 - 3.6 - Black, moist
4.8	100%		fine to medium silty
4.0		0.5	sand
4.5	Sample 4.0-4.5 @ 1300	0.6	
5.0		0.0	3.6 - 4.6 - Brown, moist
5.5		0.0	medium to coarse sand
6.0		0.1	w/trace silt
6.5		0.0	
7.0		0.1	
7.5		0.0	
8.0		0.0	

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PROPRIETARY INFORMATION

TITLE PROJECT

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- Date - 6/4/21
- Weather -

105N 120E

Depth	% Rec	PID	Description
8-12	100%		
8.0		0.0	4.6 - 8.0 - Reddish brown, moist clay w/ grey mottling + silt/sand lenses throughout
8.5			
9.0			
9.5			
10.0			
10.5			8.0 - 8.3 - Dark Grey, moist, medium to coarse sand
11.0			
11.5			
12.0		0.0	8.3 - 8.8 - Reddish brown clay
12-16			8.8 - 11.3 ~~8.7 - 11.3~~ - Brown, saturated fine to medium sand (Water level). Dolomitical rock @ 11.3
12.0			
12.5			
13.0			
13.5			11.3 - 13.9 - Reddish brown moist clay
14.0			
14.5			
			13.9 - 14.2 - Grey moist silty clay w/trace sand + gravel

- 1320 - Completed 105N, 120E w/ Refusal @ 14.2

Daily Drilling Summary 6/4/21

Boring ID	Sample ID	Time	PID	Total Depth
60N 80E	10.5 - 11.0	0825	0.8	14.1
120N 100E	14.5 - 15.1	0930	0.7	15.1
120N 120E	14.0 - 14.6	1010	0.0	14.6
120N 140E	14.0 - 14.3	1050	0.0	14.3
105N 140E	14.0 - 14.3	1230	0.0	14.3
105N 120E	4.0 - 4.5	1300	0.6	

- 1435 - NDI offsite
- 1445 - S. Cooper off site. Will head to TA Guthrie to drop off samples.
- 1550 - Arrive @ TA

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PROPRIETARY INFORMATION

TITLE

PROJECT

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6/7/21

75°F SUNNY

08:05 – KEVIN ON-SITE, NOTIFIED GEOPHONE TECH OF ON-SITE

08:45 – NOTIFIED ON-SITE, TOM MANGOFFIDA (OWNER) [illegible] GUSTAFSON, WAITING FOR GUTSMAN

09:28 – GUTSMAN ON SITE BEGIN GEOPHONE

12:00 – CLOSED GUTSMANN OFF SITE

13:45 – RETRIEVED GEOPHONE

14:45 – FINISHED FOR DAY, BEGAN CLEANUP, SECURING WATER FOR OVERNIGHT

14:50 – PACKAGING WORK COMPONENTS FOR TRANSPORT (i.e. WELDING GOODS TO SCHOOL)

15:30 – KEVIN OFF-SITE & NOTIFIED

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ON/OB

SAMPLE	DEPTH	REC	PID	LAB	DESC
1	0-4	2.0'	0/0		0-4: FILL - NO ODOR, MP SAND, WET 224 NO OD
2	4-8	4.0'	0/0/0		4-8: NO ODOR CLAYEY SILT, GRAY DESC CHANGE, MOIST, NO ODOR
3	8-12	4.0'	0/0/0		8-11: NO ODOR QUICK SAND
3	11-13.6	1.6'	0/0	ON/OB (11:15) 11:45	11-12: SAME AS 4-8' 12-13.6: ASA, REFUSAL @ 13.1

ON/-20B

SAMPLE	DEPTH	REC	PID	LAB	DESC
1	0-4	3.2'	0.1/0.2/0.0		0-4: FILL - TOPSOIL (CO2), 2-4 NO ODOR MP SAND MOIST, NO ODOR
2	4-8	4.0'	0/0/0		4-8: NO ODOR CLAYEY SILT, GRAY DESICCATION CRACKS, MOIST, NO ODOR
3	8-12	4.0	0/0/0	ON/-20B (11:50) 11:20	8-10: NO ODOR QUICK SAND
4	12-13.9	1.9	0/0		10-12: SAME AS 4-8' 12-13.9: ASA, REFUSAL CLAYS @ 13.5 REFUSAL @ 13.9

ON/20B

SAMPLE	DEPTH	REC	PID	LAB	DESC
1	0-4	2.0	0/0		0-4: TOPSOIL, NO-OD BRN SILT
2	4-8	4.0	0.0/0/0		3-4: NO ODOR MP SAND, WET 4-8: NO ODOR CLAYEY SILT, SAME-FIN GRAY GRAY DESC CLAYS
3	8-12	4.0	0/0/0/0	ON/20B	8-12: ASA QUICKSAND SOME SILTS
4	12-13.7	1.7	0/0	(12-13) 11:55	12-13.7: QUICK SAND, REFUSAL @ 13.7'

SIGNATURE

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PROPRIETARY INFORMATION

TITLE **PROJECT**

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80N / -20E

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	3.5'	0/0/0		0-4: Fill - Brown Fine Sand + Rounded Sand + Clast, moist, no odor
2	4-8	3.5'	0/0/0/0		4-8: No Recovery Clayey Silt, some Fine Grain, Coarse Obsidian Cobbles moist, no odor
3	8-12	4.0	0/0/0/0		8-12: AA
4	12-13.6	1.6	0/0	80N/-20E Co-130 13:10	12-13.6: Gravel Some Clast, wet, no odor Refusal @ 13.6

10N / -20E

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	3.0	0/0/0		0-4: Fill - No Recovery Fine Sand + Silt + Clast, moist, no odor
2	4-8	4.0	0/0/0/0		4-8: No Recovery Clayey Silt, some Fine Grain Gravel, Coarse Obsidian Cobbles moist, no odor
3	8-12	4.0	0/0/0/0	10N/-20E (12-13) 13:35	8-12: AA
4	12-13.5	1.0	0		12-13.5 AA Refusal @ 13.5

160N / -20E

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	3.0'	0/0/0		0-4: Fill - Recovered Silt, Clay + Sand + Gravel, Brown, Obsidian @ 3.5-4 moist, no odor Fine Grain
2	4-8	2.0'	0/0	160N/-20E (Core) 14:45	4-8: AA Red Wet
3	8-12	2.0	0/0		8-12: AA Coarse @ 12 Gravel Cobble @

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PROPRIETARY INFORMATION

Location

Project / Client

Date 9/7/21

120 N -20 E

~~400 N~~, ~~200 N~~

Sample	Depth	Rec	PID	Lab
1	0-4'	2.4	0/0/0	~~120 N 200~~ 120 -200 (2.4) @ ~~09:47~~ 75
2	4-8'	4.0	0/0/0	
3	8-12	4.0	0/0/0	
4	12-13.7	1.7	0	~~120 200~~ 12-13 @ ~~10:25~~ 10:25

Location

Project / Client

Date

Desc

0-2: Topsoil - no rec Silt

2-4: Dk Brn-Blk mf Sand, moist - wet

Sample rec

4-8: No Rec Sample Sand Clay, Gravel

Dark Cuttings mixed no rec

8-11.5: AA

11.5-12: Gry Sandy Clay, moist, no rec

Sand & Gravel

12-13.7: AA refusal @ 13.7

TITLE

PROJECT

Continued from page

6/8/24

72°F Cloudy

07:55- Team on site, mob w/ materials

~~Calib~~ Calibrated PID w/ 100ppm isobutylene

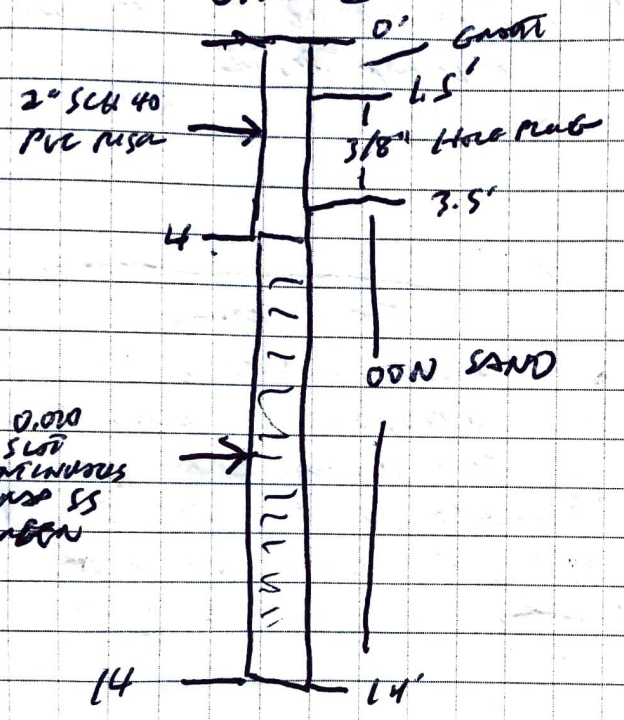
Began Tailgate Safety Meeting

08:09- Resumed Geoprobe w/ 140N/-45G

09:40- Finished Geoprobe, Began ~~Installing~~ installing OMW-2 w/ CME-75 w/ 4.25" HSA

~~outer~~

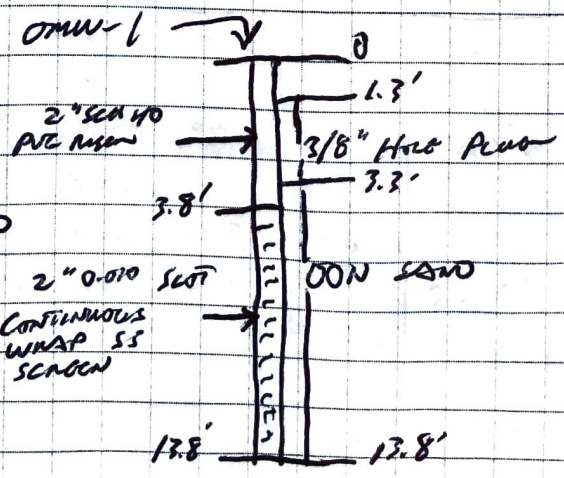
OMW-2



11:45- Rawson OMW-2 installation to set up Ogden

12:00- Lunch

12:30- Began installing OMW-1 & constructing Ogden road



13:09- Began Ogden

13:39- Finished Ogden resumed OMW-1 installation

14:19- Rawson OMW-1 ~~Installation~~ installation

15:30- Team North off-site

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PROJECT

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140N1 - 40E

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	3.7'	0/0/0		0-4: Fill - Topsoil, w/ wood fragments, Reworked Silty Sand, No Bank - Oxidized mottled, no odor
2	4-8	4.0'	0/0/0		4-8: No Bank Silt, some Clay, some f Gravel, Gray, Occasional Cracks, moist, no odor
3	8-12	4.0	0/0/0		8-12: AA Grading to Gray Clay, some f Sand, Silty, wet, no odor
4	12-13	0.5	0	MW1/MW2 (12-14) @ 08:28	12-13: AA, Refusal @ 13'

OMW-2

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	2.0 3.0	0/0	OMW-2 (3.5-4) @ 08:55	0-4: Fill - Topsoil, Reworked Silt + wood chips, Silty @ 3.5-4'
2	4-8		0/0/0		4-8: No Bank, Silty Sand Clay, Tr Gravel Gray Occasional Cracks, moist, no odor
3	8-12	4.0	0/0/0		8-12: AA Grading to Gray Clay, some f Sand + Silt, wet, no odor
4	12-14'	2.0	0.02	OMW-2 (13-14) @ 09:00	12-14': AA, Refusal @ 14'

BMW-300

Sample #	Depth	Rec	PID	Lab	Desc
1	0-4	2.2'	0/0.2/0		0-4': Topsoil, Gray Reworked Silty + Gravel, moist, no odor
2	4-8	4.0	0/0/0/0		4-8: No Bank Silt, some Clay Tr Gravel Gray Occasional Cracks, moist, no odor
3	8-12	4.0	0/0/0/0	BMW-300 (13-14) @ 09:40	8-12: AA
4	12-14	2.0	5.3/16.3		12-14': Gray Clay, some f Sand & Silt, wet. no odor, Refusal @ 14'

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PROPRIETARY INFORMATION

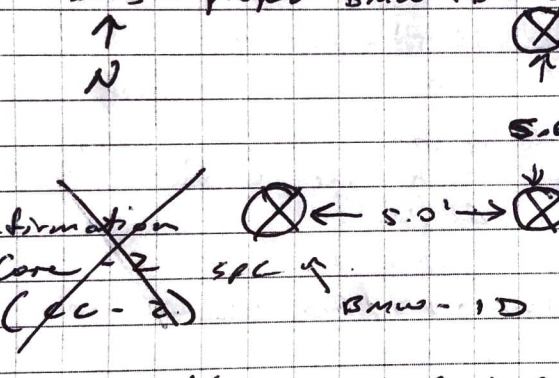
TITLE

PROJECT

Continued from page

- Date - 6/9/21
- Weather - 73°F. Mostly Cloudy
- Personnel - Sam P. Connelly (Arcom)
  - Thom Mongetida + Jason Fasing (NDI)

- 0750 - Arrive on site.
- 0800 - NDI crew arrive on site. Will perform H/S meeting → NDI crew will discuss augers and then prepare to continue drilling and start to set bedrock well casing.
- X - Jason offsite to pick up core boxes for confirmation cores. (Someone will bring core boxes to site)
- 0915 - Will begin casing / setting casing @ BMW-1D / DD + OMW-1 location. Will name confirmation cores CC-1 + CC-2.. + will assign proper BMW ID's when exact depths / locations are determined.



* Only need 1 CC @ each cluster. total of 3

- Procedure - Auger down to bedrock, set temporary 6" casing → core confirmation core → roller bit w/ 5 7/8 5' into rock → trommie grout + set 4" permanent casing → pull 6" casing.
- 0933 - Reached bedrock on CC-1 @ 13' 8". Will begin to set 6" temporary casing after augers are pulled.
- 0951 - Pouring Bentonite around 6" temporary casing → use auto hammer to push casing to bedrock
- 0955 - Jim from NDI delivers core boxes
- 1020 - Began confirmation core.
- 1050 - Completed 5' confirmation core for BMW-1DD

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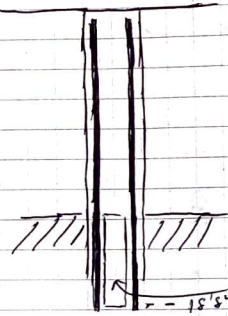
PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/9/21
- Weather - 78°F. Partly cloudy
- Personnel - Some

CC-1 / BMW-1D/DD + OMW-1
Assigned: BMW-1DD (Deeper bedrock well)



- 6¼ HSA → 13'8" → pulled augers & installed 6" temp casing -> cored 5' confirmation core → 18'8". Pulled core and reamed out hole for w/ 5⅞" rotary bit. Set 4" perm casing + grout in place → pulled 6" casing
13'8" - Bedrock
13'8" - 18'8" - Confirmation Core for temporary 6" Casing

- Confirmation Core for BMW-1D/DD Cluster

13'8" - 18'8" w/ 120 gallons lost starting @ 14'9" → 16'1". Fracture zone (unclear) 14'9" Sand lense @ 16'1", partial lense @ 16'9" (sand lense / calcium deposits)

RQD = $\frac{1.5 + 1.2 + 1.8}{5.0}$

RQD = $\frac{4.5}{5.0}$

RQD = 90%

* Grout 4" Casing filled w/ grout on all bedrock wells for better seal.

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/9/21
- Weather - 81°F, Cloudy
- Personnel - Same

- 1110 - Completed pulling confirmation core for BMW-1DD. Will pull rock core, roller bit then set permanent 4" casing
- 1130 - Began roller bit drilling to set casing
- 1220 - Completed roller bit drilling to 18'8".
- 1245 - Begin pumping grout mixture into 6" temporary casing. Used 3 total bags of Lehigh Type I-II Portland cement = 28-30 gallons of grout
- 1250 - Setting 4" permanent casing -> pull 6" temporary.
- 1305 - Completed setting / grouting 4" casing.
- 1310 - Will break for lunch then decon augers, load up GeoProbe then line up on BMW-1D.
- 1330 - Completed all decon + prep for tomorrow. Depart site

6/9/21 Drilling Summary

- BMW-1DD drilled to 18'8" w/ confirmation core from 13'8" → 18'8", permanent 4" steel casing grouted into place, 5' into bedrock (13'8" → 18'8")

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PROPRIETARY INFORMATION

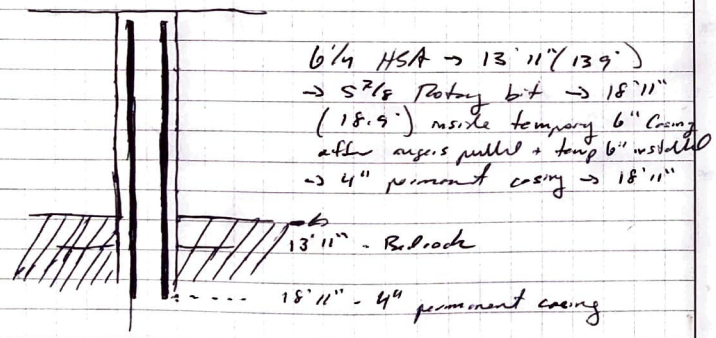
TITLE PROJECT

Continued from page

- Date - 6/10/21
- Weather - 66°F, Partly Cloudy
- Personnel - Sean P. Connelly (Arcon)
  - Thom Mongchila / Jason Ewsing (NDI)

- 0745 - Arrive on site. NDI crew already on site with portion H/S meeting then beginning augering down on BMW - 1D
- 0505 - Began augering on BMW - 1D
- 0820 - Reached bedrock @ 13' 11" Will pull augers then install 6" temporary casing + seal w/ bentonite
- 0841 - Completed instal of 6" temp. casing.
- 0910 - Began coring to instal 4" permanent casing
- 1020 - Completed coring to 18' 11". Flushing out core/bore → will install casing. Using 3 bags of Lehigh Portland cement = 28-30 gallons
- 1100 - Completed grouting 4" + pulling 6" casing. Will begin clean up/decon

BMW - 1D



- 1210 - 1230 - Took lunch
- 1230 - Began setting up to drill/core w/ confirmation core @ BMW-3DD
- 1245 - Reached bedrock w/ augers @ 13' 11"
  Casing: 15' 6" (15' 5 7/8") - 1' 7" = 13' 11"
- 1252 - Installing temporary 6" casing

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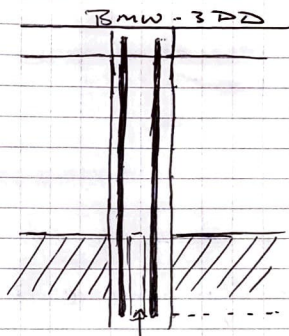
PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/10/21
- Weather - 73°F, Sunny
- Personnel - Same

BMW - 3DD



Confirmation Rock Core from 13' 11 (13.9') to 18' 11 (18.9')

- 1318 - Began coring BMW - 3DD.
- 1332 - Losing water @ ~ 14' 4"
- 1340 - Completed 5" Core run (confirmation core). Pulling rods + core sleeve

$$RQD = \left(\frac{(0.6 + 1.2 + 0.4 + 2.8)}{5.0}\right) \times 100$$

$$RQD = \left(\frac{4.7}{5.0}\right) \times 100$$

$$RQD = 94\%$$

Confirmation core run from 13' 11 (13.9') → 18' 11 (18.9'). w/a 100 gallons lost ~16.0'. No mechanical fractures. Grey dolostone w/ traces of sand/calcium deposits @ 16' 3" / 16.2'. From 18' 2" → End of run, light grey intact sand layer w/ small to medium square crystals (quartz crystals)

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SIGNATURE DATE

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page

- Date - 6/10/21
- Weather - 75°F, mostly sunny
- Personnel - Same

- 1400 - Began roller bitting w/ 5 7/8 roller bit
- 1448 - Completed roller bitting. Will pump out boring and then install 4" permanent casing. Will use 3 bags of Lehigh Portland cement to grout casing.
- 1454 - Installing casing
- 1515 - Completed installing 4" permanent casing + pulling 6" temp. casing.

Daily Drilling Summary 6/10/21

- BMW-1D drilled to 18'11" w/ bedrock @ 13'11". Permanent 4" casing installed + grouted
- BMW-3DD drilled to 18'11" w/ bedrock @ 13'11". Continuation core drilled/cored from 13'11" → 18'11" w/ RQD of 94%. Permanent 4" casing installed + grouted.

- 1540 - Depart site.

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PROPRIETARY INFORMATION

TITLE PROJECT

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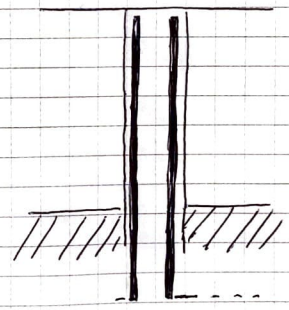
- Date - 6/11/21
- Weather - 64°F, Mostly Cloudy
- Personnel - Sean P. Connolly (Arcom)
  Thom Mongeford / Jason Easing (NDZ)

- 0800 - Arrive on site. NDZ crew already onsite, decorning augers + prepping for days activities. Goal is to drill + set casing @ BMW-3D. Will perform H/S
- 0835 - Begin augering BMW-3D
- 0854 - Augered to bedrock @ 13'11". Will pull augers → install 6" temp casing
- 0955 - Began coring BMW-3D
- 1215 - Completed coring. ~~Flushing~~ Flushing boring out
- 1245 - Completed grouting. Pulling 6" Casing
- 1400 - All parties depart site.

Daily Drilling Summary 6/11/21

- BMW-3D drilled/cored to 18'11" w/ 5 4" casing grouted into place from 13'11" (bedrock → 18'11")

BMW-3D



- Augered w/ 6 1/4 HSA → Bedrock (13'11") → Installed 6" temporary casing → 13'11" → Rotor b.t w/ 5 7/8" bit → 18'11" → install + grout 4" permanent casing → pull 6" casing

13'11" - Bedrock

18'11" 4" Steel casing

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PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page 6/14/21, 70°, Sunny

08:35 - KSM on-site

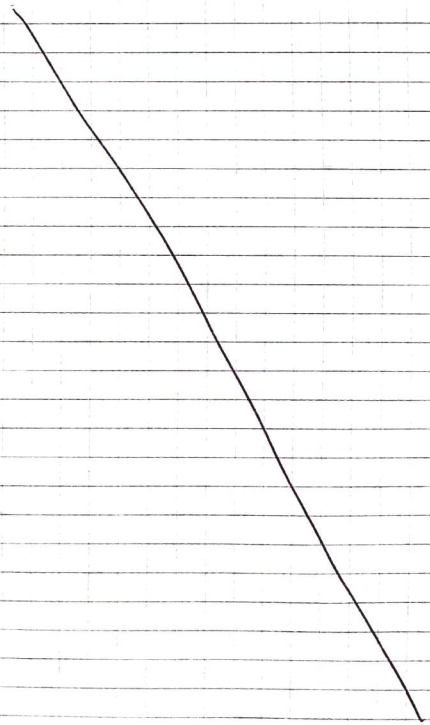
NDI out site

09:30 - Begin Digging anchor 2, Dozers in loc

09:35 - Ground Crew, Begin Panda anchor 2 Reinforcement

Begin Cleanup

10:00 ~ KSM off site



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PROPRIETARY INFORMATION

TITLE

PROJECT

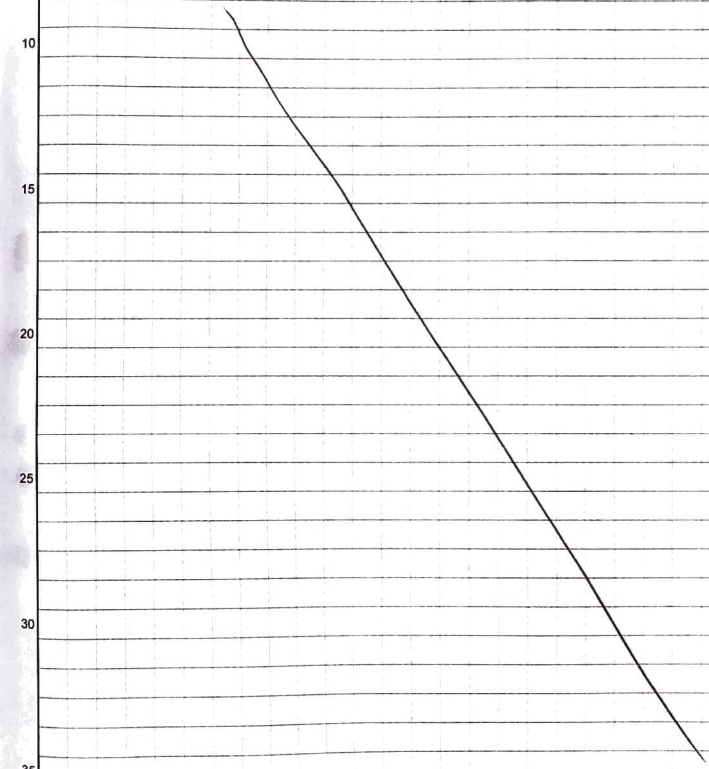
Continued from page 6/15/21 59°F Cloudy

07:44 KSM on-site

08:50 ~ NDI on-site, Bryan Swanson (Owner) w/ CMB SSLC

09:00 MG on site

09:10 ~ KSM off site



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PROPRIETARY INFORMATION

Continued from page 6/16/21 - 57°F Sunny

08:15 KSN on-site, met w/ NDI Bryan Swartz (Driller) & Cris Sisco

08:30 Conducted HTS meeting, NDI began setting BMW-2D

Calibrated PID — N/A

- BMW-2
- BMW-2DD
- BMW-2D
- BMW-3D
- BMW-3DD

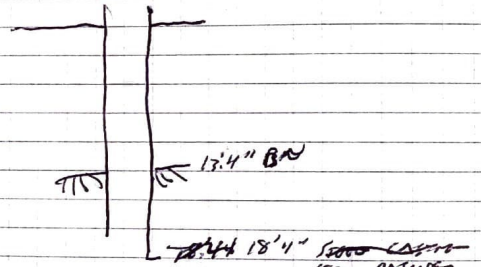
Began developing OMW-1, DGEAMS in development log

10:20 - Tow drivers Hesper (Andrew Hudson) to obtain safety glasses w/ side shields, Hesper is assistant [redacted] Claimed such glasses [redacted] get mailed Approx days AM

13.4-18.4

10:42 Finished aggressively Bit @ BMW-2D Bit 13'4" 13'4"-18'4"

Lost ~150 gal [redacted] during init aggressively, [redacted] Hole Cleaning



[redacted] Lunch

12:13

12:43 Resumed OMW-1 [redacted] Development

13:44 - Finished [redacted] OMW-1 Development, & Finished setting up Casing [redacted] for BMW-2D

14:00 - NDI setting up on BMW-3DD

14:30 - Began DGEAM

14:45 - Finished "

15:05 - Finished Cleaning KSN & NDI off-site

Continued from page 6/17/21 - 58° Sunny

07:45 - KSN on-site met w/ NDI, Conducted Tailgate Safety meeting, Calibrated PID

08:07 - NDI Comm BMW-3DD, KSN Developing OMW-2, DGEAMS in Log

10:32 Raised OMW-2 Development, [redacted] Resuming on 6/18

BMW-3DD

19'-24'

Run #	DGEAM	[redacted]	RQD	DGSC
2	19-24'	100%	[redacted] 92.5%	[redacted] MD Gray Limestone / Dolostone, Brecciated - Blocky, very thin Bedding, Some Vugs, No water loss, No Flow
3	24'-29'	100%	97%	24'-29': N/A, 15% water loss
4	29'-34'	95%	93%	29'-34' N/A But no vugs, very water loss
5	34'-39'	100%	98%	34'-39': N/A 10% water loss
6	39-42	100%	90%	39-42' N/A w/ Vugs 7% water loss Eod @ 42' BGS
1	13.2-18.2	93%	93%	In 13.2-18.2': Same as 19-24', but Blocky Massive [redacted]

12:46 Lunch, Finished Comm BMW-3DD

13:05 - Began to set up @ BMW-3D

Conducted Down Inn

[redacted] Down Soil Cuttings: HHT HHT I

OMW-[redacted] Down Water: HHT HHT [redacted] III

Development [redacted] Purge Water: II

13:35 - Began Drilling BMW-3D down to 31' BGS

15:44 Finished Drilling BMW-[redacted]3D, Began Cleanup for day

16:00 - KSN & NDI off site

TITLE **PROJECT**

Continued from page 6/18/21 64°F cloudy

07:45 – KGM on site met w/ NDE, calibrated PID

08:00 – Tailgate safety meeting, NOI to drill BMW-10 down to 31' BGS reamed DMW-2 abandonment, details in log

08:41 – Finished DMW-2 abandonment (see log). Purged 10 DV 4 times btw 6/17 + 6/18.

09:00 – Departed location off of SOW drilling

~~Casing for BMW-10 installed at an angle, will need to tilt rig~~

Casing for BMW-10 installed at an angle (see log). NOI to tilt CME 55LC to match angle and continue drilling via rotary bit, no cores

10:00 – NOI installing ~~6x~~ 6x5 casings on BMW-10, BMW-100 & DMW-1. Details in well construction logs

11:37 – Finished drilling BMW-10 down to 31' BGS, 20g mason sand began to set up @ BMW-100 (target depth = 41' 8")

12:04 – Finished ~~setting~~ setting up @ BMW-100, lunch

12:30 – Waiting for rain/potential storm to pass

13:10 – Thunder heard in distance, NOI conducting prep work for new installation & replacing concrete forms on DMW-1/BMW-2 surface, GBR.

13:50 – Cleaning out BMW-100 for coring on 6/21/21

14:44 – Finished ~~cleaning~~ cleaning out BMW-100, 3x drums of drill water generated today. Began cleanup for the day

15:00 – KGM & NDL off site

Continued to page

SIGNATURE	DATE
DISCLOSED TO AND UNDERSTOOD BY	DATE

PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page

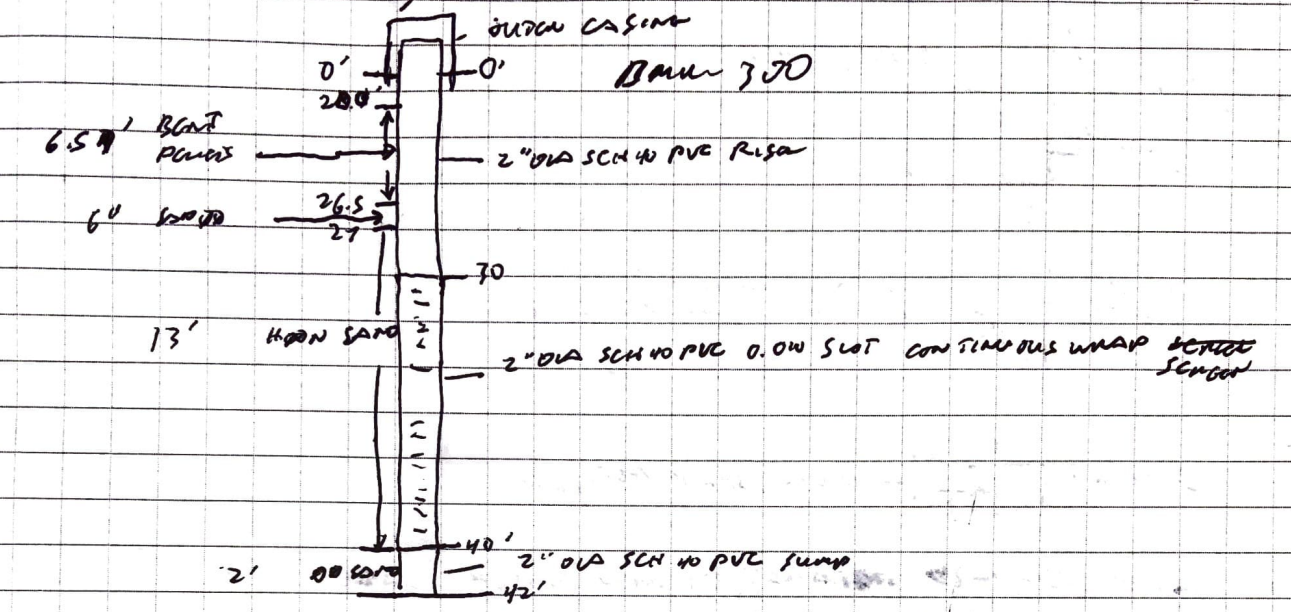
6/21/21 70°F Sunny

08:15 – ICSM on-site, met w/ NDI

Calgaz Safety meeting, Bump Checked PID

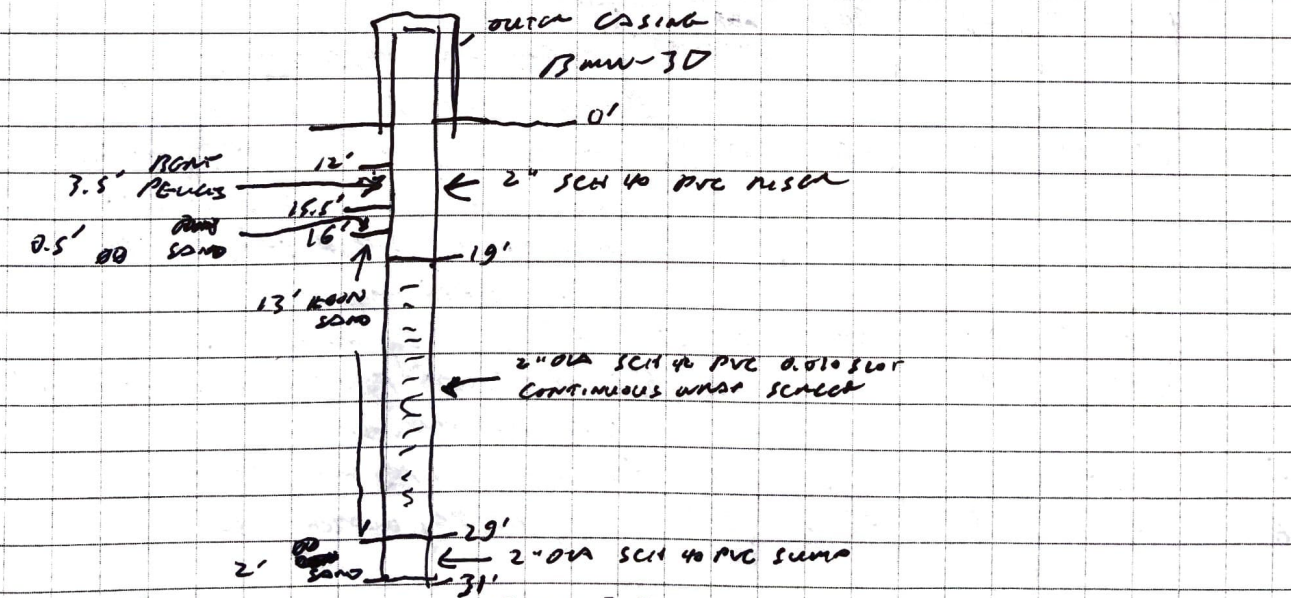
08:41 – NDI to get Time Released Bgnt Pellets for

09:32 NDI on-site, resumed BMW-30D ~~installation~~ installation



Note: Bgnt Pellets and 3/8" Coated Time Released Pellets

10:11 – Finished Installing BMW-30D, resumed BMW-30 installation



10:48 – Finished Installing BMW-30

Continued to page

SIGNATURE DATE

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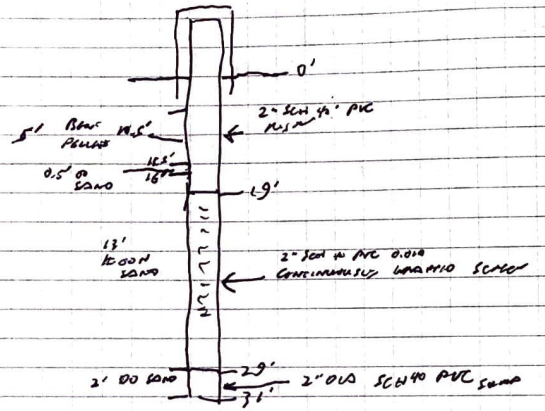
PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page 71

10:51 - RESUMED RMW-10 INSTALLATION



11:35- RAMSOR RMW-10 INSTALLATION WITH FINISH CASE

11:58 - BEGAN COMING RMW-10D

NAME	DEPTH	REC%	RQD%	DESC
1 (6/9/21	13.8'-18.8'	100%	90%	13'8"-18'8" : NO GRAY LIMESTONE/CONCRETE/GRAVEL, NO FLOW BROWN/BUFF, V THIN BEDDING
2	19-24'	90	87	19'-24' NO GRAY LIMESTONE/CONCRETE, NO FLOW BROWN/BUFF, VERY THIN BEDDING NO WATER LOSS, SHEEN OF FECES, NO ODOR VUGS PRESENT
3	24'-29'	99	98	24'-29': A/A, 275g WATER LOSS
4	29'-34'	100	84	29'-34': A/A BUFF FOW → NO VUGS, NO SHEEN 260g WATER LOSS
6/22/21 5	34'-39'	97	92.5	34'-39': A/A, 170g WATER LOSS
6	39'-42'	100	82.5	39'-42': A/A 20g WATER LOSS

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

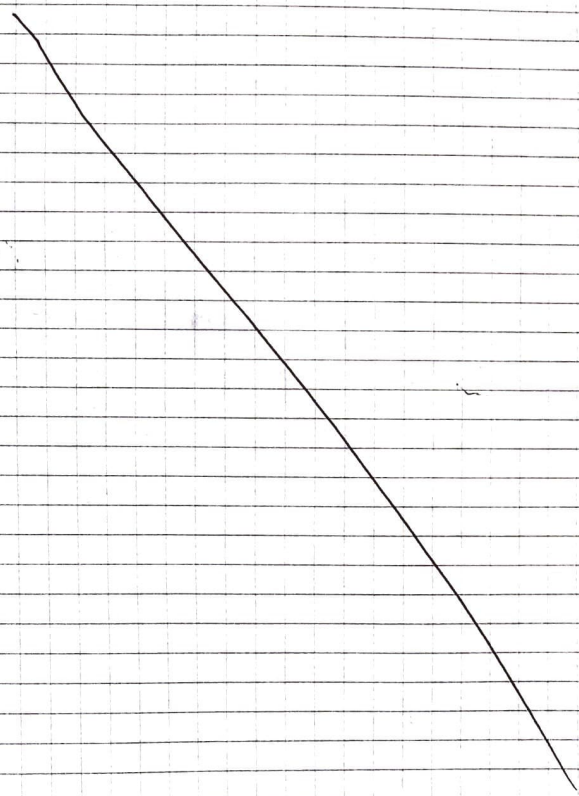
TITLE

PROJECT

Continued from page 72

14:55- RAMSOR RMW-10D COMING DUE TO APPROACHING STORM
BEGAN CLEANUP FOR THE DAY

15:10 - JOSH & NDI OFF SITE



Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

Continued from page 6/22/21 56°F CLOUDY

07:50 – ICSH on site, MEO w/ NOL, CALIBRATE PID

08:20 – H&S MEETING, RESUME BMW-100 COMING

08:23 – FINISHED BMW-100 COMING, BEGAN SETUP @ BMW-20

09:00 – BEGAN DRILLING BMW-20 DOWN TO 21'

11:17 – FINISHED DRILLING BMW-20 TO 31' BGS, ~140g WATER LOSS
STARTED OBSERVED @ ~ 27:30; NAPL ENCOUNTERED @ 28'
BEGAN TO SET UP @ BMW-200

12:00 – BEGAN COMING BMW-200 DOWN TO 42'
BMW-200

	RUN #	DEPTH	REC %	RQD %	DESC
	2	19'-24'	87.7	72.5	19'-24': MD GRAY, LIMESTONE/DOLOSTONE; MD HARD, BROKEN → BLOCKY, V. THIN BEDDING, LITTLE VUGS ~30g WATER LOSS
	3	24'-29'	100'	95.8	24'-29': A/A, MORE BLOCKY, NO VUGS ~250g WATER LOSS
	4	29'-34'	100	92.5	29'-34': A/A, MORE BROKEN LITTLE VUGS 170g WATER LOSS
6/23/21	5	34'-39'	95.8	95.8	34'-39': A/A 150g WATER LOSS
	6	39'-42'	97.2	97.2	39'-42': A/A, MORE VUGS, 60g WATER LOSS

Continued to page

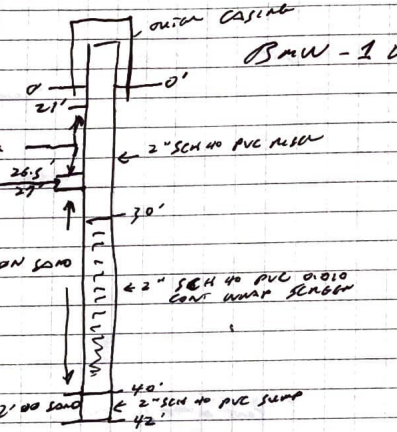
SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

Continued from page 74

14:17 – RESUMED COMING BMW-200 TO ALLOW FOR WATER TO ACCUMULATE IN HOLE & ~~COMPLETED BMW-100~~ SETTING UP TO COMPLETE BMW-100 ON 6/23



14:41 – RESUMED BMW-200 COMING

15:22 – REACHED BMW-200 COMPLETE, BEGAN CLEANUP FOR DAY
3x DRUMS OF IDW (DRILL WATER) GENERATED TODAY
35x DRUMS OF IDW (TOTAL)

16:05 – ICSH & NOL OFF-SITE

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page

6/23/21 54° F, Sunny

07:45 - KTM on-site, Met w/ NDI, Calibrated PID

H&S Meeting

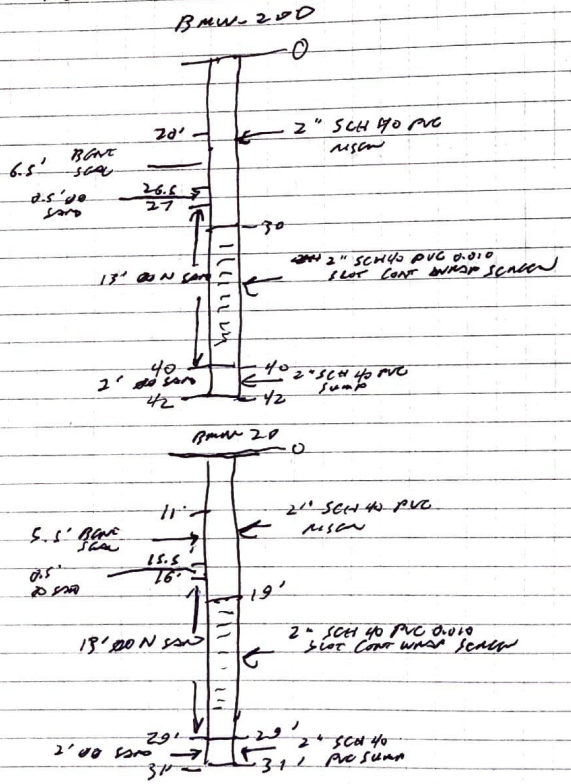
08:00 - NDI completing BMW-100 (See pg 75), Began Decontamination

BMW-30/00 (See Decontamination Log)

10:00 - Finished Decontaminating BMW-300 (See Log)

NDI Finished Coring BMW-200

Began Installing BMW-20/00



Continued to page

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PROPRIETARY INFORMATION

TITLE

PROJECT

Continued from page 76

12:00 - NDI & Finished Installing BMW-20/00 & Put Casing on BMW-2

12:11 - Finished Decontaminating BMW-30 See Log

12:30 - NDI Began Cleaning Began Decontaminating BMW-10, See Log

13:13 - NDI off Site

13:40 - Finished Decontaminating BMW-30, See Log

Began Cleaning For Off

5 x Drums of Decontamination Water Generated

14:26 - KTM off Site

Continued to page

SIGNATURE | DATE

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PROPRIETARY INFORMATION

TITLE **PROJECT**

Continued from page 6/24/21 65°F Sunny

08:30 JCM on site, HAS Meeting

Began Developing BMW-100, details in Log

10:04 - Finished Developing BMW-100 See Log

Began setting up @ BMW-200, will develop BMW-200 @ 11:30 ~24 hrs after completion

11:30 - Began Developing BMW-200, details in Log

12:13 - Finished Developing BMW-200 See Log, Began Cleanup

13:45 JCM off site

Needs to be recalibrated YSI

2x drums of development water generated

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

TITLE **PROJECT**

Continued from page 6/25/21 68°F Sunny

07:52 ICEM on site HES meeting

Began development BMW-20, details in log

09:44: Finished ~~Began~~ BMW-20 development, see log

~~Began~~ Began Drum In

Soil cuttings:	𝍸 𝍸 III	13
Drill water:	𝍸 𝍸 𝍸 IIII	19
Development water:	𝍸 𝍸	10
Tubing/PPE:	I	1
Empty:	I	1
		44 Drums

10:50 Finished Drum In ICEM off site

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page 8/11/21 73°F RAIN

0812O - KGM ON-SITE MGT W/ TU. RAINING HARD/STORM, WAITING TO PASS

~~08:38~~ HEARD THUNDER (MIN 30 WAIT). CONDUCTED TAIL GATE SAFETY ~~MEETING~~ MEETING

08:38

09:30 BEGAN DTW/DOB MEASUREMENTS AT PRE-EXISTING WELLS MW, (SEE ~~WORKSHEET~~ WORKSHEET)

11:40 LUNCH

12:20 BEGAN SAMPLING OMW-2/BMW-20/BMW-200 (SEE SAMPLE LOG)

14:00 FINISHED DTW/DOB MEASUREMENTS

15:10 FINISHED SAMPLING OMW-2/BMW-20/BMW-200, BEGAN CLEANUP

15:30 FINISHED CLEANUP AECOM ~~BACK~~ OFF SITE

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

TITLE PROJECT

Continued from page 8/12/21 81°F Cloudy

08:05 KSM on-site, mtg w/ TU
Tailgate safety meeting
08:30 TU began sampling OMW-1 / BMW-10 / BMW-100
Details in GW sample logs
KSM off site to McCoy/MG
09:30 [redacted] KSM returned to site
09:40 MG on-site & began neutralizing/discharging
19x drums of DMW water
pH began changing w/ [redacted] YSI 556 water quality meter
13:23 Finished neutralizing/discharging DMW water drum

NEW DMW Count
19x Soil Cuttings (DMW cuttings)
10x Decon/PPE water
1x PPE/Tubing
1x [redacted] Purge water
13x [redacted] Empty/Non-Haz

13:30 MG off site, Finish sampling OMW-1 / BMW-10 / BMW-100
sampling BMW-30/300, Details in GW Sample Logs
14:00 Finished Sampling, Began Cleanup
14:15 Accom off site

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

TITLE **PROJECT**

Continued from page 9/8/21 65°F ~~RAIN~~ LT RAIN

09:38- ICAM ON-SITE ~~MOBILE~~/ CLEAN HANDS

CLEAN HANDS BOOM REMOVING DRUMS

10:45- FINISHED LOADING 1ST END OF DRUMS INTO TRUCK

14 ~~MW~~ SOIL CUTTINGS

2 ~~MW~~ DEVELOPMENT / PURGE WATER

WILL COME BACK FOR 2ND ROUND WHEN GROUND IS ~~DRY~~

DRIER / LOW MUDDY SOFT

NOW ON-SITE DRUM ~~COUNT~~ COUNT

4X SOIL CUTTINGS

8X DEVELOPMENT WATER

1X PURGE WATER

1X PPE / TYVEK

7X EMPTY / NON HAZ

HANDS

10:55- CLEAN ~~HANDS~~ OFF-SITE

11:05- CARGO ~~OFFICE~~ LOCK SUB

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

APPENDIX D

SOIL BORING LOGS

AECOM

TEST BORING LOG

BORING NO. : 0N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 1

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144414.221 **EASTING:** 1380008.744

GROUNDWATER: ~3' bgs

GROUND ELEVATION: 555 est

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Medium Brown		FILL: Medium to fine Sand		0.0	Wet, No Odor, No Staining
-5		2		100	Reddish Brown w/ Gray Mottling		Clayey SILT	ML	0.0	Moist
-10		3		100	Medium Brown		Medium to fine SAND, Running Sand/Quicksand	SW	0.0	Saturated
		4		100	Reddish Brn w/ Gray Mottling		Clayey SILT	ML	0.0	Moist
-15							Refusal @ 13.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 12-13' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 0N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 1

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144414.221 **EASTING:** 1380028.744

GROUNDWATER: ~3' bgs

GROUND ELEVATION: 555 est

				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Medium to Dark Brown		TOPSOIL: Silt		0.0	Moist, No Odor, No Staining
									0.0	
									0.0	
					Medium Brown		FILL: Medium to fine Sand		0.0	Wet
-5		2		100	Reddish Brown w/ Gray Mottling		Clayey SILT, some-trace Gravel	ML	0.0	Moist
									0.0	
									0.0	
							Medium to fine SAND, Running Sand/Quicksand		0.0	
		3		100	M. Brn			SW	0.0	Saturated
-10					Reddish Brown w/ Gray Mottling		Clayey SILT, some-trace Gravel	ML	0.0	
									0.0	
									0.0	
									0.0	
		4		100	Medium Brown		Medium to fine SAND, Running Sand/Quicksand	SW	0.0	
									0.0	
-15							Refusal @ 13.7' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 12-13' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 0N -20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144414.221 **EASTING:** 1379988.744

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		80	Medium Brown		TOPSOIL		0.1	Wet, No Odor, No Staining
									0.2	
							FILL: Medium to fine Sand		0.0	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		Clayey SILT	ML	0.0	Moist
									0.0	
									0.0	
									0.0	
		3		100	Medium Brown		Medium to fine SAND, Running Sand/Quicksand	SW	0.0	Saturated
-10									0.0	
					Reddish Brown w/ Gray Mottling		Clayey SILT	ML	0.0	Moist
									0.0	
		4		100			Bedrock chips @ 13.5' bgs.		0.0	
									0.0	
-15							Refusal @ 13.9' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 11-12' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 20N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144434.221 **EASTING:** 1380008.744

GROUNDWATER: 8 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray		FILL: Reworked Gravel and Pulverized Rock		0.0	
					Light Brown		SAND, little Silt	SW	0.0	
									0.0	
									0.4	
									0.0	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		50	Dark Brown		SAND	SW	0.0	Saturated
-10									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		4		1					0.0	
-15							Refusal @ 13.8' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 7.5-8.1' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 20N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144434.221 **EASTING:** 1380028.744

GROUNDWATER: 8.3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		33	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
					Gray Black		FILL: Reworked Silt, Sand, Gravel and Clay		0.2	
									0.8	
		2		100					3.9	
-5									0.1	
					Reddish Brown		CLAY	CL	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		100	Gray		SAND	SW	0.0	Wet
									0.0	
					Reddish Brown		CLAY	CL	0.1	Moist
-10									0.0	
									0.5	
									2.3	
									48.5	
									76.3	
		4		100					15.0	
									0.0	
									0.0	
									0.0	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 11-11.5' for VOCs

BORING NO. : 20N 20E

AECOM

TEST BORING LOG

BORING NO. : 20N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144434.221 **EASTING:** 1380048.744

GROUNDWATER: 8.0 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	
					Black				0.0	
					Gray				0.0	
									0.0	
									0.0	
									0.0	
									0.0	
-5		2		100					0.0	
									0.0	
									0.0	
					Reddish Brown		CLAY	CL	0.0	
									0.0	
									0.0	
									0.5	
									0.1	
		3		100	Gray		SAND, little Gravel	SW	0.1	Wet
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		4		100					0.0	
									0.0	
									0.0	
									6.8	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 13.9-14.1' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 20N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144434.221 **EASTING:** 1380068.744

GROUNDWATER: 3.0 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray				0.0	
					Yellow Brown		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	
									0.0	
									0.0	
									0.0	
									0.0	
-5		2		88	Reddish Brown		CLAY	CL	0.0	Wet
									0.0	
									0.6	
									0.3	
									0.3	
									0.1	
							Sand from 8-11.5'		0.1	
									0.8	
		3		75					0.0	
									0.0	
									0.0	
-10									0.6	
									0.1	
									0.1	
									0.1	
									1.0	
		4		100					0.0	
									0.0	
									0.0	
					Gray		Broken rock at 14.1-14.3'		0.0	Moist
-15							Refusal @ 14.3' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 11-11.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 40N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144454.221 **EASTING:** 1380008.744

GROUNDWATER: 8 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray		FILL: Reworked Silt, Gravel and Clay		0.0	
					Black				0.0	
					Brown				0.0	
		2		100					0.0	
-5					Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
									0.0	
									0.0	
									0.1	
									0.0	
									0.0	
		3		60	Dark Brown		Fine to medium SAND	SW	0.0	Saturated
									0.0	
					Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
-10									0.0	
									0.2	
									0.0	
									0.6	
									0.3	
		4		45					0.0	
					Light Gray		Sandy CLAY, some Gravel	CH	1.8	
									0.9	
									7.1	
-15							Refusal @ 13.8' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 13-13.8' for VOCs

BORING NO. : 40N 0E

AECOM

TEST BORING LOG

BORING NO. : 40N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144454.221 **EASTING:** 1380028.744

GROUNDWATER: 2.8 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		63	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray				0.0	
					D Brn to Blk		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	
									1.9	
									0.0	
		2		100	Dark Brown				8.5	Wet
-5									3.5	
									1.9	
									1.4	
									10.2	
					Reddish Brown		CLAY	CL	11.8	Moist
									19.5	
									0.0	
		3		50					0.0	
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
									4.1	
									0.2	
									1.3	
									3.0	
		4		25					2.7	Saturated
									0.0	
									17.3	
									19.1	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil samples at 2.5-3', 4-5' & 13.5-14.1' for VOCs

BORING NO. : 40N 20E

AECOM

TEST BORING LOG

BORING NO. : 40N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144454.221 **EASTING:** 1380048.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		87.5	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					Gray				0.0	
					Black				0.0	
					Yellow Brown		FILL: Pulverized Rock and Gravel 0.8-1.2' bgs		0.4	Moist
					Reddish Brown w/ Gray Mottling		Fine to medium Silty Sand	CL	0.0	
									0.0	
-5		2		87.5			CLAY, trace Gravel		0.0	Wet
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.4	
									0.0	
		3		87.5					0.3	
-10									0.1	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		4		0					0.0	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected no sample for VOCs

AECOM

TEST BORING LOG

BORING NO. : 40N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144454.221 **EASTING:** 1380068.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Gray		FILL: Gravel, little Sand		0.0	Dry, No Odor, No Staining
					Black		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	Moist
					Grayish Brown				0.0	
					Reddish Brown w/ Gray Mottling				0.0	
-5		2		88			CLAY, trace Gravel	CL	0.0	
									0.2	
									0.0	
									0.4	
									0.9	
									1.2	
									0.4	
									0.2	
									0.7	
									0.7	
		3		38					1.5	
									0.5	
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									1.0	
		4		65	Grayish Brown		Medium to coarse SAND, trace Gravel	SW	0.1	
									0.0	
									0.6	
									0.4	
-15							Refusal @ 14.3' bgs		1.2	
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 13.5-14.3' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 60N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144474.221 **EASTING:** 1380008.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		63	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					D. Brn		FILL: Reworked Silt, Gravel and Clay, wood debris @ 3.2-3.6'		0.0	Moist
					D. Brn to Blk				0.0	
		2		88	Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
-5									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		25					0.0	
-10									0.0	
									9.9	
					Light Gray		Sandy CLAY, some Gravel	SC/CH	9.8	
		4		100					32.8	
									31.7	
									12.4	
-15							Refusal @ 13.9' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil samples at 11-11.5' & 12.5-13' for VOCs

BORING NO. : 60N 0E

AECOM

TEST BORING LOG

BORING NO. : 60N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144474.221 **EASTING:** 1380028.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
									0.0	
									0.0	Moist
									0.0	
					Black		FILL: Pulverized Rock and Gravel 0.8-1.2' bgs		2.5	
									2.5	
					Reddish Brown w/ Gray Mottling		Clayey Silt, little Sand grading to fine to medium Sand little Silt		1.8	
									2.8	
		2		100				CL	1.8	
-5									4.3	
							CLAY		2.3	
									3.8	
									8.2	
									1.7	
									1.8	
									0.4	
		3		87.5					0.0	
									1.4	
									1.1	
-10									2.2	
									3.3	
					Gray				18.6	
							Silty CLAY, some fine to medium Sand		44.3	
									16.6	
		4		50					18.5	
									5.6	
							CLAY		2.0	Wet
									2.3	
-15							Refusal @ 13.9' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected samples at 2.5-3.5' and 10.5-11' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 60N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144474.221 **EASTING:** 1380048.744

GROUNDWATER: 2.7 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		67.5	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
									0.0	
									0.0	
					Black		FILL: Sand, Silt & Gravel Mix		0.0	Moist
					Brown				0.0	
					Black		Clayey Silt, little Sand		0.0	Wet
					Reddish Brown w/ Gray Mottling				0.0	
		2		75			CLAY	CL	0.0	Saturated
-5									0.0	
									0.0	
									1.0	
									0.4	
									0.4	
									0.3	
									0.6	
		3		62.5					0.2	
									0.3	
									0.0	
-10									0.0	
									0.0	
									0.0	
									3.5	
					Gray				6.5	
							Silty CLAY		2.5	
		4		0					0.0	
									0.0	
									0.0	
-15							Refusal @ 13.9' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 10.5-11.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 60N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144474.221 **EASTING:** 1380068.744

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
									0.0	
									0.0	
									0.0	
					Gray		FILL: Pulverized Rock and Gravel		0.0	
					Black				0.0	
					Rd Brn		Sand and Silt mix, trace Gravel and Clay		0.0	
									0.0	
		2		87.5	Reddish Brown w/ Gray Mottling			CL	0.0	Dry Moist
-5							CLAY		0.2	
									1.7	
									0.1	
									5.4	
									7.5	
									4.0	
									2.2	
		3		50					2.3	
									0.0	
									0.0	
-10									0.0	
									0.0	
									24.2	
									51.5	
									45.0	
		4		25					15.5	
									0.0	
					Gray		Silty CLAY, trace Sand and Gravel		1.1	
									0.6	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 11-11.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 60N 80E

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 1

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144474.221 **EASTING:** 1380088.744

GROUNDWATER: ~3 ft bgs

GROUND ELEVATION: 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Dark Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Gray				0.0	
					Dk Brn		FILL: Gravel, Rocks and Sand		0.0	Dry
					Black				0.0	Moist
					Gray		Sand and Silt mix, trace Gravel, Clay, Organics		0.1	
		2		75	Dark Brown				0.0	Wet
-5					Reddish Brown w/ Gray Mottling				0.0	
									0.0	
							CLAY, trace Sand	CL	0.0	Moist
		3		50					0.0	
									0.0	
									0.0	
									0.0	
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.5	
									0.8	
									0.0	
		4		25					0.0	
									0.0	
									0.0	
					Gray		Silty CLAY, trace Sand and Gravel		0.0	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 10.5-11' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 80N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1380008.744

GROUNDWATER: 2.6 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		38	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					Dark Brown to Black		FILL: Reworked Silt, Gravel and Clay		0.0	Moist
									0.0	
									0.0	
									0.0	
									0.0	Wet
									0.0	
									0.0	
		2		93	Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
-5									0.0	
									0.0	
									0.0	
									0.1	
									0.0	
									0.0	
		3		38					0.0	
									0.0	
									0.0	
									0.0	
-10									0.0	
					Reddish Light Gray		Sandy CLAY, some Gravel	SC/CH	0.5	Moist
									3.9	
		4		100					3.7	
									2.9	
-15							Refusal @ 13.7' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 13-13.7' for VOCs

BORING NO. : 80N 0E

AECOM

TEST BORING LOG

BORING NO. : 80N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1380028.744

GROUNDWATER: 3.3 ft bgs | **GROUND ELEVATION:** 555 Est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	
					Dark Brown				0.0	
									0.0	
									0.0	
					Gray				0.0	
									0.2	Wet
		2		100					0.0	
-5					Reddish Brown		CLAY	CL	0.0	Moist
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		50					0.0	
									0.0	
									0.0	
-10									0.0	
					Gray		Sandy CLAY	CH	0.0	
									4.1	
									12.8	
									0.5	
		4		50					3.2	
									0.5	Wet
									0.8	
									17.9	
-15							Refusal @ 14' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 13.5-14' for VOCs

BORING NO. : 80N 20E

AECOM

TEST BORING LOG

BORING NO. : 80N -20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1379988.744

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Red Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Clay		0.0	
									0.0	
									0.0	
-5		2		75	Reddish Brown w/ Gray Mottling		Clayey SILT, some-trace Gravel	ML	0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	
-10									0.0	
									0.0	
									0.0	
		4		100	Gray		Sandy CLAY	CH	0.0	Wet
									0.0	
							Refusal @ 13.6' bgs			
-15										
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 12-13' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 80N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1380048.744

GROUNDWATER: 5.3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/2/2021

DATE FINISHED: 6/2/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					Gray		FILL: Pulverized Rock and Gravel		0.0	
					Brown / Black		Very fine to medium Sand, little Silt grading to sandy Silt, litte Clay		0.0	Moist
-5		2		100	R. Brn		CLAY, little Gravel	CL	0.0	
					Gray		Fine to medium Silty SAND	SM	0.0	Saturated
		3		100	Reddish Brown w/ Gray Mottling		CLAY, little Gravel	CL	0.0	
-10		4		25	Dark Gray		Sandy SILT, little Clay, trace Gravel	MH	0.0	Moist
									0.0	
									0.0	
									0.6	
-15							Refusal @ 14.3' bgs		2.4	
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 13.5-14.3' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 80N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1380068.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining Dry Moist
					Gray				0.0	
					Rd to Gry Brn		FILL: Pulverized Rock and Gravel		0.0	
					Black				0.0	
					Brown		Sand and Silt mix, trace Gravel and Clay		0.0	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		CLAY, Hard/Stiff	CL	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									1.1	
		3		75					0.7	
									0.1	
									0.0	
-10									0.0	
									0.0	
									0.0	
					Gray		Silty CLAY, trace Sand and Gravel		0.0	
		4		100					0.0	
									0.0	
									0.0	
									0.0	
-15							Refusal @ 14.2' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 7-7.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 80N 80E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144494.221 **EASTING:** 1380088.744

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 555 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				

* POCKET PENETROMETER READING

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Gray		FILL: Gravel, Rocks and Sand		0.0	Dry, No Odor, No Staining
					Black		Sand and Silt mix, trace Gravel, Clay, Organics		0.0	Moist
					Dark Brown				0.0	
					Black				0.0	
		2		87.5					0.0	
-5					Reddish Brown w/ Gray Mottling		CLAY, trace fine Gravel	CL	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
							Silty CLAY, trace Sand and Gravel		0.0	
					Gray				0.0	
		4		0			No Recovery @ 12-14.2'			
-15							Refusal @ 14.2' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

AECOM

TEST BORING LOG

BORING NO. : 100N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.221 **EASTING:** 1380008.744

GROUNDWATER: 3.1 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		87	Brown		TOPSOIL		0.5	Dry, No Odor, No Staining
					Gray					
					Brown		FILL: Reworked Silt, Gravel and Clay		4.0	Moist
					Dark Brown to Black				0.6	Wet
		2		100					0.0	
-5					Reddish Brown		CLAY	CL	0.0	Dry
									0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	
-10									1.4	
									6.7	
									7.8	
					Gray		Clayey SAND	SC/CH	8.6	Moist
									2.8	
		4		100					0.0	Saturated
									17.5	
-15							Refusal @ 14' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil samples at 10.5-11' & 13-13.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 100N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.931 **EASTING:** 1380028.647

GROUNDWATER: ~4 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		63	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray				0.0	
					Brown		FILL: Reworked Silt, Sand, Gravel and Clay and Wood Debris		0.0	
									0.0	
									0.0	
									0.0	
									0.5	
		2		88	D. Brn to Blk				0.8	
-5					Reddish Brown w/ Gray Mottling/ Desic.		CLAY	CL	0.0	
									0.3	
									0.4	
									0.1	
									0.1	
									0.0	
		3		38					0.0	
									0.0	
									0.0	
									0.0	
-10									0.0	
									0.3	
									0.0	
					Gray		Sandy CLAY	CH	0.0	
		4		100					0.0	
									23.9	
-15							Refusal @ 14.4' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 14-14.4' for VOCs

BORING NO. : 100N 20E

AECOM

TEST BORING LOG

BORING NO. : 100N -20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.221 **EASTING:** 1379988.744

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555 est.

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore	HQ	
DIA.		2"	2.5"	
WT.				
FALL				

DATE	TIME	LEVEL	TYPE

* POCKET PENETROMETER READING

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Red Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Clay		0.0	
									0.0	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		Clayey SILT, some-trace Gravel	ML	0.0	
									0.0	
									0.0	
									0.0	
-10		3		100					0.0	
									0.0	
									0.0	
									0.0	
		4		66					0.0	
									0.0	
-15							Refusal @ 13.5' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 12-13' for VOCs

BORING NO. : 100N -20E

AECOM

TEST BORING LOG

BORING NO. : 100N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.221 **EASTING:** 1380048.744

GROUNDWATER: 2.8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					Gray				0.0	
					Reddish Brown		FILL: Pulverized Rock and Gravel		0.0	Moist
					Gray		Sand and Silt mix, trace Gravel		0.0	
									0.0	Wet
		2		100			Silty CLAY	CL	0.0	Moist
-5					Reddish Brown		CLAY		0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		100	Dk Gry		Fine to medium SAND, little Silt	SW	0.0	Wet
					R Brn		CLAY	CL	0.0	Moist
					Dk Gry			SW	0.0	
-10					Reddish Brown		Fine to medium SAND, little Silt	CL	0.0	
									0.0	
							CLAY		0.1	
					Gray				0.1	
		4		100			Silty CLAY, trace Sand		0.0	
									0.0	
									0.0	
							Silty SAND, trave Gravel		0.0	
								SM	0.0	Wet
-15							Refusal @ 14.5' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.5' for VOCs

BORING NO. : 100N 40E

AECOM

TEST BORING LOG

BORING NO. : 100N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.221 **EASTING:** 1380068.744

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Gray Brown		FILL: Pulverized Rock and Gravel		0.0	
					Reddish Brown		Sand and Silt mix, trace Gravel		0.0	
					Black				0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		CLAY, Hard/Stiff	CL	0.0	Dry
									0.0	Moist
		3		62.5					0.0	
-10					Gray		Silty CLAY, trace Sand and Gravel		0.0	
		4		25					0.0	
-15							Refusal @ 14.5' bgs		0.0	
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 100N 80E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144514.221 **EASTING:** 1380088.744

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		87.5	Gray		FILL: Gravel, Rocks and Sand		0.0	Dry, No Odor, No Staining
					Black		Sand and Silt mix, trace Gravel, Clay, Organics		0.0	Moist
					Reddish Brown				0.0	
					Black				0.0	
					Gray				0.0	
		2		100	Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
-5									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		50					0.0	
									0.0	
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
		4		16					0.0	
							Coarse to Medium SAND Lense	SW	0.0	
					Gray		Silty CLAY, trace Sand and Gravel	CL	0.0	Wet
-15							Refusal @ 14.4' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14.2-14.4' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 100 N 100E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144524.521 **EASTING:** 1380109.675

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		95	Gray		FILL: Gravel, Rocks and Sand		0.0	Dry, No Odor, No Staining
					Black				0.0	
					Reddish Brown		Sand and Silt mix, trace Gravel, Clay, Organics		0.0	Moist
					Brownish Gray				0.0	
									0.0	
									0.0	
									0.0	
		2		100	Reddish Brown w/ Gray Mottling				0.0	
-5							CLAY, trace Silt and Sand	CL	0.1	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		42.5					0.0	Saturated
									0.0	
									0.0	
-10									0.0	
									0.0	
									0.0	
									0.0	
					Gray		Silty CLAY, trace Sand and Gravel		0.0	Moist
		4		9					0.0	
									0.0	
									0.0	
									0.0	
-15							Refusal @ 14.2' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.2' for VOCs

BORING NO. : 100 N 100E

AECOM

TEST BORING LOG

BORING NO. : 105N 120E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144527.806 **EASTING:** 1380128.851

GROUNDWATER: ~8.8' bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75			FILL: Gravel		0.0	Dry, No Odor, No Staining
					Brown to Black to Rd. Brown		Sand and Silt mix, trace Gravel, Clay, Organics		0.0	Moist
-5		2		100	Reddish Brown w/ Gray Mottling		CLAY, with Silt and Sand lenses	CL	0.0	
							Medium to coarse SAND	SW	0.0	
		3		100	Dark Gray		CLAY	CL	0.0	
-10					Brown		Medium to fine SAND	SW	0.0	Saturated
					Reddish Brown		CLAY	CL	0.0	
		4		100					0.0	
-15					Gray		Silty CLAY, trace Sand and Gravel		0.0	
							Refusal @ 14.2' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 4-4.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 105N 140E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1380148.744

GROUNDWATER: ~7.5' bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		62.5	Brown to Black to Rd. Brown		FILL: Gravel Sand and Silt mix, trace Gravel, Clay, Organics		0.0	Dry, No Odor, No Staining Moist
-5		2		100	Reddish Brown w/ Gray Mottling		CLAY, with Silt lenses	CL	0.0	
		3		12.5					0.0	Saturated
-10		4		21.7					0.0	
-15							Refusal @ 14.3' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.3' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 0E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1380008.744

GROUNDWATER: ~12 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		87	Light Brown / Dark Brown		TOPSOIL FILL: Reworked Silt, Gravel and Clay		31.8	Dry, No Odor, No Staining
-5		2		100	Brownish Red		CLAY, little Silt	CL	6.1 7.4 1.2 0.8 0.0 0.0 0.0 2.8	
		3		100	Dark Brown		Silty SAND, little Clay	SM	1.2	Moist
-10					Brownish Red		Silty CLAY, little Sand, gray lenses	CL	1.9 0.0 0.0	
		4		100	Brn to Blk / Gray		Clayey SAND	SC/CH	1.3 5.7 13.7 4.3	
		5		100					0.9	
-15							Refusal @ 14.5' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil sample at 2-2.5' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.954 **EASTING:** 1380028.576

GROUNDWATER: 3.3 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/1/2021

DATE FINISHED: 6/1/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Brown		TOPSOIL, little Gravel and Organics		0.0	Moist, No Odor, No Staining
					Gray		FILL: Reworked Silt, Sand, Gravel and Clay		0.0	
					Brown				0.0	
					Gray				0.0	
					Brown to Black				0.0	
-5		2		75					0.0	Wet Possible Staining at 3.9-4' Moist
									0.5	
									0.8	
									0.0	
									0.0	
					Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	
									0.1	
									0.0	
									0.0	
		3		50					0.0	
-10					Gray		Some medium to fine Gravel			
									0.3	
									0.4	
		4		25					1.6	
									3.8	
-15									7.8	
							Refusal @ 14.9' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected soil samples at 3.9-4' & 14.5-14.9' for VOCs

BORING NO. : 120N 20E

AECOM

TEST BORING LOG

BORING NO. : 120N -20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1379988.744

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555 est.

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore	HQ	
DIA.		2"	2.5"	
WT.				
FALL				

DATE	TIME	LEVEL	TYPE

* POCKET PENETROMETER READING

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		60	Medium Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
									0.0	
					Dark Stained		FILL: Medium to fine Sand		0.0	Wet, Dark Staining, Slight Odor
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		SILT, some Clay	ML	0.0	No Staining or Odor, Moist
									0.0	
									0.0	
		3		100					0.0	
-10									0.0	
									0.0	
									0.0	
					Gray				0.0	
		4		100			Silty CLAY, some fine Sand	CL	0.0	
									0.0	
-15							Refusal @ 13.7' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected samples at 2-4' and 12-13' for VOCs

BORING NO. : 120N -20E

AECOM

TEST BORING LOG

BORING NO. : 120N 40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1380048.744

GROUNDWATER: ~3 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Dry, No Odor, No Staining
					Gray				0.0	
					Reddish Brown		FILL: Pulverized Rock and Gravel		0.0	
									0.0	Moist
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
-5		2		87.5	Gray/ Black/ Rd Brn		Sand and Silt mix, trace Gravel		0.0	Dry
									0.0	Moist
									0.7	
					Reddish Brown w/ Gray Mottling		CLAY, Hard/Stiff	CL	0.4	
									0.0	
									0.0	
									0.1	
		3		75					0.7	
									0.0	
									0.8	
-10									1.5	
					Reddish Gray		Silty CLAY, trace Sand and Gravel		4.1	
					Gray				1.3	
									2.8	Saturated
									1.5	
		4		50					0.4	
									0.0	
									0.0	
									0.0	
									0.0	
-15									0.0	
									0.0	
							Refusal @ 15.5' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 10-11' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 60E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1380068.744

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Gray				0.0	
					Reddish Brown		FILL: Pulverized Rock and Gravel		0.0	Dry
							Sand and Silt mix, trace Gravel		0.0	Moist
									0.0	
									0.0	
									0.0	
									0.0	
-5		2		75	Black				0.0	
					Gray				0.0	
					Reddish Brown w/ Gray Mottling		CLAY, Hard/Stiff	CL	0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	
									0.1	Saturated
-10									0.8	
									0.3	
									0.5	
									0.2	
					Gray		Silty CLAY, trace Sand and Gravel		0.4	
									0.0	
							Refusal @ 11.5' bgs			
-15										
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 8.5-9.5' for VOCs

BORING NO. : 120N 60E

AECOM

TEST BORING LOG

BORING NO. : 120N 80E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144536.855 **EASTING:** 1380088.968

GROUNDWATER: 6.7 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/3/2021

DATE FINISHED: 6/3/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		87.5	Brown to Dk Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Brown		FILL: Sand and Silt mix, trace Gravel, Clay, Organics		0.0	
-5		2		75	Black				0.0	
					Gray				0.0	
					Reddish Brown w/ Gray Mottling		CLAY	CL	0.0	Wet Moist
		3		50					0.0	
-10					Gray		Silty CLAY, trace Sand and Gravel		0.0	
		4		100					0.0	
							Fine to Medium SAND Lense	SW	0.0	
							Silty CLAY, trace Sand and Gravel	CL	0.0	
-15							Refusal @ 14.6' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 13.9-14.6' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 100E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144524.521 **EASTING:** 1380109.675

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		62.5	Dark Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Light Brown / Reddish Brown / Black		FILL: Sand and Silt mix, trace Gravel, Clay, Organics		0.0	
-5		2		85	Reddish Brown w/ Gray Mottling		CLAY, trace Sand and Silt	CL	0.0	
		3		62.5					0.0	
-10					Gray		Silty CLAY, trace Sand and Gravel		0.0	
		4		24					0.0	
-15							Refusal @ 15.1' bgs		0.0	
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14.5-15.1' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 120E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144538.739 **EASTING:** 1380128.233

GROUNDWATER: ~8 ft bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Black		FILL: Sand and Silt mix, trace Gravel, Clay, Organics		0.0	
-5		2		62.5	Brown				0.0	
					Reddish Brown w/ Gray Mottling		CLAY, trace Sand and Silt	CL	0.0	
		3		75			8-11.5': CLAY surrounded by brown fine to medium Sand		0.0	Saturated
-10									0.0	
		4		50	Gray		Silty CLAY, trace Sand and Gravel		0.0	Moist
-15							Refusal @ 14.6' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.6' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 120N 140E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144534.221 **EASTING:** 1380148.744

GROUNDWATER: ~7.5' bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/4/2021

DATE FINISHED: 6/4/2021

DRILLER: T. Mangefrida

GEOLOGIST: S. Connelly

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown to Dk. Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
					Black		FILL: Sand and Silt mix, trace Gravel, Clay, Organics. Wood Chips		0.0	
					Gray				0.0	
		2		100	Reddish Brown w/ Gray Mottling		CLAY, with Silt lenses	CL	0.0	
-5									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		3		0			8-12': No Recovery		0.0	Saturated
-10										
		4		43					0.0	
									0.0	
					Gray		Silty CLAY, trace Sand and Gravel		0.0	Moist
									0.0	
-15							Refusal @ 14.3' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 14-14.3' for VOCs

AECOM

TEST BORING LOG

BORING NO. : 140N -20E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144548.01 **EASTING:** 1379988.744

GROUNDWATER: ~4' bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/7/2021

DATE FINISHED: 6/7/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		75	Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Clay		0.0	
									0.0	
									0.0	
					Dark Stained Brown		Fine Gravel		0.0	Dark Staining Wet @ 4' bgs
-5		2		50					0.0	
									0.0	
									0.0	
									0.0	
		3		50					0.0	
-10									0.0	
									0.0	
							End of Boring @ 12' bgs. Gravel keeps caving in.			
-15										
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 11-12 for VOCs

AECOM

TEST BORING LOG

BORING NO. : 140N -40E

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144548.01 **EASTING:** 1379968.744

GROUNDWATER: ~8' bgs | **GROUND ELEVATION:** 556 est.

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/8/2021

DATE FINISHED: 6/8/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		85	Medium to Dark Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Wood Fragments		0.0	
									0.0	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		SILT, some Clay, some-trace Gravel	ML	0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	Wet
-10					Gray		Grading to CLAY, some fine Sand and Silt	CL	0.0	
									0.0	
									0.0	
		4		50					0.0	
-15							Refusal @ 13' bgs			
-20										
-25										

COMMENTS:

Boring advanced by Geoprobe® Model 7822DT

Collected sample at 12-13' for VOCs

BORING NO. : 140N -40E

AECOM

TEST BORING LOG

BORING NO. : BMW-1DD

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144459.718 **EASTING:** 1380038.515

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555.534

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/9/2021

DATE FINISHED: 6/22/2021

DRILLER: T. Mangefrida/ B.Swartz

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0							0-13.8': See Boring Log for 40N 60E			
-5										
-10										
-15		R1		100/ 90	Medium Gray	Medium Hard	DOLOSTONE (Lockport/Penfield Member), Broken-Blocky, Very Thin Bedding. Vuggy throughout. Dolomitic mineralization throughout.			
-20		R2		90/ 87			Vugs Present 20-21': Dolomitic mineralization in fractures @ 21.5', 22.6' & 23.5'.			No water loss. Sheen observed on core.
-25		R3		99/ 98			Broken @ 25.9-26.1'. Horizontal fractures 6-15" apart. Slight mineralization.			275-gal water loss. Sheen observed on core.

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by Geoprobe® Model 7822DT and CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-1DD

PROJECT: Erdle Perforating Site | **SHEET: 2 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. :60644874**

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
-30		R4		100/ 84			Blocky (6 fractures). Concentrated laminates. Shaley partings. Few to No Vugs.			260-gal water loss. Sheen observed on core.
-35		R5		97/ 92.5						260-gal water loss. No sheen observed on core.
-40		R6		100/ 82.5			38-39': Very broken to broken. Horizontal fractures @ 39.8-40' Horizontal fractures @ 41.75-41.9'			70-gal water loss
-45							End of Boring @ 42' bgs.			
-50										
-55										
-60										

COMMENTS:Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by Geoprobe® Model 7822DT and CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-2D

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144495.539 **EASTING:** 1380008.63

GROUNDWATER: ~3' bgs

GROUND ELEVATION: 556.125

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/15/2021

DATE FINISHED: 6/22/2021

DRILLER: B. Swartz

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0							0-13.4': See Boring Log for OMW-2			
-5										
-10										
-15		R1		97/85.8	Medium Gray	Medium Hard	DOLOSTONE (Lockport/Penfield Member). Broken-Blocky, Very Thin Bedding. 13.4-14.5': Blocky 14.5-18.4': Dolomitic Vugs grading to Vuggy Throughout.			150-gal water loss.
-20		R2		89.5/86.3			Fractures @ 19.75', 20.1', 22.25', 22.75', 23', & 23.6' Some Dolomitic Mineralization Void @ 23.9'			70-gal water loss.
-25		R3		100/100			Blocky. Very Broken @ 25.8-26', with Dolomitic Mineralization. No Vugs.			100-gal water loss. Sheen/NAPL Evidence @ 27.29'

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock
Boring advanced by CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-2D

PROJECT: Erdle Perforating Site | **SHEET: 2 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. :60644874**

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
-30		R4		100/100			Broken to Blocky. Fractures @ 29', 30' & 30.35'.			100-gal water loss. No Sheen or NAPL
							End of Boring @ 31' bgs.			
-35										
-40										
-45										
-50										
-55										
-60										

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock
Boring advanced by CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-2DD

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144499.481 **EASTING:** 1380008.83

GROUNDWATER: ~3' bgs

GROUND ELEVATION: 556.21

					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/15/2021

DATE FINISHED: 6/22/2021

DRILLER: B. Swartz

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0							0-14': See Boring Log for OMW-2			
-15		R1		100/100	Medium Gray	Medium Hard	DOLOSTONE (Lockport/Penfield Member), Broken-Blocky, Very Thin Bedding. Horizontal fractures @ 14.8', 15.6', 16.7' & 19'			100-gal water loss.
-20		R2		81.7/ 72.5			Little Vugs 19.6': Horizontal fractures w/ dolomitic mineralization. 22.1-22.7': Very broken. 22.7-29': Blocky 23.9': Horizontal fractures w/ dolomitic mineralization. 24.15': Horizontal fractures w/ dolomitic mineralization. 4 x Horizontal fractures			30-gal water loss.
-25		R3		100/ 95.8						250-gal water loss.

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-2DD

PROJECT: Erdle Perforating Site | **SHEET: 2 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. :60644874**

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
-30		R4		100/ 92.5			More Broken. Continuous argillaceous laminates.			170-gal water loss.
-35		R5		95.8/ 95.8			Horizontal fractures @ shaley partings.			150-gal water loss.
-40		R6		97.2/ 97.2			More Vugs Broken-blocky			60-gal water loss
-45							End of Boring @ 42' bgs.			
-50										
-55										
-60										

COMMENTS:Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-3D

PROJECT/PROJECT LOCATION: Erdle Perforating Site

SHEET: 1 **OF** 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 60644886

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1144442.268 **EASTING:** 1380012.614

GROUNDWATER: ~3' bgs

GROUND ELEVATION: 555.264

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/8/2021

DATE FINISHED: 6/17/2021

DRILLER: T. Mangefrida/ B.Swartz

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0							0-14': See Boring Log for BMW-3DD			
-5										
-10										
-15		R1		xxx/xxx	Medium Gray	Medium Hard	DOLOSTONE (Lockport/Penfield Member). Blocky,			
-20		R2		96/93			Fractures @ 12-18'			
-25		R3		98/95						200-gal water loss

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock
Boring advanced by Geoprobe® Model 7822DT and CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-3D

PROJECT: Erdle Perforating Site | **SHEET: 2 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. :60644874**

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
-30		R4		100/87.5						50-gal water loss
							End of Boring @ 31' bgs.			
-35										
-40										
-45										
-50										
-55										
-60										

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock
Boring advanced by Geoprobe® Model 7822DT and CME 55LC

AECOM

TEST BORING LOG

BORING NO. : BMW-3DD

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144435.673 **EASTING:** 1380011.771

GROUNDWATER: ~3' bgs | **GROUND ELEVATION:** 555.13

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore	HQ	
				DIA.		2"	2.5"	
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 6/8/2021

DATE FINISHED: 6/17/2021

DRILLER: T. Mangefrida/ B.Swartz

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		55	Gray		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Wood Fragments		0.0	
									0.2	
									0.0	
-5		2		100	Reddish Brown w/ Gray Mottling		SILT, some Clay, trace Gravel	ML	0.0	
									0.0	
									0.0	
									0.0	
		3		100					0.0	
-10									0.0	
									0.0	
									0.0	
		4		100	Gray		Grading to CLAY, some fine Sand and Silt	CL	5.3	Wet
									16.3	
-15		R1		93/ 93		Medium Hard	DOLOSTONE (Lockport/Penfield Member), Blocky-Massive, Very Thin Bedding, Some Vugs			
		R2		100/ 92.5			Broken-Blocky 19-24': Vuggy (5 x horizontal fractures)			No water loss
-20										
		R3		100/ 97			24-29': Blocky (5 x horizontal fractures), some dolomitic mineralization.			150-gal water loss
-25										

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by Geoprobe® Model 7822DT and CME 55LC
Collected sample at 13-14' for VOCs

AECOM

TEST BORING LOG

BORING NO. : BMW-3DD

PROJECT: Erdle Perforating Site | **SHEET: 2 OF 2**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. :60644874**

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
-30		R4		93/ 93			29-30.4': Blocky 30.4-31.1': Broken (4 x horizontal fractures) 31.1-34': Blocky (3 x horizontal fractures)			100-gal water loss
-35		R5		100/ 98			34-35.5': Broken. 35.5-39': Blocky			100-gal water loss
-40		R6		100/ 90			Vugs. Slight dolomitic mineralization. Horizontal fractures at 39', 39.9', 40.2' & 40.3'. Shaley partings.			75-gal water loss
							End of Boring @ 42' bgs.			
-45										
-50										
-55										
-60										

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by Geoprobe® Model 7822DT and CME 55LC
Collected sample at 13-14' for VOCs

AECOM

TEST BORING LOG

BORING NO. : OMW-2

PROJECT/PROJECT LOCATION: Erdle Perforating Site | **SHEET: 1 OF 1**

CLIENT: New York State Department of Environmental Conservation | **JOB NO. : 60644886**

BORING CONTRACTOR: Nothnagle Drilling | **NORTHING:** 1144504.587 **EASTING:** 1380009.647

GROUNDWATER: ~8' bgs | **GROUND ELEVATION:** 556.414

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore	HQ	
			DIA.		2"	2.5"	
			WT.				
			FALL				
			* POCKET PENETROMETER READING				

DATE STARTED: 6/8/2021

DATE FINISHED: 6/8/2021

DRILLER: T. Mangefrida

GEOLOGIST: K. McGovern

REVIEWED BY: M. Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		50	Medium to Dark Brown		TOPSOIL		0.0	Moist, No Odor, No Staining
							FILL: Reworked Silt and Wood Fragments		0.0	
									0.0	
									0.0	
		2		75	Reddish Brown w/ Gray Mottling		SILT, some Clay, trace Gravel	ML	0.0	Sheen @ 3.5-4' bgs.
-5									0.0	
									0.0	
									0.0	
		3		100					0.0	Wet
					Gray		Grading to CLAY, some fine Sand and Silt	CL	0.0	
-10									0.0	
									0.0	
		4		50					0.0	
									0.2	
-15							Refusal @ 14.1' bgs			
-20										
-25										

COMMENTS: Advanced 6" steel casing (rock socket) to 5' below top of rock.
Boring advanced by Geoprobe® Model 7822DT
Collected samples at 3.5-4' and 13-14' for VOCs

APPENDIX E

WELL CONSTRUCTION LOGS

DRILLING SUMMARY

Geologist:
Kevin J. McGovern

Drilling Company:
Nothnagle Drilling

Driller:
T. Mangefrida

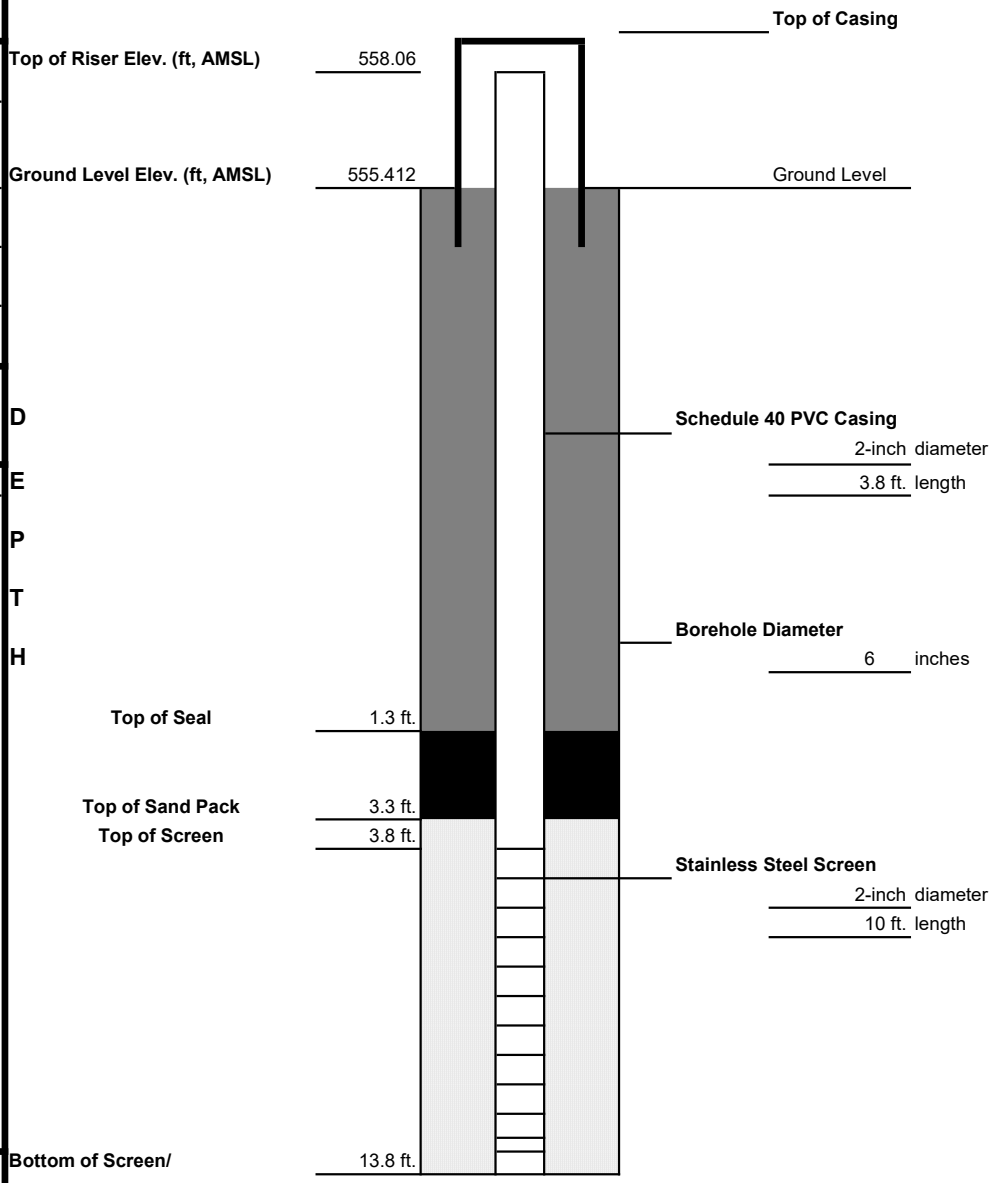
Rig Make/Model:
CME-75

Date:
6/8/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See 40N 60E boring log for lithologic description.

WELL DESIGN



CASING MATERIAL		SCREEN MATERIAL		FILTER MATERIAL
Surface:	4" Steel protective cover (Stick Up)	**Type:**	2" Continuous Wrap Stainless Steel	**Type:** #00N Sand **Setting:** 3.3' - 13.8'
Monitor:	2" Schedule 40 PVC	**Slot Size:**	0.010"	**SEAL MATERIAL** **Type 1:** 3/8" Hole Plug **Setting:** 1.3' - 3.3' **Type 1:** **Setting:**

COMMENTS:

LEGEND

- Cement Grout
- Bentonite Seal
- Sand Pack

Client: NYSDEC	**Location: Erdle Perforating Site**	**Project No.: 60644886**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: OMW-1**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

Rig Make/Model:
CME-55LC

Date:
6/21/2021

GEOLOGIC LOG

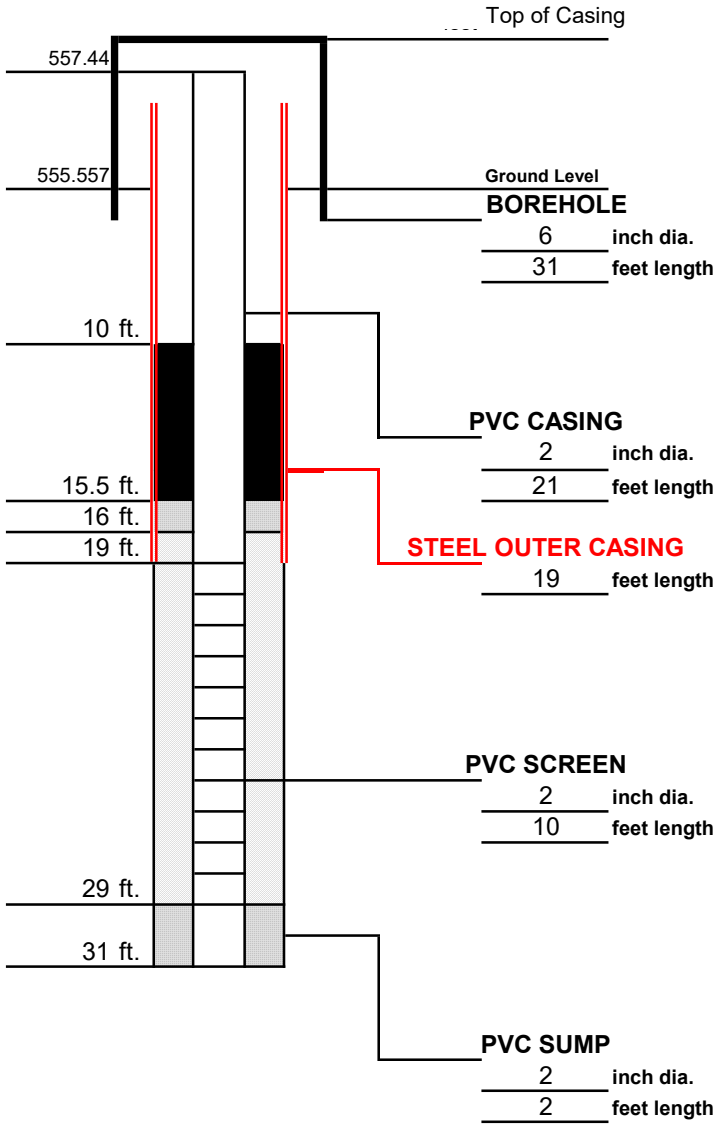
Depth(ft.)	Description
	See BMW-1DD boring log for lithologic description.

WELL DESIGN

Top of Riser Elev. (ft, AMSL) 557.44

Ground Level Elev. (ft, AMSL) 555.557

D
E
P
T
H



CASING MATERIAL

Surface: 6" Steel protective cover (Stick Up)

Monitor: 2" Schedule 40 PVC

SCREEN MATERIAL

Type: 2" Schedule 40 PVC Continuous Wrap

Slot Size: 0.010"

FILTER MATERIAL

Type: 00 **Setting:** 29'-31'

Type: 00N **Setting:** 19'-19'

Type: 00 **Setting:** 15.5'-16'

SEAL MATERIAL

Type: Bentonite **Setting:** 10'-15.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-1D**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

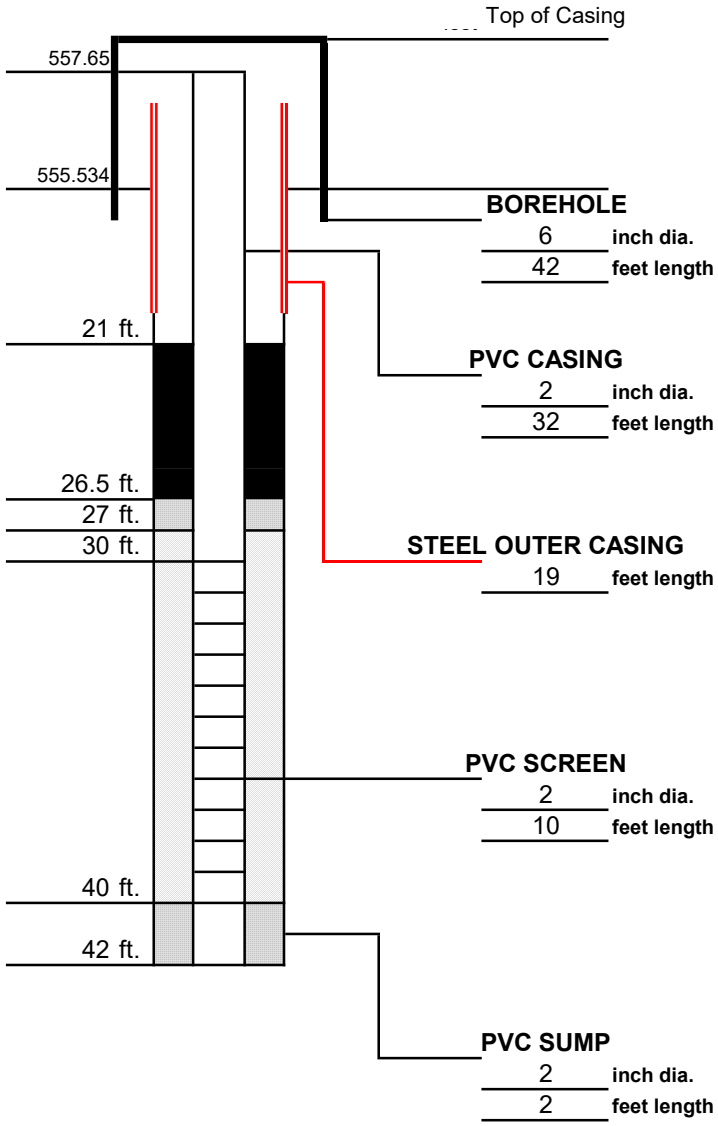
Rig Make/Model:
CME-55LC

Date:
6/23/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

D
E
P
T
H



WELL DESIGN

CASING MATERIAL

Surface: 6" Steel protective cover (Stick Up)

Monitor: 2" Schedule 40 PVC

SCREEN MATERIAL

Type: 2" Schedule 40 PVC Continuous Wrap

Slot Size: 0.010"

FILTER MATERIAL

Type:	00	**Setting:**	40'-42'
Type:	00N	**Setting:**	27'-40'
Type:	00	**Setting:**	26.5'-27'

SEAL MATERIAL

Type: Bentonite **Setting:** 21'-26.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-1DD**

DRILLING SUMMARY

Geologist:
Kevin J. McGovern

Drilling Company:
Nothnagle Drilling

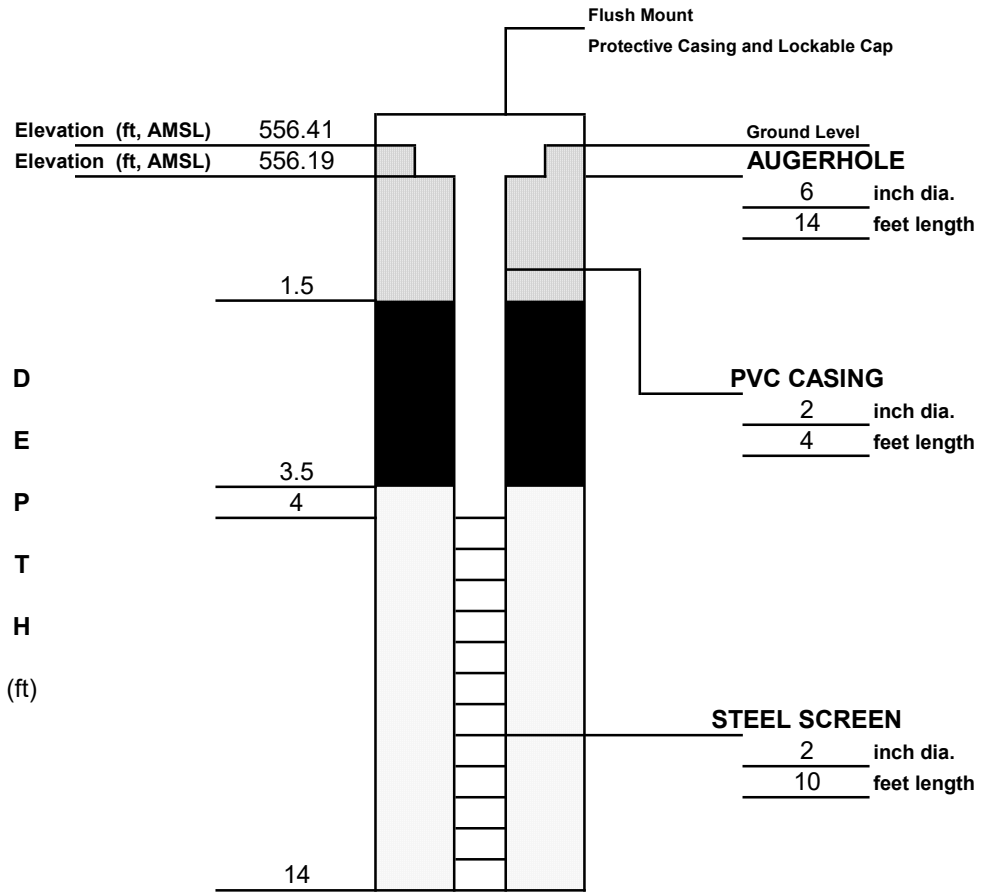
Driller:
T. Mangefrida

Rig Make/Model:
CME-75

Date:
6/8/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" Continuous Wrap Stainless Steel	**Type:** #00N Sand **Setting:** 3.5' - 14'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** 3/8" Hole Plug **Setting:** 1.5' - 3.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: Erdle Perforating Site**	**Project No.: 60644886**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: OMW-2**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

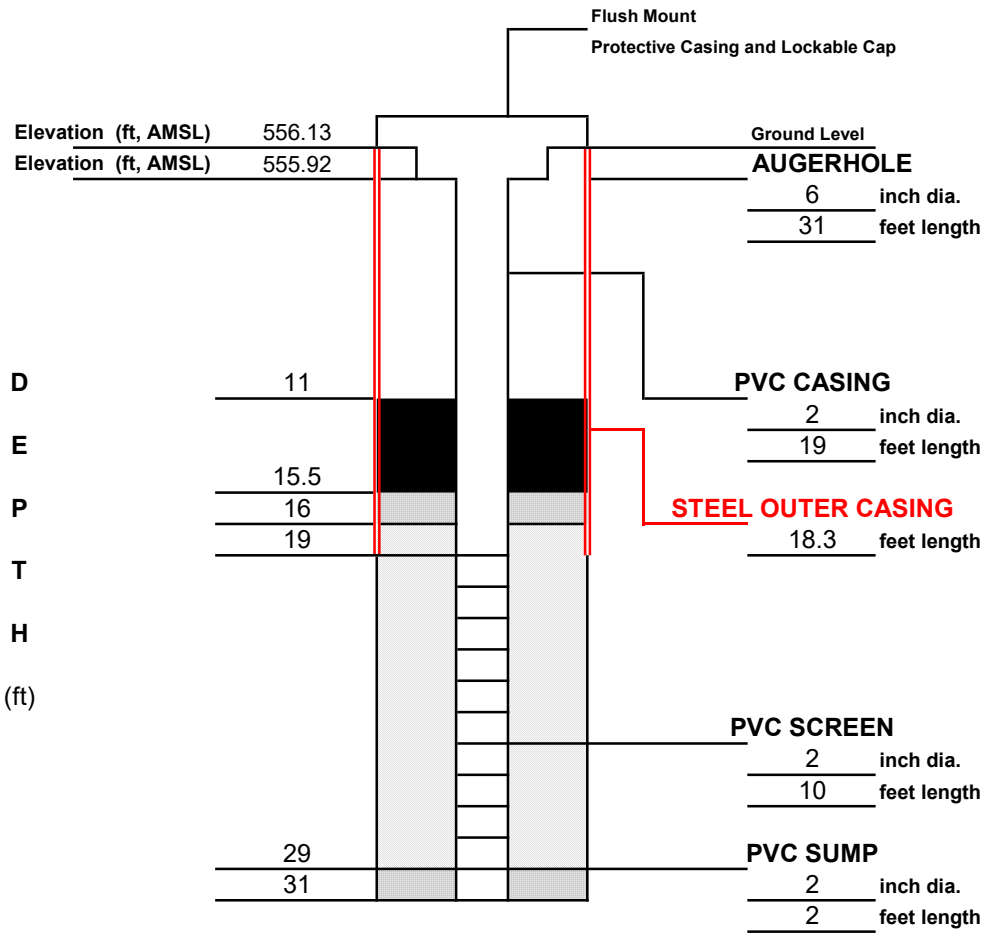
Rig Make/Model:
CME-55LC

Date:
6/23/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See BMW-2DD boring log for lithologic description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: 6" Steel protective cover (Stick Up)	**Type:** 2" Schedule 40 PVC Continuous Wrap	**Type:** 00 **Setting:** 29'-31'
Monitor: 2" Schedule 40 PVC	**Slot Size:** 0.010"	**Type:** 00N **Setting:** 16'-29'
		Type: 00 **Setting:** 15.5'-16'
		SEAL MATERIAL
		Type: Bentonite **Setting:** 11'-15.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-2D**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

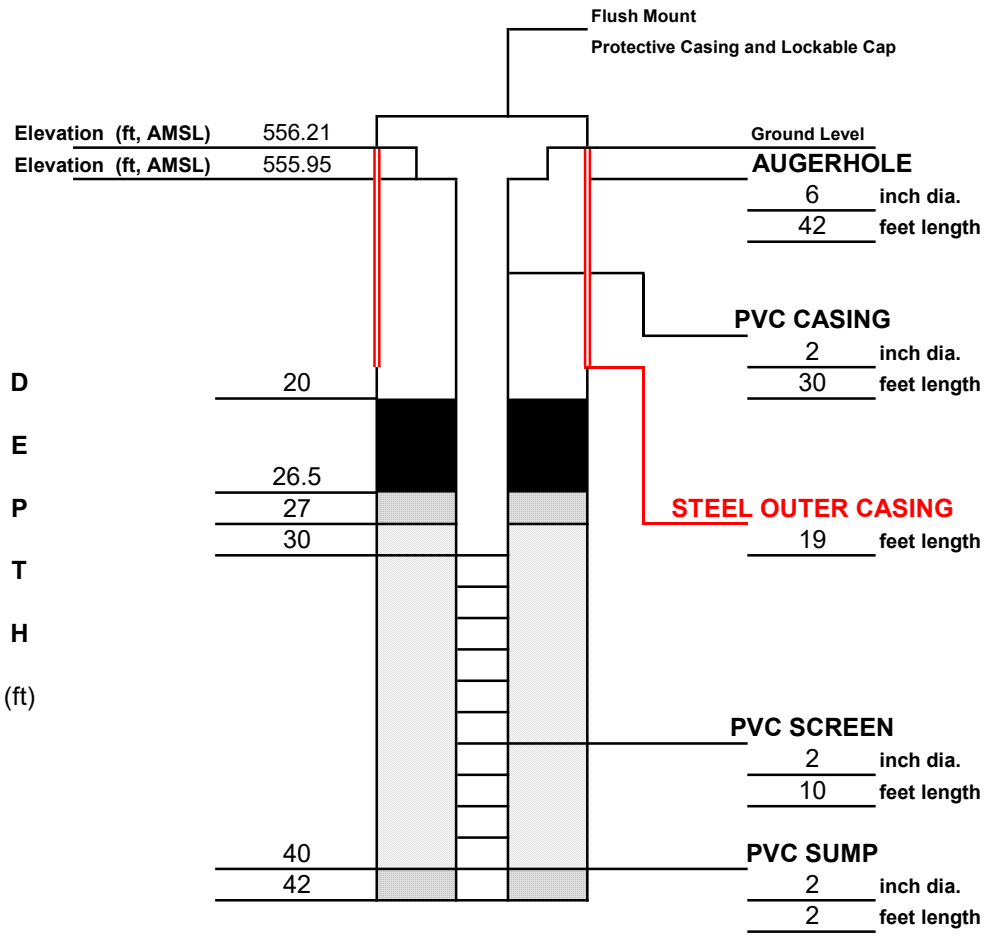
Rig Make/Model:
CME-55LC

Date:
6/23/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

WELL DESIGN



CASING MATERIAL

Surface: 6" Steel protective cover (Stick Up)

Monitor: 2" Schedule 40 PVC

SCREEN MATERIAL

Type: 2" Schedule 40 PVC Continuous Wrap

Slot Size: 0.010"

FILTER MATERIAL

Type: 00 **Setting:** 40'-42'

Type: 00N **Setting:** 27'-40'

Type: 00 **Setting:** 26.5'-27

SEAL MATERIAL

Type: Bentonite **Setting:** 20'-26.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-2DD**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

Rig Make/Model:
CME-55LC

Date:
6/21/2021

GEOLOGIC LOG

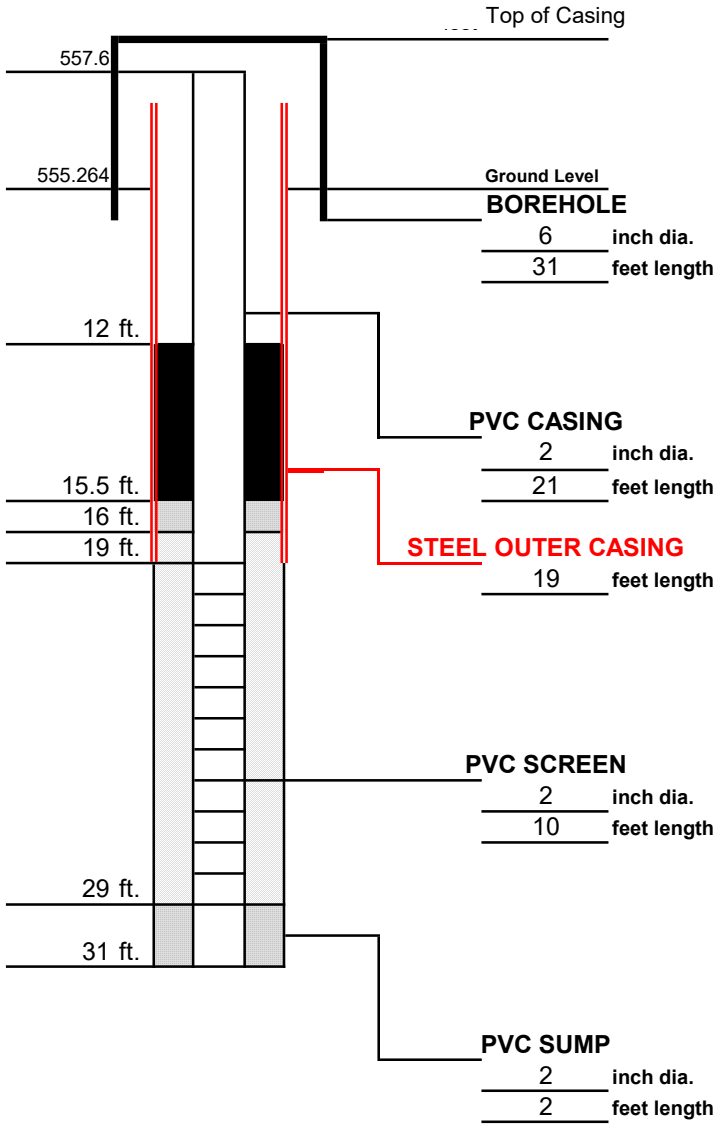
Depth(ft.)	Description
	See BMW-3DD boring log for lithologic description.

WELL DESIGN

Top of Riser Elev. (ft, AMSL) 557.6

Ground Level Elev. (ft, AMSL) 555.264

D
E
P
T
H



CASING MATERIAL

Surface: 6" Steel protective cover (Stick Up)

Monitor: 2" Schedule 40 PVC

SCREEN MATERIAL

Type: 2" Schedule 40 PVC Continuous Wrap

Slot Size: 0.010"

FILTER MATERIAL

Type: 00 **Setting:** 29'-31'

Type: 00N **Setting:** 19'-19'

Type: 00 **Setting:** 15.5'-16'

SEAL MATERIAL

Type: Bentonite **Setting:** 12'-15.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-3D**

DRILLING SUMMARY

Geologist:
Kevon J. McGovern, PG

Drilling Company:
Nothnagle Drilling

Driller:
Bryan Swartz

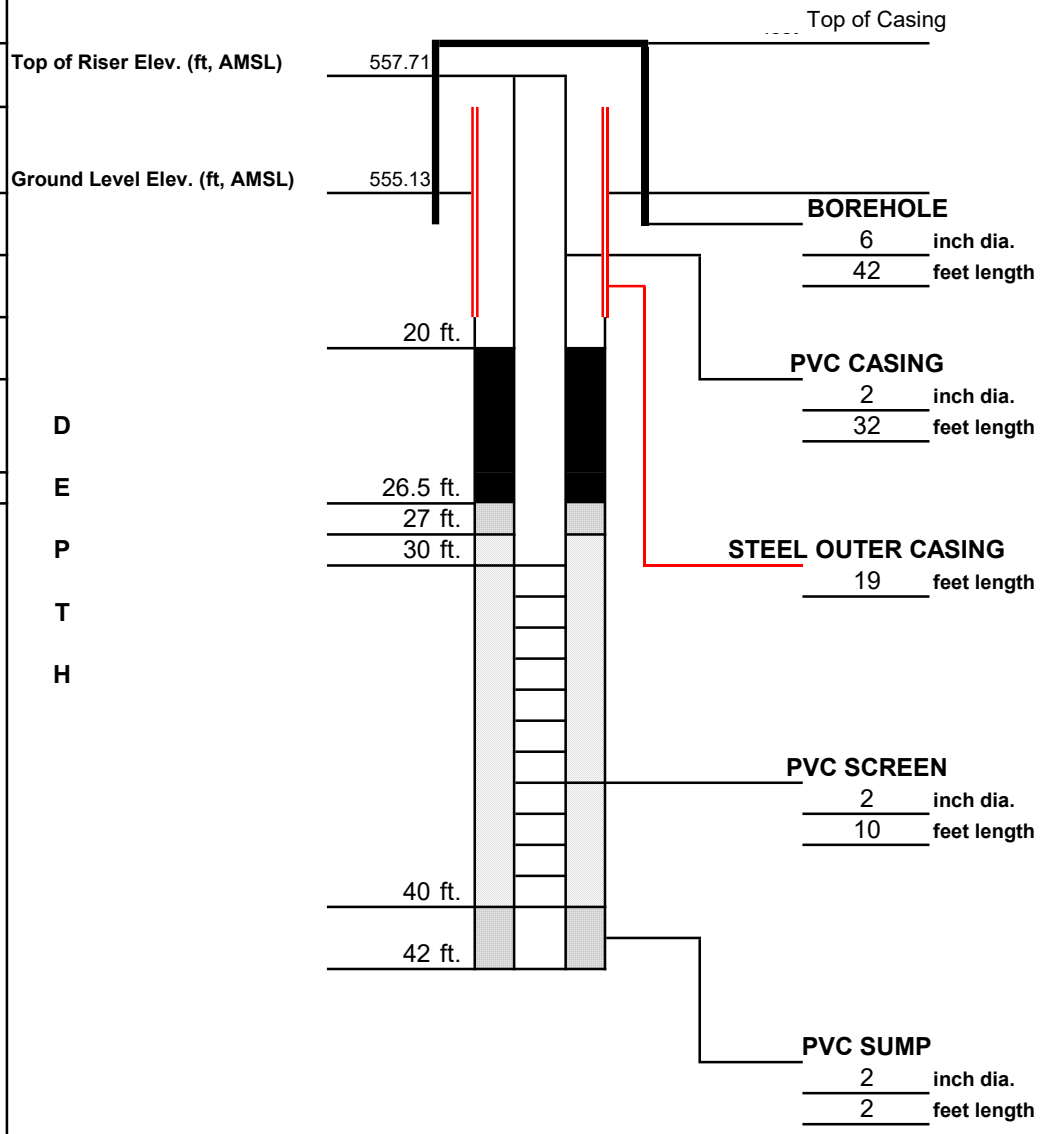
Rig Make/Model:
CME-55LC

Date:
6/21/2021

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

WELL DESIGN



CASING MATERIAL

Surface: 6" Steel protective cover (Stick Up)

Monitor: 2" Schedule 40 PVC

SCREEN MATERIAL

Type: 2" Schedule 40 PVC Continuous Wrap

Slot Size: 0.010"

FILTER MATERIAL

Type: 00 **Setting:** 40'-42'

Type: 00N **Setting:** 27'-40'

Type: 00 **Setting:** 26.5'-27'

SEAL MATERIAL

Type: Bentonite **Setting:** 20'-26.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal (3/8" Coated Pellets)
- 00N Silica Sandpack
- 00 Silica Sandpack

Client: NYSDEC	**Location:**	**Project No.: 60644886**
AECOM	**BEDROCK MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: BMW-3DD**

APPENDIX F

WELL DEVELOPMENT LOGS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: OMW-1

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/16/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	12.80	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	2.55	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	10.3	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.74	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	5.23	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	65	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	5	10	15	20	25	30	35	40	45	55	60	65
PARAMETERS TIME	1010	1022	1031	1047	1102	1117	1130	1143	1206	1311	1327	1344
pH	7.67	8.13	7.83	7.75	7.66	7.54	7.47	7.45	7.44	7.51	7.45	7.44
TEMPERATURE (°C)	13.8	13.5	13.5	13.7	14.0	14.2	14.1	14.2	14.3	15.4	14.9	14.6
SPEC. COND. (mS/cm)	2.568	2.876	2.975	3.110	3.142	3.191	3.210	3.202	3.232	3.241	3.225	3.184
DO (mg/l)	2.53	3.01	2.19	2.35	1.76	1.93	1.59	1.94	1.92	2.84	2.87	2.35
TURBIDITY (NTU)	>4300	1962.0	3900.0	504.0	516.0	328.0	337.0	212.0	50.6	32.0	35.1	30.1
ORP (mV)	21.7	-11.3	-49.8	-86.5	-94.7	-87.1	-85.0	-79.7	-72.9	-83.2	-80.8	-77.0

COMMENTS:

Using combo foot valve/surge block & peri pump to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-1D

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/23/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	33.15	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	4.30	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	28.9	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	4.90	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	14.71	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	35	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	10	20	30	35								
PARAMETERS TIME	1117	1325	1334	1339								
pH	7.78	7.61	7.61	7.59								
TEMPERATURE (°C)	15.7	15.1	14.9	14.7								
SPEC. COND. (mS/cm)	3.326	3.320	3.338	3.337								
DO (mg/l)	2.30	2.03	2.14	1.99								
TURBIDITY (NTU)	206.0	91.2	8.2	4.9								
ORP (mV)	-184.0	-191.0	-187.0	-191.0								

COMMENTS:

Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-1DD

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/24/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	43.90	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	4.72	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	39.2	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	6.66	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	19.98	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	50	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	10	20	30	40	50							
PARAMETERS TIME	919	927	939	953	1004							
pH	7.88	7.47	7.35	7.27	7.27							
TEMPERATURE (°C)	14.8	14.2	14.1	14.2	14.2							
SPEC. COND. (mS/cm)	2.676	2.635	2.596	2.600	2.612							
DO (mg/l)	2.17	1.96	1.77	1.76	1.75							
TURBIDITY (NTU)	812.0	202.0	74.6	30.2	15.8							
ORP (mV)	-148.0	-223.0	-236.0	-243.0	-245.0							

COMMENTS: Mild sulfur odor present
Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: OMW-2

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/14/21, 6/17/21, 6/18/21

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	14.00	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.70	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	10.3	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.75	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	5.25	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	25	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	5	10		15		20		25				
PARAMETERS TIME	930	838	846	931	936	1022	1024	834	840			
pH	6.92	7.34	Dry	7.26	Dry	7.11	Dry	7.08	Dry			
TEMPERATURE (°C)	19.0	15.2	Dry	16.5	Dry	15.9	Dry	16.3	Dry			
SPEC. COND. (mS/cm)	2.301	2.201	Dry	2.400	Dry	2.445	Dry	2.468	Dry			
DO (mg/l)	4.99	4.01	Dry	4.18	Dry	3.72	Dry	3.27	Dry			
TURBIDITY (NTU)	>4000	>2400	Dry	>2600	Dry	>2500	Dry	2000.0	Dry			
ORP (mV)	52.6	23.8	Dry	-23.1	Dry	19.5	Dry	-4.9	Dry			

COMMENTS:

6/14/2021 — 6/17/2021 — 6/18/2021

Using combo foot valve/surge block & peri pump to purge.
Measured parameters w/ YSI ProDSS

6/17/2021 08:54 - DTW = 11.5'
09:06 - DTW = 8.65'
09:22 - DTW = 6.90' (Resumed Purging)
10:02 - DTW = 7.95'
10:11 - DTW = 7.35 (Resumed Purging)

6/18/2021 08:14 - DTW = 3.65' (Began Purging)

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-2D

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/25/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	30.80	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.15	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	27.7	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	4.70	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	14.10	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	70	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	10	20	30	40	50	60	70					
PARAMETERS TIME	844	854	904	916	924	934	944					
pH	7.74	7.43	7.43	7.43	7.41	7.42	7.42					
TEMPERATURE (°C)	16.6	15.8	15.8	15.8	15.8	15.9	15.8					
SPEC. COND. (mS/cm)	3.209	2.767	3.310	3.367	3.391	3.412	3.420					
DO (mg/l)	2.57	1.94	2.16	2.06	1.70	1.79	1.75					
TURBIDITY (NTU)	507.0	163.0	85.4	146.0	54.0	43.6	28.8					
ORP (mV)	-82.2	-102.7	-102.2	-106.0	-109.0	-106.0	-107.6					

COMMENTS:

Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-2DD

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/24/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	41.70	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.27	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	38.4	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	6.53	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	19.60	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	60	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	10	20	30	40	50	60						
PARAMETERS TIME	1150	1200	1212	1222	1232	1243						
pH	7.68	7.16	7.14	7.17	7.15	7.16						
TEMPERATURE (°C)	17.1	15.9	15.9	15.8	15.7	15.8						
SPEC. COND. (mS/cm)	1.602	2.415	2.850	2.950	2.973	2.980						
DO (mg/l)	2.47	1.84	1.34	1.41	1.42	1.40						
TURBIDITY (NTU)	672.0	391.0	101.0	71.8	42.6	37.7						
ORP (mV)	-190.0	-261.0	-203.0	-268.0	-263.0	-266.0						

COMMENTS:

Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-3D

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/23/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	32.80	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	4.25	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	28.6	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	4.85	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	14.56	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	90	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	10	20	30	40	50	60	70	80	90			
PARAMETERS TIME	1104	1111	1117	1124	1130	1137	1146	1200	1211			
pH	7.85	7.79	7.78	7.96	7.83	7.78	7.69	7.63	7.61			
TEMPERATURE (°C)	15.6	14.2	14.2	14.2	14.2	14.2	14.4	14.6	14.9			
SPEC. COND. (mS/cm)	3.048	3.009	3.015	2.957	2.990	2.942	2.962	2.932	2.892			
DO (mg/l)	1.43	1.98	1.90	2.04	2.22	1.86	2.05	1.96	2.07			
TURBIDITY (NTU)	56.3	63.4	75.6	189.0	94.1	174.0	76.0	80.0	37.0			
ORP (mV)	-247.0	-23.4	-234.7	-245.0	-237.0	-251.0	-235.0	-243.0	-240.0			

COMMENTS: Sulfur odor
Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

WELL DEVELOPMENT LOG

AECOM

PROJECT TITLE: NYSDEC Erdle Perforating WELL NO.: BMW-3DD

PROJECT NO.: 60644886

STAFF: Kevin J. McGovern

DATE(S): 6/23/2021

			WELL ID.	)L. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	41.70	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	4.55	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	37.2	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	6.32	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	18.95	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	100	0.75"	0.02

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
	5	10	20	30	40	50	60	70	80	90	100	
PARAMETERS TIME	839	843	852	902	912	922	932	942	950	1000	1008	
pH	9.64	9.14	8.52	8.27	7.84	7.86	7.77	7.60	7.52	7.54	7.53	
TEMPERATURE (°C)	13.6	13.6	13.5	13.5	13.6	13.7	13.8	14.0	13.9	13.9	14.0	
SPEC. COND. (mS/cm)	2.289	2.532	2.535	2.701	2.705	2.710	2.739	2.749	2.755	2.751	2.747	
DO (mg/l)	2.46	2.25	2.02	2.26	2.02	1.97	2.14	2.15	2.08	2.24	2.11	
TURBIDITY (NTU)	619.0	469.0	1647.0	385.0	249.0	247.0	140.0	120.0	81.0	52.0	41.0	
ORP (mV)	-206.0	-233.0	-247.0	-237.0	-242.0	-256.0	-251.0	-252.0	-261.0	-270.0	-277.0	

COMMENTS: Sulfur odor
Using foot valve/surge block to purge.
Measured parameters w/ YSI ProDSS

APPENDIX G

WELL SAMPLING LOGS

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: OMW-1

Date: 8/12/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 4.20 Depth to Well Bottom: 16.14 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 7.4 Estimated Purge Volume (liters): 7.4

Sample ID: BMW-2DD Sample Time: 1120 QA/QC: None

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1045	7.56	18.0	2.700	1.22	157.68	-222.4	210	4.20
1050	7.57	18.0	2.723	0.32	122.31	-252.7	210	4.50
1055	7.59	17.3	2.729	0.30	73.20	-263.1	210	4.55
1100	7.61	17.4	2.724	0.30	55.99	-266.1	210	4.57
1105	7.63	17.3	2.691	0.29	34.26	-269.6	210	4.57
1110	7.62	17.2	2.685	0.39	24.72	-269.8	210	4.62
1115	7.61	17.2	2.677	0.29	17.90	-270.1	210	4.60
1120	7.60	17.0	2.675	0.29	13.80	-269.5	210	4.60
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-1D

Date: 8/12/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/ Sampling Device:	Geotech GeoPump II AC/DC Peristaltic Pump			Tubing Type:	HDPE & Silicone	Pump/Tubing Inlet Location:	Midpoint of Screen
Measuring Point:	Top of Casing	Initial Depth to Water:	3.53	Depth to Well Bottom:	32.91	Well Diameter:	2"
Screen Length:	10'						
Casing Type:	PVC			Volume in 1 Well Casing (liters):	18.1	Estimated Purge Volume (liters):	18.1

Sample ID: BMW-1D Sample Time: 1038 QA/QC: None

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
0953	7.94	15.7	2.710	0.49	5.52	-234.5	400	3.53
0958	7.23	15.6	2.741	0.34	0.31	-248.0	400	3.65
1003	7.18	15.6	2.749	0.33	1.18	-251.9	400	3.65
1008	7.17	15.6	2.752	0.32	1.62	-253.5	400	3.65
1013	7.16	15.6	2.754	0.32	1.38	-255.0	400	3.65
1018	7.16	15.6	2.755	0.31	1.54	-256.0	400	3.65
1023	7.16	15.3	2.755	0.31	1.82	-256.3	400	3.65
1028	7.15	15.5	2.751	0.31	1.66	-256.4	400	3.65
1033	7.15	15.5	2.754	0.31	-1.80	-256.5	400	3.65
1038	7.15	15.5	2.752	0.31	1.44	-256.6	400	3.65
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-1DD

Date: 8/12/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 4.00 Depth to Well Bottom: 43.90 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 24.6 Estimated Purge Volume (liters): 26.0

Sample ID: BMW-1DD Sample Time: 0945 QA/QC: None

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
0840	8.10	16.3	2.559	1.27	3.73	-230.5	400	4.00
0845	6.93	15.5	2.681	0.46	0.61	-278.0	400	4.33
0850	6.94	15.2	2.677	0.40	0.83	-282.5	400	4.33
0855	6.95	15.3	2.684	0.37	0.39	-294.3	400	4.33
0900	6.96	15.1	2.683	0.36	0.44	-313.3	400	4.33
0905	6.95	15.1	2.684	0.36	0.10	-315.1	400	4.33
0910	6.95	15.0	2.685	0.35	0.73	-315.5	400	4.33
0915	6.95	15.0	2.682	0.35	0.53	-316.8	400	4.33
0920	6.95	14.9	2.683	0.34	0.77	-318.3	400	4.33
0925	6.95	14.9	2.682	0.34	0.49	-320.0	400	4.33
0930	6.95	14.8	2.684	0.33	0.75	-322.9	400	4.33
0935	6.95	14.8	2.683	0.33	0.81	-323.5	400	4.33
0940	6.95	14.7	2.686	0.33	52.00	-329.8	400	4.33
0945	6.95	15.0	2.680	0.33	0.67	-326.5	400	4.33
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: OMW-2

Date: 8/11/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/ Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 2.53 Depth to Well Bottom: 13.55 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 6.8 Estimated Purge Volume (liters): 7.8

Sample ID: OMW-2 Sample Time: 1510 QA/QC: NA

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1440	7.14	21.5	2.349	2.19	12.22	-210.0	260	2.95
1445	6.77	18.8	2.291	0.32	7.74	-234.1	260	3.95
1450	6.77	18.7	2.286	0.31	8.18	-238.0	260	4.33
1455	6.77	18.7	2.264	0.29	7.29	-237.9	260	4.58
1500	6.77	18.6	2.260	0.29	7.21	-237.4	260	4.77
1505	6.77	18.5	2.252	0.28	6.46	-234.7	260	4.99
1510	6.78	18.5	2.248	0.28	10.47	-232.8	260	5.10
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-2D

Date: 8/11/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 2.10 Depth to Well Bottom: 28.70 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 16.4 Estimated Purge Volume (liters): 18.0

Sample ID: BMW-2D Sample Time: 1318 QA/QC: FD-081121

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1233	6.90	19.1	2.463	1.20	84.10	-267.0	400	2.10
1243	6.75	16.8	2.592	0.47	18.49	-338.4	400	2.10
1248	6.92	16.9	2.772	0.39	3.59	-337.5	400	2.10
1253	6.99	16.9	2.826	0.36	1.11	-331.0	400	2.10
1258	7.00	16.8	2.844	0.35	0.22	-324.9	400	2.10
1303	7.01	16.7	2.852	0.34	0.58	-329.0	400	2.10
1308	7.01	16.5	2.857	0.34	0.00	-330.0	400	2.10
1313	7.02	16.6	2.854	0.34	0.00	-330.8	400	2.10
1318	7.02	16.7	2.858	0.33	0.00	332.7	400	2.10
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks: Sulfur Odor Present

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-2DD

Date: 8/11/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 2.42 Depth to Well Bottom: 39.48 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 22.9 Estimated Purge Volume (liters): 24.0

Sample ID: BMW-2DD Sample Time: 1430 QA/QC: MS/MSD

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1330	7.04	16.4	2.595	0.40	8.32	-336.1	400	2.42
1335	7.01	16.3	2.589	0.36	7.11	-339.4	400	2.42
1340	6.98	16.3	2.570	0.36	9.22	-340.0	400	2.42
1345	6.97	16.3	2.546	0.34	1.06	-337.0	400	2.42
1350	6.97	16.2	2.546	0.33	0.99	-335.0	400	3.88
1355	6.95	16.2	2.543	0.33	0.00	-332.2	400	3.88
1400	6.94	16.2	2.538	0.33	1.03	-332.8	400	3.88
1405	6.93	16.1	2.536	0.33	0.00	-331.5	400	3.88
1410	6.93	16.2	2.535	0.32	0.00	-333.6	400	3.88
1415	6.93	16.1	2.534	0.32	0.00	-333.6	400	3.88
1420	6.93	16.0	2.528	0.32	0.00	-332.0	400	3.88
1425	6.93	16.0	2.525	0.32	0.00	-336.0	400	3.88
1430	6.92	16.1	2.524	0.32	0.00	-337.7	400	3.88
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks: Sulfur Odor Present

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-3DD

Date: 8/12/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 4.20 Depth to Well Bottom: 44.00 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 24.6 Estimated Purge Volume (liters): 26.0

Sample ID: BMW-3DD Sample Time: 1305 QA/QC: None

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1200	7.22	15.4	2.726	1.04	3.66	-213.1	400	4.20
1205	7.11	15.3	2.739	0.48	1.39	-247.4	400	5.10
1210	7.11	15.1	2.738	0.39	0.69	-278.2	400	5.19
1215	7.11	15.1	2.738	0.37	0.17	-293.4	400	5.13
1220	7.11	15.1	2.740	0.35	0.22	-301.4	400	5.10
1225	7.09	15.2	2.744	0.33	1.13	-305.5	400	5.05
1230	7.09	15.1	2.744	0.33	2.51	-309.9	400	5.05
1235	7.08	15.2	2.741	0.32	1.61	-316.7	400	5.05
1240	7.08	15.2	2.738	0.32	1.23	-319.3	400	5.05
1245	7.08	15.2	2.738	0.32	1.06	-321.9	400	5.05
1250	7.08	15.4	2.740	0.32	1.06	-321.9	400	5.05
1255	7.07	15.4	2.745	0.32	1.62	-325.8	400	5.05
1300	7.08	15.2	2.743	0.32	1.86	-327.8	400	5.05
1305	7.09	15.4	2.743	0.31	1.38	-329.6	400	5.05
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60644886 Site: NYSDEC Erdle Well I.D.: BMW-3D

Date: 8/12/2021 Sampling Personnel: K. McGovern & T. Urban Company: AECOM

Purging/Sampling Device: Geotech GeoPump II AC/DC Peristaltic Pump Tubing Type: HDPE & Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: Top of Casing Initial Depth to Water: 3.48 Depth to Well Bottom: 32.79 Well Diameter: 2" Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (liters): 18.1 Estimated Purge Volume (liters): 26.0

Sample ID: BMW-3D Sample Time: 1355 QA/QC: None

Sample Parameters: TCL Volatiles + 10 TICs by 8260C
Field parameters measured w/ YSI ProDSS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1310	7.68	16.4	2.719	0.52	1.20	-233.0	400	3.48
1315	7.22	16.2	2.743	0.33	1.16	-242.8	400	3.58
1320	7.18	16.2	2.743	0.31	1.39	-248.3	400	3.56
1325	7.17	16.2	2.744	0.31	1.62	-250.7	400	3.58
1330	7.17	16.4	2.736	0.30	1.60	-252.2	400	3.56
1335	7.16	16.6	2.743	0.30	0.90	-253.2	400	3.56
1340	7.16	16.9	2.744	0.30	0.95	-253.6	400	3.56
1345	7.16	17.2	2.745	0.30	1.51	-253.6	400	3.56
1350	7.15	17.5	2.746	0.29	1.34	-253.0	400	3.56
1355	7.16	17.0	2.735	0.29	0.81	-253.0	400	3.56
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft.; 1 inch diameter well = 154 ml/ft.; 2 inch diameter well = 617 ml/ft.; 4 inch diameter well = 2470 ml/ft. ($vol_{cyl} = \pi r^2 h$)

Remarks:

APPENDIX H

INVESTIGATION DERIVED WASTE DOCUMENTS

Please print or type:

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYD002206944	1	(800) 483-2748	016383051 FLE

GENERATOR

5. Generator's Name and Mailing Address
NYSDEC
625 Broadway 12th Floor
Albany, NY 14624
Generator's Phone: (518) 402-9826 ATTN Benjamin Rung

Generator's Site Address (if different than mailing address)
100 Pixley Industrial Highway
Gates, NY 14624

6. Transporter 1 Company Name
Clean Harbors Environmental Services, Inc

U.S. EPA ID Number
MAD039322250

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Spring Grove Resource Recovery Inc
4979 Spring Grove Avenue
Cincinnati, OH 45232
Facility's Phone: (513) 681-5736

U.S. EPA ID Number
OHD000816629

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHENE), 9, PG III	02	DM	550	P	D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
Contract retained by general or confers agency authority on main transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience or safety

15. **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. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
KEVIN J. McGUIGAN AS AGT OF NYSDEC		09	08	21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
DICK KIBLISH		09	08	21
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

Main Facility has the appropriate permits and will accept the waste the generator is shipping.

72210

Site Address: 100 Pixley Industrial Highway
Gates,NY 14624

SC PPW 7/1/2021

WORK ORDER NO. 104528744

DOCUMENT NO. 1414077 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY			SHIPPER	
Spring Grove Resource Recovery Inc.			NYSDEC ATTN:Beniamin Rung	
FACILITY EPA ID #			SHIPPER EPA ID #	
OHD000816629			NYD002206944	
ADDRESS			ADDRESS	
4879 Spring Grove Avenue			625 Broadway 12th Floor	
CITY	STATE	ZIP	CITY	STATE ZIP
Cincinnati	OH	45232	Albany	NY 14624

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
14 x 55	DM		A. NON D.O.T. REGULATED, (SOIL CUTTINGS FROM WELL INSTALLATIONS AND RELATED DEBRIS)	4202	P
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-3718 GENERATOR: NYSDEC
A.CH2218965

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER	PRINT/CONOR J. McGUIGAN AS AGENT OF NYSDEC	SIGN	DATE 9/8/21
TRANSPORTER 1	PRINT Blake Robison	SIGN	DATE 09 08 21
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material.

4

CHI 107

Clean Harbors
ENVIRONMENTAL SERVICES

Land Disposal Restriction Notification Form

Printed Date :Sep 7, 2021

MANIFEST INFORMATION

Generator : NYSDEC

Address: 100 Pixley Industrial Highway
Gates,NY 14624

EPA ID #: NYD002206944

Manifest Tracking Info

016383051FLE

Sales Order No: 2104528744

LINE ITEM INFORMATION

Line Item	Page No	Profile No	Treatability Group	LDR Disposal Category
1	1	CH2217925	WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D040	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
1,1,1-TRICHLOROETHANE	Y	N	N
ARSENIC	Y	N	N
Barium	Y	N	N
CHLOROFORM	Y	N	N
DI-N-BUTYL PHTHALATE	Y	N	N
ENDOSULFAN I	Y	N	N
Phenol	Y	N	N
Tetrachloroethylene	Y	N	N
TRICHLOROETHYLENE	Y	N	N
VINYL CHLORIDE	Y	N	N

Certification	Applies to Manifest Line Items
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.	1

Waste analysis data, where available, is attached.

Signature: [signature] Print Name: Kevin T. McGuckin As Agent of NYSDEC

Title: Sr. Env Scientist Date: 9/4/21

On Site Time:

Job Owner: Michael A Scarano
Account Owner: Michael A Scarano

Sales Order Number: 2104528744

Created By:
Created Date: 9/8/2021

Customer Code: URS015	Generator Code: NY11701
Customer Information:	**Generator Information:**
AECOM One John James Audubon ParkwaySuite 210 Amherst, NY, 14228 Mr George Kisluk **Office:** (716) 856-5636	NYSDEC 100 Pixley Industrial Highway Gates, NY, 14624 **Main Contact:** Mr George Kisluk **E-Comm: YES** **Email:** **Office:** (716) 923-1321 **Cellular:** **Fax:** **EPA ID #:** NYD002206944 **State EPA ID #:**

Arrive Time: 09:00	Activity Code	Activity Time	Record Non-billableActivity Codes Only
Depart Time: 11:00	Code	Time	Comments:
Total Onsite Time: 2 hours	023		CHES Equipment Failure
	037		CHES Wrong Equipment
	044		Insufficient Materials
Signature:			
Print Name: Robin J. McGraw as Agent for NYSDEC		Date: 09/08/21	

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYD002206944 | 2. Page 1 of: 1 | 3. Emergency Response Phone: 800-535-5053 | 4. Waste Tracking Number: 40141

5. Generator's Name and Mailing Address
NYSDEC Site #828072
100 Pixley Industrial Highway
Gates, NY 14624
Generator's Phone: 716-923-1321

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Service Group, Inc 716.695.6720 | U.S. EPA ID Number: NYD986903904

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address
American Recyclers Compan
177 Wales Avenue
Tonawanda, NY 14150
Facility's Phone: 716.695.6720 | U.S. EPA ID Number: NYR000030809

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	Non RCRA Non DOT Regulated, (Empty Drums)	001	DM	040	P	EST
	Non RCRA Non DOT Regulated, (Soil Cuttings, Debris)	005	DM	2000	P	EST
	3.					
	4.					

13. Special Handling Instructions and Additional Information

ERG:	Approval #:	Handling Codes:	24 Hour Emergency Contact:
1 -	1 - P-18868R	1 - None	INFOTRAC (Caller Must ID
2 -	2 - A-18870L	2 - None	ESG)
3 -	3 -	3 -	
4 -	4 -	4 -	

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: X MICHAEL GUTMANN | Signature: AS AGENT OF NYSDOT | Month: 09 | Day: 16 | Year: 21

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES FEDESON | Signature | Month: 09 | Day: 16 | Year: 21

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

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: Justin Rainville | Signature | Month: 09 | Day: 16 | Year: 21

TRANSPORTER #1

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NYD002206944	1	800-535-5053	01236947 FLE

GENERATOR

5. Generator's Name and Mailing Address
NYSDEC Site #828072
100 Pixley Industrial Highway
Gates, NY 14624
Generator's Phone: 716-923-1321

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Service Group, Inc. (NY) 716.695.6720 — U.S. EPA ID Number: NYD986993904

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chemical Solvents Inc
1010 Denison Avenue
Cleveland, OH 44109
Facility's Phone: 800-382-0693 — U.S. EPA ID Number: OHD980697658

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3082, Hazardous waste, liquid, n.o.s., 9, III, (Trichloroethylene)	009	DM	495	G	D040		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1 - 46886 ERG: 1- 171
24 Hour Emergency Contact:
INFOTRAC (Caller Must ID ESG)
800-535-5053

15. 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. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X MICHAEL GOTMANN — Signature: AS AGENT OF NYSEG — Month: 09 Day: 16 Year: 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X JAMES FEDESON — Signature: — Month: 09 Day: 16 Year: 21

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: MM Shan — Signature: — Month: 9 Day: 22 Year: 21

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

TRANSPORTER COPY

APPENDIX I

DATA USABILITY SUMMARY REPORTS

DATA USABILITY SUMMARY REPORT

FOR

ERDLE PERFORATING #828072
SOIL SAMPLES

VOA
SDG No. 480-185645-1Sampling Date: June 1-4, 2021

Submitted to:

AECOM
One John James Audubon Parkway
Suite 210
Amherst, New York, USA
716-313-0870

Prepared by:

Environmental Data Validation Inc. (EDV, Inc.)
Environmental Occupational & Public Health Consultants Inc. (EOPHC)
1326 Orangewood Ave
Pittsburgh, PA 15216
(412) 341-5281

Site: Erdle Perforating #828072
Client: AECOM
Laboratory: Eurofins TestAmerica

SDG #: 480-185645-1
Date: August 4, 2021
Reviewer: D. McGuire

Sample Identification Table

Client Sample ID	Laboratory ID	Matrix	VOC
120N 0E 2.0-2.5	480-185645-1	Soil	X
100N 0E 10.5-11.0	480-185645-2	Soil	X
100N 0E 13.0-13.5	480-185645-3	Soil	X
80N 0E 13.0-13.7	480-185645-4	Soil	X
60N 0E 11.0-11.5	480-185645-5	Soil	X
60N 0E 12.5-13.0	480-185645-6	Soil	X
40N 0E 13.0-13.9	480-185645-7	Soil	X
20N 0E 7.5-8.1	480-185645-8	Soil	X
120N 20E 3.9-4.0	480-185645-9	Soil	X
120N 20E 14.5-14.9	480-185645-10	Soil	X
100N 20E 14.0-14.4	480-185645-11	Soil	X
80N 20E 13.5-14.0	480-185645-12	Soil	X
40N 20E 2.5-3.0	480-185645-13	Soil	X
DUP-1-20210602	480-185645-14	Soil	X
40N 20E 4.0-5.0	480-185645-15	Soil	X
40N 20E 13.5-14.1	480-185645-16	Soil	X
20N 20E 11.0-11.5	480-185645-17	Soil	X
DUP-2-20210602	480-185645-18	Soil	X
20N 40E 13.9-14.1	480-185645-19	Soil	X
20N 60E 11.0-11.5	480-185645-20	Soil	X
40N 60E 13.5-14.3	480-185645-21	Soil	X
60N 20E 10.5-11.0	480-185645-22	Soil	X
60N 20E 2.5-3.5	480-185645-23	Soil	X
60N 40E 10.5-11.5	480-185645-24	Soil	X
80N 40E 13.5-14.3	480-185645-25	Soil	X
100N 40E 14.0-14.5	480-185645-26	Soil	X
120N 40E 5.3-5.7	480-185645-27	Soil	X
120N 40E 10.0-11.0	480-185645-28	Soil	X
120N 60E 8.5-9.5	480-185645-29	Soil	X
DUP-1-20210603	480-185645-30	Soil	X
100N 60E 14.0-14.5	480-185645-31	Soil	X
80N 60E 7.0-7.5	480-185645-32	Soil	X
60N 60E 11.0-11.5	480-185645-33	Soil	X
120W 80E 13.9-14.6	480-185645-34	Soil	X
100N 80E 14.2-14.4	480-185645-35	Soil	X
100N 100E 14.0-14.2	480-185645-36	Soil	X
60N 80E 10.5-11.0	480-185645-37	Soil	X

Client Sample ID	Laboratory ID	Matrix	VOC
120N 100E 14.5-15.1	480-185645-38	Soil	X
120N 120E 14.0-14.6	480-185645-39	Soil	X
120N 140E 14.0-14.3	480-185645-40	Soil	X
105N 140E 14.0-14.3	480-185645-41	Soil	X
105N 120E 4.0-4.5	480-185645-42	Soil	X

The sample delivery group (SDG) contained forty-two (42) soil samples, which included three (3) field duplicate samples. The samples were analyzed via SW-846 Method 8260C. The adherence of laboratory analytical performance to this method's analytical specifications was evaluated during the data validation process. The data package was evaluated for its usability as defined by the Guidance for the Development of Data Usability Summary Reports (DER-10, 11/09). USEPA Region II standard operating procedures were used as guidance documents. According to the NYSDEC Guidance for the Development of Data Usability Summary Reports, the following Quality Control (QC) data were evaluated: blanks, instrument tunings, calibration standards, calibration verifications, laboratory control/QC standards, surrogate recoveries, spike recoveries, and sample data.

The following Attachments are a part of this report: All validated Form 1s are presented in Attachment A. All Case Narrative and Chain of Custody (COC) records are presented in Attachment B.

All QC data were within quality control limits, except the following issues:

Cover letter, Narrative and Data Reporting Forms (Form 1s): The deficiencies noted in the case narrative that affect data usability are discussed in applicable sections. Data that have no impact on data usability are not discussed.

Chain of Custody (COC): Results for all samples listed in the Sample Identification Table above were present on the COC.

Preservation: Preservation for all samples was acceptable.

Holding Time: Samples were analyzed within holding times. .

Blanks Quality Control: There was no method or trip blank contamination.

Calibration Quality Control: There were deficiencies noted during calibration. The following table details the compounds experiencing calibration issues, affected samples and resulting qualifiers:

Sample ID	Compound	Qualifier
480-185645-7, 480-185645-8 480-185645-9, 480-185645-12 480-185645-16, 480-185645-17 480-185645-18, 480-185645-25 480-185645-26, 480-185645-29 480-185645-30, 480-185645-31 480-185645-32, 480-185645-33	1,2,4-Trichlorobenzene	UJ
480-185645-34, 480-185645-35 480-185645-36	Bromodichloromethane	UJ

Sample ID	Compound	Qualifier
480-185645-1, 480-185645-13 480-185645-20, 480-185645-21 480-185645-24, 480-185645-27 480-185645-34, 480-185645-35 480-185645-36, 480-185645-38 480-185645-39, 480-185645-40	Chloroethane	UJ
480-185645-34, 480-185645-35 480-185645-36, 480-185645-38 480-185645-39, 480-185645-40	Trichlorotrifluoromethane	UJ
480-185645-1, 480-185645-4, 480-185645-5, 480-185645-13, 480-185645-15, 480-185645-20, 480-185645-21, 480-185645-24, 480-185645-27, 480-185645-34, 480-185645-35, 480-185645-36, 480-185645-38, 480-185645-39, 480-185645-40	Vinyl chloride	J, UJ

Laboratory Control Sample (LCS): The recoveries were acceptable.

Surrogates: The recoveries were acceptable.

Internal Standard: There were deficiencies noted in the review of internal standard data for two samples. The internal standard, 1,4-Dichlorobenzene d4, is outside of acceptance limits, therefore the compounds associated with this internal standard in these sample require qualification. The following table below describes the samples with the deficient internal standard, affected compounds and resulting qualifiers:

Sample ID	Internal Standard	Compund	Qualifier
480-185645-9 480-185645-15	1,4 Dichlorobenzene d4	1,1,2,2-Tetrachloroethene, 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dichlorobenzene, 1,2,4- Trichlorobenzene, 1,2,4-Trimethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, t-Butylbenzene, 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene, 1,4-Dichlorobenzene	J, UJ

Matrix Spike (MS)/Matrix Spike Duplicate (MSD): One sample submitted for MS/MSD experienced a precision deficiency in the MS/MSD reproducibility (RPD), described in the following table:

Sampled ID	Compound	MS/MSD RPD (%)	Qualifier
40N 20E 4.0-5.0	cis-1,2-dichloroethene	35	J

Field Duplicate: The Relative Percent Difference (RPD) is calculated when both parent and duplicate sample report a positive detection. The following table describes the affected compound with a RPD deficiency and the calculated RPD for the parent and field duplicate samples:

Compound	Sample ID Conc. ug/kg 20N 20E 11.0-11.5	Duplicate ID Conc. ug/kg DUP-2-20210602	RPD (%)
Carbon disulfide	15	17	12.5
cis-1,2-Dichloroethene	6300	10,000	45.4
trans-1,2-Dichloroethene	9.2	11	17.8
Trichloroethene	4200	13,000	102
Acetone	27	30	11
1,1-Dichloroethene	3.9	4.1	5

Compound	Sample ID Conc. ug/kg 120N 60E 8.5-9.5	Duplicate ID Conc. ug/kg DUP-1-20210603	RPD (%)
cis-1,2-Dichloroethene	85	64	28.2
Trichloroethene	20	22	9.5
trans-1,2-Dichloroethene	2.1	1.4	40

Compound	Sample ID Conc. ug/kg 40N-20E-2.5-3.0	Duplicate ID Conc. ug/kg DUP-1-20210602	RPD (%)
Toluene	4.0	640	198
Trichloroethene	14	53	116

Compound Quantitation: Both the Method Detection Limit (MDL) and the Reporting L limit (RL) are elevated for several samples. The affected samples were analyzed using medium level analysis due to matrix interferences and/or results outside of the calibration range. When a diluted sample result, within the calibration range, was reported for a compound, that result should be used. Conversely, the sample result outside of the calibration range is qualified as rejected, R, and therefore should not be used.

Method Detection Limit (MDL) and Reporting Limit (RL): Sample results were reported to the MDL. Positive results above the MDL, but less than the RL, were qualified as estimated, J if not previously qualified for other deficiencies.

Additional Comments: Some Form 1s and case narratives report criteria outside of QC limits. During the validation process, if data were impacted due to a deficiency, it is discussed in this DUSR, including a description of the appropriate data validation qualifier(s) applied to sample results on the Form 1s and the Electronic Data Deliverable (EDD).

Discussions in this DUSR relate to all conditions that affected data usability. When there are multiple analyses, the most valid analytical run is presented (Attachment A).

Data usability: Data qualified with the "UJ" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "J" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "R" qualifier are not usable due to severe quality control issues. Data qualified with the "U" qualifier are usable at the reporting limit.

ATTACHMENT A

VALIDATED AND QUALIFIED DATA SHEETS (FORM 1s)

Client Sample Results

Client: New York State D.E.C.
Job ID: 480-185645-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 120N 0E 2.0-2.5
Lab Sample ID: 480-185645-1

Date Collected: 06/01/21 09:35
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 88.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2,4-Trimethylbenzene	**3.9**	**J vs**	5.7	1.1	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	J
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2-Dichlorobenzene	ND	vs	5.7	0.44	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,3,5-Trimethylbenzene	**1.5**	**J vs**	5.7	0.37	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
2-Butanone (MEK)	**23**	**J vs**	28	2.1	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Acetone	**130**	**vs**	28	4.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Carbon disulfide	ND	vs	5.7	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Chloroethane	ND	*+ vs	5.7	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	UJ
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
cis-1,2-Dichloroethene	**2.7**	**J vs**	5.7	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	J
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Methylcyclohexane	ND	vs	5.7	0.86	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
n-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
N-Propylbenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
sec-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
tert-Butylbenzene	ND	vs	5.7	0.59	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	

Client Sample ID: 120N 0E 2.0-2.5
Lab Sample ID: 480-185645-1

Date Collected: 06/01/21 09:35
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 88.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	VQ
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
trans-1,2-Dichloroethene	ND	vs	5.7	0.59	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Trichloroethene	**14**	**vs**	5.7	1.2	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	
Vinyl chloride	ND	vs	5.7	0.69	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	UJ
Xylenes, Total	ND	vs	11	0.95	ug/Kg	☼	06/08/21 18:48	06/08/21 21:47	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/08/21 18:48*	*06/08/21 21:47*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/08/21 18:48*	*06/08/21 21:47*	*1*
Toluene-d8 (Surr)	*98*		*71 - 125*	*06/08/21 18:48*	*06/08/21 21:47*	*1*

Client Sample ID: 100N 0E 10.5-11.0
Lab Sample ID: 480-185645-2

Date Collected: 06/01/21 10:40
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 85.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,1,2,2-Tetrachloroethane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,1,2-Trichloroethane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,1-Dichloroethane	ND		120	38	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2,3-Trichlorobenzene	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2,4-Trichlorobenzene	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2,4-Trimethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2-Dibromo-3-Chloropropane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2-Dichloroethane	ND		120	50	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,2-Dichloropropane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,3,5-Trimethylbenzene	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,3-Dichlorobenzene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
1,4-Dioxane	ND		2300	630	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
2-Butanone (MEK)	ND		610	360	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
2-Hexanone	ND		610	250	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
4-Methyl-2-pentanone (MIBK)	ND		610	39	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Acetone	ND		610	500	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Benzene	ND		120	23	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Bromodichloromethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Bromoform	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Bromomethane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Carbon disulfide	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1
Chlorobromomethane	ND		120	44	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1

Client Sample ID: 100N 0E 10.5-11.0
Lab Sample ID: 480-185645-2

Date Collected: 06/01/21 10:40
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Chloroform	ND		120	84	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
cis-1,2-Dichloroethene	**2500**		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Dibromochloromethane	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Dichlorodifluoromethane	ND		120	53	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Ethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Methyl acetate	ND		610	58	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Methyl tert-butyl ether	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Methylcyclohexane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
n-Butylbenzene	ND		120	36	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
N-Propylbenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
sec-Butylbenzene	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Styrene	ND		120	30	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
tert-Butylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Toluene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
trans-1,2-Dichloroethene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Trichloroethene	**4400**		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Trichlorofluoromethane	ND		120	58	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Vinyl chloride	ND		120	41	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	
Xylenes, Total	ND		250	68	ug/Kg	☼	06/08/21 13:48	06/09/21 13:45	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*53 - 146*	*06/08/21 13:48*	*06/09/21 13:45*	*1*
4-Bromofluorobenzene (Surr)	*99*		*49 - 148*	*06/08/21 13:48*	*06/09/21 13:45*	*1*
Toluene-d8 (Surr)	*99*		*50 - 149*	*06/08/21 13:48*	*06/09/21 13:45*	*1*

Client Sample ID: 100N 0E 13.0-13.5
Lab Sample ID: 480-185645-3

Date Collected: 06/01/21 10:48
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,1,2,2-Tetrachloroethane	ND		120	20	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2,3-Trichlorobenzene	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2,4-Trichlorobenzene	ND		120	46	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2,4-Trimethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2-Dibromo-3-Chloropropane	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	

Client Sample ID: 100N 0E 13.0-13.5
Lab Sample ID: 480-185645-3
Date Collected: 06/01/21 10:48
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	VQ
1,2-Dichloroethane	ND		120	49	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,2-Dichloropropane	ND		120	20	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,3,5-Trimethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
1,4-Dioxane	ND		2300	620	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
2-Butanone (MEK)	ND		600	360	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
2-Hexanone	ND		600	250	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
4-Methyl-2-pentanone (MIBK)	ND		600	39	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Acetone	ND		600	500	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Benzene	ND		120	23	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Bromoform	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Bromomethane	ND		120	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Carbon disulfide	ND		120	55	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Chlorobromomethane	ND		120	44	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Chloroform	ND		120	83	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
cis-1,2-Dichloroethene	**320**		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Dibromochloromethane	ND		120	58	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Dichlorodifluoromethane	ND		120	53	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Methyl acetate	ND		600	57	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Methyl tert-butyl ether	ND		120	46	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Methylcyclohexane	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
N-Propylbenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
sec-Butylbenzene	ND		120	44	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Styrene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
tert-Butylbenzene	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Toluene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Trichloroethene	**77**	**J**	120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	J
Trichlorofluoromethane	ND		120	57	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Vinyl chloride	**750**		120	40	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	
Xylenes, Total	ND		240	67	ug/Kg	☼	06/08/21 15:22	06/09/21 18:00	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*53 - 146*	*06/08/21 15:22*	*06/09/21 18:00*	*1*
4-Bromofluorobenzene (Surr)	*93*		*49 - 148*	*06/08/21 15:22*	*06/09/21 18:00*	*1*

Client Sample ID: 100N 0E 13.0-13.5
Lab Sample ID: 480-185645-3

Date Collected: 06/01/21 10:48
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.7

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		50 - 149	06/08/21 15:22	06/09/21 18:00	1

Client Sample ID: 80N 0E 13.0-13.7
Lab Sample ID: 480-185645-4

Date Collected: 06/01/21 11:15
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.3	0.39	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	5.3	0.86	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.3	1.2	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,1,2-Trichloroethane	ND	vs	5.3	0.69	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,1-Dichloroethane	ND	vs	5.3	0.65	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,1-Dichloroethene	ND	vs	5.3	0.65	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2,3-Trichlorobenzene	ND	vs	5.3	0.56	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2,4-Trichlorobenzene	ND	vs	5.3	0.32	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2,4-Trimethylbenzene	ND	vs	5.3	1.0	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.3	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2-Dibromoethane	ND	vs	5.3	0.68	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2-Dichlorobenzene	ND	vs	5.3	0.42	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2-Dichloroethane	ND	vs	5.3	0.27	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,2-Dichloropropane	ND	vs	5.3	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,3,5-Trimethylbenzene	ND	vs	5.3	0.34	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,3-Dichlorobenzene	ND	vs	5.3	0.27	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,4-Dichlorobenzene	ND	vs	5.3	0.74	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
1,4-Dioxane	ND	vs	110	23	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
2-Butanone (MEK)	ND	vs	27	1.9	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
2-Hexanone	ND	vs	27	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	27	1.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Acetone	**19**	**J vs**	27	4.5	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	J
Benzene	ND	vs	5.3	0.26	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Bromodichloromethane	ND	vs	5.3	0.71	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Bromoform	ND	vs	5.3	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Bromomethane	ND	vs	5.3	0.48	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Carbon disulfide	ND	vs	5.3	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Carbon tetrachloride	ND	vs	5.3	0.51	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Chlorobenzene	ND	vs	5.3	0.70	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Chlorobromomethane	ND	vs	5.3	0.38	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Chloroethane	ND	vs	5.3	1.2	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Chloroform	ND	vs	5.3	0.33	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Chloromethane	ND	vs	5.3	0.32	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
cis-1,2-Dichloroethene	**1.6**	**J vs**	5.3	0.68	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	J
cis-1,3-Dichloropropene	ND	vs	5.3	0.77	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Cyclohexane	ND	vs	5.3	0.74	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Dibromochloromethane	ND	vs	5.3	0.68	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Dichlorodifluoromethane	ND	vs	5.3	0.44	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Ethylbenzene	ND	vs	5.3	0.37	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Isopropylbenzene	ND	vs	5.3	0.80	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Methyl acetate	ND	vs	27	3.2	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	

Client Sample ID: 80N 0E 13.0-13.7
Lab Sample ID: 480-185645-4
Date Collected: 06/01/21 11:15
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Methyl tert-butyl ether	ND	vs	5.3	0.52	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	VQ
Methylcyclohexane	ND	vs	5.3	0.81	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Methylene Chloride	ND	vs	5.3	2.4	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
n-Butylbenzene	ND	vs	5.3	0.46	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
N-Propylbenzene	ND	vs	5.3	0.43	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
sec-Butylbenzene	ND	vs	5.3	0.46	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Styrene	ND	vs	5.3	0.27	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
tert-Butylbenzene	ND	vs	5.3	0.55	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Tetrachloroethene	ND	vs	5.3	0.71	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Toluene	ND	vs	5.3	0.40	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
trans-1,2-Dichloroethene	ND	vs	5.3	0.55	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
trans-1,3-Dichloropropene	ND	vs	5.3	2.3	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Trichloroethene	ND	vs	5.3	1.2	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Trichlorofluoromethane	ND	vs	5.3	0.50	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	
Vinyl chloride	ND	vs	5.3	0.65	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	UJ
Xylenes, Total	ND	vs	11	0.89	ug/Kg	☼	06/07/21 19:46	06/08/21 04:35	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/07/21 19:46*	*06/08/21 04:35*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/07/21 19:46*	*06/08/21 04:35*	*1*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/07/21 19:46*	*06/08/21 04:35*	*1*

Client Sample ID: 60N 0E 11.0-11.5
Lab Sample ID: 480-185645-5
Date Collected: 06/01/21 11:48
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,1-Dichloroethene	**1.1**	**J vs**	5.7	0.70	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	J
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2,4-Trimethylbenzene	ND	vs	5.7	1.1	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2-Dichlorobenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,3,5-Trimethylbenzene	ND	vs	5.7	0.37	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Acetone	**21**	**J vs**	28	4.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	J

Client Sample ID: 60N 0E 11.0-11.5
Date Collected: 06/01/21 11:48
Date Received: 06/04/21 15:20

Lab Sample ID: 480-185645-5
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Benzene	**0.35**	**J vs**	5.7	0.28	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	J
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Carbon disulfide	**20**	**vs**	5.7	2.8	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Chloroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
cis-1,2-Dichloroethene	**2500**	**E vs**	5.7	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	R
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Methylcyclohexane	ND	vs	5.7	0.87	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
n-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
N-Propylbenzene	ND	vs	5.7	0.46	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
sec-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
tert-Butylbenzene	ND	vs	5.7	0.59	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Toluene	**0.65**	**J vs**	5.7	0.43	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	J
trans-1,2-Dichloroethene	**22**	**vs**	5.7	0.59	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Trichloroethene	**6.5**	**vs**	5.7	1.3	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	
Vinyl chloride	**5.1**	**J vs**	5.7	0.69	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	J
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	06/07/21 19:46	06/08/21 04:59	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 126*	*06/07/21 19:46*	*06/08/21 04:59*	*1*
4-Bromofluorobenzene (Surr)	*88*		*72 - 126*	*06/07/21 19:46*	*06/08/21 04:59*	*1*
Toluene-d8 (Surr)	*105*		*71 - 125*	*06/07/21 19:46*	*06/08/21 04:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	R
1,1,2,2-Tetrachloroethane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,1,2-Trichloroethane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,1-Dichloroethane	ND		120	38	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2,3-Trichlorobenzene	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	

Client Sample ID: 60N 0E 11.0-11.5
Date Collected: 06/01/21 11:48
Date Received: 06/04/21 15:20

Lab Sample ID: 480-185645-5
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,2,4-Trichlorobenzene	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	R
1,2,4-Trimethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2-Dibromo-3-Chloropropane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2-Dichloroethane	ND		120	50	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,2-Dichloropropane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,3,5-Trimethylbenzene	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
1,4-Dioxane	ND		2300	620	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
2-Butanone (MEK)	ND		610	360	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
2-Hexanone	ND		610	250	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
4-Methyl-2-pentanone (MIBK)	ND		610	39	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Acetone	ND		610	500	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Benzene	ND		120	23	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Bromoform	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Bromomethane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Carbon disulfide	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Chlorobromomethane	ND		120	44	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Chloroform	ND		120	83	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
cis-1,2-Dichloroethene	**6400**		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	v
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	R
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Dibromochloromethane	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Dichlorodifluoromethane	ND		120	53	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Methyl acetate	ND		610	58	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Methyl tert-butyl ether	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Methylcyclohexane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
n-Butylbenzene	ND		120	36	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
N-Propylbenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
sec-Butylbenzene	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Styrene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
tert-Butylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Toluene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
trans-1,2-Dichloroethene	**51**	**J**	120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Trichloroethene	**60**	**J**	120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Trichlorofluoromethane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	
Vinyl chloride	ND		120	41	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	v

Client Sample ID: 60N 0E 11.0-11.5
Lab Sample ID: 480-185645-5
Date Collected: 06/01/21 11:48
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Xylenes, Total	ND		240	67	ug/Kg	☼	06/08/21 13:48	06/09/21 14:08	1	R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*	*06/08/21 13:48*	*06/09/21 14:08*	*1*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*	*06/08/21 13:48*	*06/09/21 14:08*	*1*
Toluene-d8 (Surr)	*100*		*50 - 149*	*06/08/21 13:48*	*06/09/21 14:08*	*1*

Client Sample ID: 60N 0E 12.5-13.0
Lab Sample ID: 480-185645-6
Date Collected: 06/01/21 11:53
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,1,2,2-Tetrachloroethane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2,3-Trichlorobenzene	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2,4-Trichlorobenzene	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2,4-Trimethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2-Dibromo-3-Chloropropane	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2-Dichloroethane	ND		120	50	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,2-Dichloropropane	ND		120	20	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,3,5-Trimethylbenzene	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
1,4-Dioxane	ND		2300	620	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
2-Butanone (MEK)	ND		610	360	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
2-Hexanone	ND		610	250	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
4-Methyl-2-pentanone (MIBK)	ND		610	39	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Acetone	ND		610	500	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Benzene	ND		120	23	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Bromoform	ND		120	61	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Bromomethane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Carbon disulfide	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Chlorobromomethane	ND		120	44	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Chloroform	ND		120	83	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
cis-1,2-Dichloroethene	**2500**		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Dibromochloromethane	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	

Client Sample ID: 60N 0E 12.5-13.0
Lab Sample ID: 480-185645-6
Date Collected: 06/01/21 11:53
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Dichlorodifluoromethane	ND		120	53	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	VQ
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Methyl acetate	ND		610	58	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Methyl tert-butyl ether	ND		120	46	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Methylcyclohexane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
N-Propylbenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
sec-Butylbenzene	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Styrene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
tert-Butylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Toluene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
trans-1,2-Dichloroethene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Trichloroethene	**830**		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Trichlorofluoromethane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Vinyl chloride	ND		120	41	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	
Xylenes, Total	ND		240	67	ug/Kg	☼	06/08/21 13:48	06/09/21 14:31	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*53 - 146*	*06/08/21 13:48*	*06/09/21 14:31*	*1*
4-Bromofluorobenzene (Surr)	*99*		*49 - 148*	*06/08/21 13:48*	*06/09/21 14:31*	*1*
Toluene-d8 (Surr)	*104*		*50 - 149*	*06/08/21 13:48*	*06/09/21 14:31*	*1*

Client Sample ID: 40N 0E 13.0-13.9
Lab Sample ID: 480-185645-7
Date Collected: 06/01/21 13:05
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.6	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	5.6	0.91	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.6	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,1,2-Trichloroethane	ND	vs	5.6	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,1-Dichloroethane	ND	vs	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,1-Dichloroethene	ND	vs	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2,3-Trichlorobenzene	ND	vs	5.6	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2,4-Trichlorobenzene	ND	vs	5.6	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.6	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2-Dibromoethane	ND	vs	5.6	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2-Dichlorobenzene	ND	vs	5.6	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2-Dichloroethane	ND	vs	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,2-Dichloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,3,5-Trimethylbenzene	ND	vs	5.6	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,3-Dichlorobenzene	ND	vs	5.6	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,4-Dichlorobenzene	ND	vs	5.6	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	

Client Sample ID: 40N 0E 13.0-13.9
Lab Sample ID: 480-185645-7
Date Collected: 06/01/21 13:05
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
2-Butanone (MEK)	**6.2**	**J vs**	28	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Acetone	**26**	**J vs**	28	4.7	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
Benzene	**0.33**	**J vs**	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
Bromodichloromethane	ND	vs	5.6	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Bromoform	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Bromomethane	ND	vs	5.6	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Carbon disulfide	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Carbon tetrachloride	ND	vs	5.6	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Chlorobenzene	ND	vs	5.6	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Chlorobromomethane	ND	vs	5.6	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Chloroethane	ND	*+ vs	5.6	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Chloroform	ND	vs	5.6	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Chloromethane	ND	vs	5.6	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
cis-1,2-Dichloroethene	**2.5**	**J vs**	5.6	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
cis-1,3-Dichloropropene	ND	vs	5.6	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Cyclohexane	ND	vs	5.6	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Dibromochloromethane	ND	vs	5.6	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Dichlorodifluoromethane	ND	vs	5.6	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Ethylbenzene	ND	vs	5.6	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Isopropylbenzene	ND	vs	5.6	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Methyl tert-butyl ether	ND	vs	5.6	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Methylcyclohexane	ND	vs	5.6	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Methylene Chloride	ND	vs	5.6	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
n-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
N-Propylbenzene	ND	vs	5.6	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
sec-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Styrene	ND	vs	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
tert-Butylbenzene	ND	vs	5.6	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Tetrachloroethene	ND	vs	5.6	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Toluene	ND	vs	5.6	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
trans-1,2-Dichloroethene	**3.7**	**J vs**	5.6	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
trans-1,3-Dichloropropene	ND	vs	5.6	2.5	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Trichloroethene	**2.5**	**J vs**	5.6	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
Trichlorofluoromethane	ND	vs	5.6	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	
Vinyl chloride	**2.4**	**J vs**	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	J
Xylenes, Total	ND	vs	11	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 10:42	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/07/21 22:23*	*06/08/21 10:42*	*1*
4-Bromofluorobenzene (Surr)	*89*		*72 - 126*	*06/07/21 22:23*	*06/08/21 10:42*	*1*
Toluene-d8 (Surr)	*103*		*71 - 125*	*06/07/21 22:23*	*06/08/21 10:42*	*1*

Client Sample ID: 20N 0E 7.5-8.1
Lab Sample ID: 480-185645-8

Date Collected: 06/01/21 13:35
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.6	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.6	0.92	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.6	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,1,2-Trichloroethane	ND	vs	5.6	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,1-Dichloroethane	ND	vs	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,1-Dichloroethene	ND	vs	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2,3-Trichlorobenzene	ND	vs	5.6	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2,4-Trichlorobenzene	ND	vs	5.6	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.6	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2-Dibromoethane	ND	vs	5.6	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2-Dichlorobenzene	ND	vs	5.6	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2-Dichloroethane	ND	vs	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,2-Dichloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,3,5-Trimethylbenzene	ND	vs	5.6	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,3-Dichlorobenzene	ND	vs	5.6	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,4-Dichlorobenzene	ND	vs	5.6	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Acetone	**7.8**	**J vs**	28	4.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	J
Benzene	ND	vs	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Bromodichloromethane	ND	vs	5.6	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Bromoform	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Bromomethane	ND	vs	5.6	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Carbon disulfide	ND	vs	5.6	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Carbon tetrachloride	ND	vs	5.6	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Chlorobenzene	ND	vs	5.6	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Chlorobromomethane	ND	vs	5.6	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Chloroethane	ND	*+ vs	5.6	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Chloroform	ND	vs	5.6	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Chloromethane	ND	vs	5.6	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
cis-1,2-Dichloroethene	**1.1**	**J vs**	5.6	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	J
cis-1,3-Dichloropropene	ND	vs	5.6	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Cyclohexane	ND	vs	5.6	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Dibromochloromethane	ND	vs	5.6	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Dichlorodifluoromethane	ND	vs	5.6	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Ethylbenzene	ND	vs	5.6	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Isopropylbenzene	ND	vs	5.6	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Methyl tert-butyl ether	ND	vs	5.6	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Methylcyclohexane	ND	vs	5.6	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Methylene Chloride	ND	vs	5.6	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
n-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
N-Propylbenzene	ND	vs	5.6	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
sec-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Styrene	ND	vs	5.6	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
tert-Butylbenzene	ND	vs	5.6	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	

Client Sample ID: 20N 0E 7.5-8.1
Lab Sample ID: 480-185645-8
Date Collected: 06/01/21 13:35
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Tetrachloroethene	ND	vs	5.6	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Toluene	ND	vs	5.6	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
trans-1,2-Dichloroethene	ND	vs	5.6	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
trans-1,3-Dichloropropene	ND	vs	5.6	2.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Trichloroethene	**4.9**	**J vs**	5.6	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	J
Trichlorofluoromethane	ND	vs	5.6	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Vinyl chloride	ND	vs	5.6	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	
Xylenes, Total	ND	vs	11	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 11:07	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/07/21 22:23*	*06/08/21 11:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*06/07/21 22:23*	*06/08/21 11:07*	*1*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/07/21 22:23*	*06/08/21 11:07*	*1*

Client Sample ID: 120N 20E 3.9-4.0
Lab Sample ID: 480-185645-9
Date Collected: 06/01/21 14:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 40.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	12	0.89	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,1,2,2-Tetrachloroethane	ND	*3 vs	12	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	12	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,1,2-Trichloroethane	ND	vs	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,1-Dichloroethane	ND	vs	12	1.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,1-Dichloroethene	ND	vs	12	1.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,2,3-Trichlorobenzene	ND	*3 vs	12	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,2,4-Trichlorobenzene	ND	*3 vs	12	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,2,4-Trimethylbenzene	**9.6**	**J *3 vs**	12	2.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
1,2-Dibromo-3-Chloropropane	ND	*3 vs	12	6.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,2-Dibromoethane	ND	vs	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,2-Dichlorobenzene	ND	*3 vs	12	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,2-Dichloroethane	ND	vs	12	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,2-Dichloropropane	ND	vs	12	6.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
1,3,5-Trimethylbenzene	**3.3**	**J *3 vs**	12	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
1,3-Dichlorobenzene	ND	*3 vs	12	0.63	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,4-Dichlorobenzene	ND	*3 vs	12	1.7	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
1,4-Dioxane	ND	vs	240	53	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
2-Butanone (MEK)	ND	vs	61	4.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
2-Hexanone	ND	vs	61	6.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	61	4.0	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Acetone	**65**	**vs**	61	10	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Benzene	ND	vs	12	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Bromodichloromethane	ND	vs	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Bromoform	ND	vs	12	6.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Bromomethane	ND	vs	12	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Carbon disulfide	**6.2**	**J vs**	12	6.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
Carbon tetrachloride	ND	vs	12	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Chlorobenzene	ND	vs	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Chlorobromomethane	ND	vs	12	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	

Client Sample ID: 120N 20E 3.9-4.0
Lab Sample ID: 480-185645-9
Date Collected: 06/01/21 14:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 40.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND	*+ vs	12	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Chloroform	ND	vs	12	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Chloromethane	ND	vs	12	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
cis-1,2-Dichloroethene	**23**	**vs**	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
cis-1,3-Dichloropropene	ND	vs	12	1.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Cyclohexane	ND	vs	12	1.7	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Dibromochloromethane	ND	vs	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Dichlorodifluoromethane	ND	vs	12	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Ethylbenzene	**1.4**	**J vs**	12	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
Isopropylbenzene	ND	*3 vs	12	1.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
Methyl acetate	ND	vs	61	7.4	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Methyl tert-butyl ether	ND	vs	12	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Methylcyclohexane	ND	vs	12	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Methylene Chloride	ND	vs	12	5.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
n-Butylbenzene	ND	*3 vs	12	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
N-Propylbenzene	ND	*3 vs	12	0.98	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
sec-Butylbenzene	ND	*3 vs	12	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
Styrene	ND	vs	12	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
tert-Butylbenzene	ND	*3 vs	12	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	UJ
Tetrachloroethene	**2.5**	**J vs**	12	1.6	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
Toluene	**7.4**	**J vs**	12	0.92	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
trans-1,2-Dichloroethene	**2.5**	**J vs**	12	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J
trans-1,3-Dichloropropene	ND	vs	12	5.4	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Trichloroethene	**26**	**vs**	12	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Trichlorofluoromethane	ND	vs	12	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Vinyl chloride	ND	vs	12	1.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	
Xylenes, Total	**8.9**	**J vs**	24	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 11:32	1	J

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*06/07/21 22:23*	*06/08/21 11:32*	*1*
4-Bromofluorobenzene (Surr)	*80*		*72 - 126*	*06/07/21 22:23*	*06/08/21 11:32*	*1*
Toluene-d8 (Surr)	*110*		*71 - 125*	*06/07/21 22:23*	*06/08/21 11:32*	*1*

Client Sample ID: 120N 20E 14.5-14.9
Lab Sample ID: 480-185645-10
Date Collected: 06/01/21 14:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,1,2,2-Tetrachloroethane	ND		480	78	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		480	240	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,1,2-Trichloroethane	ND		480	100	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,1-Dichloroethane	ND		480	150	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,1-Dichloroethene	ND		480	170	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2,3-Trichlorobenzene	ND		480	220	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2,4-Trichlorobenzene	ND		480	180	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2,4-Trimethylbenzene	**1400**		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2-Dibromo-3-Chloropropane	ND		480	240	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2-Dibromoethane	ND		480	84	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	

Client Sample ID: 120N 20E 14.5-14.9
Lab Sample ID: 480-185645-10

Date Collected: 06/01/21 14:25
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,2-Dichlorobenzene	ND		480	120	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2-Dichloroethane	ND		480	200	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,2-Dichloropropane	ND		480	78	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,3,5-Trimethylbenzene	**370**	**J**	480	150	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	J
1,3-Dichlorobenzene	ND		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,4-Dichlorobenzene	ND		480	68	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
1,4-Dioxane	ND		9200	2500	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
2-Butanone (MEK)	ND		2400	1400	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
2-Hexanone	ND		2400	990	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
4-Methyl-2-pentanone (MIBK)	ND		2400	150	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Acetone	ND		2400	2000	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Benzene	ND		480	92	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Bromodichloromethane	ND		480	96	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Bromoform	ND		480	240	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Bromomethane	ND		480	110	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Carbon disulfide	ND		480	220	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Carbon tetrachloride	ND		480	120	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Chlorobenzene	ND		480	64	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Chlorobromomethane	ND		480	170	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Chloroethane	ND		480	100	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Chloroform	ND		480	330	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Chloromethane	ND		480	110	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
cis-1,2-Dichloroethene	**2100**		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
cis-1,3-Dichloropropene	ND		480	120	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Cyclohexane	ND		480	110	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Dibromochloromethane	ND		480	230	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Dichlorodifluoromethane	ND		480	210	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Ethylbenzene	ND		480	140	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Isopropylbenzene	**77**	**J**	480	72	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	J
Methyl acetate	ND		2400	230	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Methyl tert-butyl ether	ND		480	180	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Methylcyclohexane	ND		480	230	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Methylene Chloride	ND		480	95	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
n-Butylbenzene	ND		480	140	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
N-Propylbenzene	**140**	**J**	480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	J
sec-Butylbenzene	ND		480	180	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Styrene	ND		480	120	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
tert-Butylbenzene	ND		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Tetrachloroethene	**120**	**J**	480	65	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	J
Toluene	ND		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
trans-1,2-Dichloroethene	ND		480	110	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
trans-1,3-Dichloropropene	ND		480	47	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Trichloroethene	**46000**		480	130	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Trichlorofluoromethane	ND		480	230	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Vinyl chloride	ND		480	160	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	
Xylenes, Total	**480**	**J**	960	270	ug/Kg	☼	06/08/21 13:48	06/09/21 14:54	4	J

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*	*06/08/21 13:48*	*06/09/21 14:54*	*4*
4-Bromofluorobenzene (Surr)	*102*		*49 - 148*	*06/08/21 13:48*	*06/09/21 14:54*	*4*

Client Sample ID: 120N 20E 14.5-14.9
Lab Sample ID: 480-185645-10

Date Collected: 06/01/21 14:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		50 - 149	06/08/21 13:48	06/09/21 14:54	4

Client Sample ID: 100N 20E 14.0-14.4
Lab Sample ID: 480-185645-11

Date Collected: 06/01/21 14:54
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2400	670	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,1,2,2-Tetrachloroethane	ND		2400	390	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2400	1200	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,1,2-Trichloroethane	ND		2400	500	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,1-Dichloroethane	ND		2400	740	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,1-Dichloroethene	ND		2400	830	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2,3-Trichlorobenzene	ND		2400	1100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2,4-Trichlorobenzene	ND		2400	910	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2,4-Trimethylbenzene	ND		2400	670	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2-Dibromo-3-Chloropropane	ND		2400	1200	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2-Dibromoethane	ND		2400	420	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2-Dichlorobenzene	ND		2400	610	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2-Dichloroethane	ND		2400	980	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,2-Dichloropropane	ND		2400	390	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,3,5-Trimethylbenzene	ND		2400	730	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,3-Dichlorobenzene	ND		2400	640	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,4-Dichlorobenzene	ND		2400	340	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
1,4-Dioxane	ND		46000	12000	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
2-Butanone (MEK)	ND		12000	7100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
2-Hexanone	ND		12000	4900	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
4-Methyl-2-pentanone (MIBK)	ND		12000	770	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Acetone	ND		12000	9900	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Benzene	ND		2400	460	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Bromodichloromethane	ND		2400	480	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Bromoform	ND		2400	1200	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Bromomethane	ND		2400	530	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Carbon disulfide	ND		2400	1100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Carbon tetrachloride	ND		2400	610	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Chlorobenzene	ND		2400	320	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Chlorobromomethane	ND		2400	870	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Chloroethane	ND		2400	500	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Chloroform	ND		2400	1600	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Chloromethane	ND		2400	570	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
cis-1,2-Dichloroethene	**2500**		2400	660	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
cis-1,3-Dichloropropene	ND		2400	570	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Cyclohexane	ND		2400	530	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Dibromochloromethane	ND		2400	1200	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Dichlorodifluoromethane	ND		2400	1000	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Ethylbenzene	ND		2400	700	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Isopropylbenzene	ND		2400	360	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20
Methyl acetate	ND		12000	1100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20

VQ

Client Sample ID: 100N 20E 14.0-14.4
Lab Sample ID: 480-185645-11

Date Collected: 06/01/21 14:54
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Methyl tert-butyl ether	ND		2400	910	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	VQ
Methylcyclohexane	ND		2400	1100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Methylene Chloride	ND		2400	480	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
n-Butylbenzene	ND		2400	700	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
N-Propylbenzene	ND		2400	630	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
sec-Butylbenzene	ND		2400	880	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Styrene	ND		2400	580	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
tert-Butylbenzene	ND		2400	670	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Tetrachloroethene	**2600**		2400	320	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Toluene	ND		2400	640	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
trans-1,2-Dichloroethene	ND		2400	570	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
trans-1,3-Dichloropropene	ND		2400	240	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Trichloroethene	**160000**		2400	670	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Trichlorofluoromethane	ND		2400	1100	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Vinyl chloride	ND		2400	800	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	
Xylenes, Total	ND		4800	1300	ug/Kg	☼	06/08/21 13:48	06/09/21 15:17	20	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*53 - 146*	*06/08/21 13:48*	*06/09/21 15:17*	*20*
4-Bromofluorobenzene (Surr)	*104*		*49 - 148*	*06/08/21 13:48*	*06/09/21 15:17*	*20*
Toluene-d8 (Surr)	*97*		*50 - 149*	*06/08/21 13:48*	*06/09/21 15:17*	*20*

Client Sample ID: 80N 20E 13.5-14.0
Lab Sample ID: 480-185645-12

Date Collected: 06/02/21 08:35
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.5	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	5.5	0.90	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.5	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,1,2-Trichloroethane	ND	vs	5.5	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,1-Dichloroethane	**0.92**	**J vs**	5.5	0.67	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	J
1,1-Dichloroethene	ND	vs	5.5	0.68	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2,3-Trichlorobenzene	ND	vs	5.5	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2,4-Trichlorobenzene	ND	vs	5.5	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.5	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.5	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2-Dibromoethane	ND	vs	5.5	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2-Dichlorobenzene	ND	vs	5.5	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2-Dichloroethane	ND	vs	5.5	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,2-Dichloropropane	ND	vs	5.5	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,3,5-Trimethylbenzene	ND	vs	5.5	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,3-Dichlorobenzene	ND	vs	5.5	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,4-Dichlorobenzene	ND	vs	5.5	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
2-Butanone (MEK)	**51**	**vs**	28	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Acetone	**170**	**vs**	28	4.7	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	

Client Sample ID: 80N 20E 13.5-14.0
Lab Sample ID: 480-185645-12
Date Collected: 06/02/21 08:35
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Benzene	ND	vs	5.5	0.27	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Bromodichloromethane	ND	vs	5.5	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Bromoform	ND	vs	5.5	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Bromomethane	ND	vs	5.5	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Carbon disulfide	ND	vs	5.5	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Carbon tetrachloride	ND	vs	5.5	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Chlorobenzene	ND	vs	5.5	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Chlorobromomethane	ND	vs	5.5	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Chloroethane	ND	*+ vs	5.5	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Chloroform	ND	vs	5.5	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Chloromethane	ND	vs	5.5	0.33	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
cis-1,2-Dichloroethene	**100**	**vs**	5.5	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
cis-1,3-Dichloropropene	ND	vs	5.5	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Cyclohexane	ND	vs	5.5	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Dibromochloromethane	ND	vs	5.5	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Dichlorodifluoromethane	ND	vs	5.5	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Ethylbenzene	ND	vs	5.5	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Isopropylbenzene	ND	vs	5.5	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Methyl acetate	ND	vs	28	3.3	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Methyl tert-butyl ether	ND	vs	5.5	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Methylcyclohexane	ND	vs	5.5	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Methylene Chloride	ND	vs	5.5	2.5	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
n-Butylbenzene	ND	vs	5.5	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
N-Propylbenzene	ND	vs	5.5	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
sec-Butylbenzene	ND	vs	5.5	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Styrene	ND	vs	5.5	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
tert-Butylbenzene	ND	vs	5.5	0.57	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Tetrachloroethene	ND	vs	5.5	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Toluene	**0.54**	**J vs**	5.5	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	J
trans-1,2-Dichloroethene	**2.9**	**J vs**	5.5	0.57	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	J
trans-1,3-Dichloropropene	ND	vs	5.5	2.4	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Trichloroethene	**3.5**	**J vs**	5.5	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	J
Trichlorofluoromethane	ND	vs	5.5	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	
Vinyl chloride	**650**	**E vs**	5.5	0.67	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	R
Xylenes, Total	ND	vs	11	0.93	ug/Kg	☼	06/07/21 22:23	06/08/21 11:56	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/07/21 22:23*	*06/08/21 11:56*	*1*
4-Bromofluorobenzene (Surr)	*90*		*72 - 126*	*06/07/21 22:23*	*06/08/21 11:56*	*1*
Toluene-d8 (Surr)	*101*		*71 - 125*	*06/07/21 22:23*	*06/08/21 11:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	R
1,1,2,2-Tetrachloroethane	ND		120	20	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	61	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	
1,1,2-Trichloroethane	ND		120	26	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	
1,1-Dichloroethane	ND		120	38	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	
1,2,3-Trichlorobenzene	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	

Client Sample ID: 80N 20E 13.5-14.0
Lab Sample ID: 480-185645-12

Date Collected: 06/02/21 08:35
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		120	46	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2,4-Trimethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2-Dibromo-3-Chloropropane	ND		120	61	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2-Dichloroethane	ND		120	50	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,2-Dichloropropane	ND		120	20	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,3,5-Trimethylbenzene	ND		120	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
1,4-Dioxane	ND		2300	620	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
2-Butanone (MEK)	ND		610	360	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
2-Hexanone	ND		610	250	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
4-Methyl-2-pentanone (MIBK)	ND		610	39	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Acetone	ND		610	500	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Benzene	ND		120	23	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Bromoform	ND		120	61	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Bromomethane	ND		120	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Carbon disulfide	ND		120	55	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Chlorobromomethane	ND		120	44	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Chloroform	ND		120	83	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
cis-1,2-Dichloroethene	**460**		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Dibromochloromethane	ND		120	59	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Dichlorodifluoromethane	ND		120	53	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Methyl acetate	ND		610	58	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Methyl tert-butyl ether	ND		120	46	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Methylcyclohexane	ND		120	57	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
N-Propylbenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
sec-Butylbenzene	ND		120	45	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Styrene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
tert-Butylbenzene	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Toluene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
trans-1,2-Dichloroethene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Trichloroethene	ND		120	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Trichlorofluoromethane	ND		120	57	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1
Vinyl chloride	**1000**		120	41	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1

VQ
R

Client Sample ID: 80N 20E 13.5-14.0
Lab Sample ID: 480-185645-12
Date Collected: 06/02/21 08:35
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Xylenes, Total	ND		240	67	ug/Kg	☼	06/08/21 15:22	06/09/21 18:23	1	R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*53 - 146*	*06/08/21 15:22*	*06/09/21 18:23*	*1*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*	*06/08/21 15:22*	*06/09/21 18:23*	*1*
Toluene-d8 (Surr)	*99*		*50 - 149*	*06/08/21 15:22*	*06/09/21 18:23*	*1*

Client Sample ID: 40N 20E 2.5-3.0
Lab Sample ID: 480-185645-13
Date Collected: 06/02/21 08:57
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.3	0.46	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.3	1.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.3	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,1,2-Trichloroethane	ND	vs	6.3	0.82	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,1-Dichloroethane	ND	vs	6.3	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,1-Dichloroethene	ND	vs	6.3	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2,3-Trichlorobenzene	ND	vs	6.3	0.67	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2,4-Trichlorobenzene	ND	vs	6.3	0.38	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2,4-Trimethylbenzene	**1.3**	**J vs**	6.3	1.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	J
1,2-Dibromo-3-Chloropropane	ND	vs	6.3	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2-Dibromoethane	ND	vs	6.3	0.81	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2-Dichlorobenzene	ND	vs	6.3	0.49	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2-Dichloroethane	ND	vs	6.3	0.32	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,2-Dichloropropane	ND	vs	6.3	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,3,5-Trimethylbenzene	ND	vs	6.3	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,3-Dichlorobenzene	ND	vs	6.3	0.33	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,4-Dichlorobenzene	ND	vs	6.3	0.89	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
1,4-Dioxane	ND	vs	130	28	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
2-Butanone (MEK)	ND	vs	32	2.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
2-Hexanone	ND	vs	32	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	32	2.1	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Acetone	ND	vs	32	5.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Benzene	ND	vs	6.3	0.31	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Bromodichloromethane	ND	vs	6.3	0.85	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Bromoform	ND	vs	6.3	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Bromomethane	ND	vs	6.3	0.57	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Carbon disulfide	ND	vs	6.3	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Carbon tetrachloride	ND	vs	6.3	0.61	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Chlorobenzene	ND	vs	6.3	0.84	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Chlorobromomethane	ND	vs	6.3	0.46	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Chloroethane	ND	*+ vs	6.3	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	UJ
Chloroform	ND	vs	6.3	0.39	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Chloromethane	ND	vs	6.3	0.38	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
cis-1,2-Dichloroethene	**4.2**	**J vs**	6.3	0.81	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	J
cis-1,3-Dichloropropene	ND	vs	6.3	0.91	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Cyclohexane	ND	vs	6.3	0.89	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Dibromochloromethane	ND	vs	6.3	0.81	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	

Client Sample ID: 40N 20E 2.5-3.0
Lab Sample ID: 480-185645-13
Date Collected: 06/02/21 08:57
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Dichlorodifluoromethane	ND	vs	6.3	0.52	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Ethylbenzene	ND	vs	6.3	0.44	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Isopropylbenzene	ND	vs	6.3	0.95	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Methyl acetate	ND	vs	32	3.8	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Methyl tert-butyl ether	ND	vs	6.3	0.62	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Methylcyclohexane	ND	vs	6.3	0.96	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Methylene Chloride	**3.4**	**J vs**	6.3	2.9	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	J
n-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
N-Propylbenzene	ND	vs	6.3	0.51	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
sec-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Styrene	ND	vs	6.3	0.32	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
tert-Butylbenzene	ND	vs	6.3	0.66	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Tetrachloroethene	ND	vs	6.3	0.85	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Toluene	**4.0**	**J vs**	6.3	0.48	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	J
trans-1,2-Dichloroethene	ND	vs	6.3	0.65	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
trans-1,3-Dichloropropene	ND	vs	6.3	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Trichloroethene	**14**	**vs**	6.3	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Trichlorofluoromethane	ND	vs	6.3	0.60	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	
Vinyl chloride	ND	vs	6.3	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	UJ
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	06/08/21 18:48	06/08/21 23:50	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*06/08/21 18:48*	*06/08/21 23:50*	*1*
4-Bromofluorobenzene (Surr)	*85*		*72 - 126*	*06/08/21 18:48*	*06/08/21 23:50*	*1*
Toluene-d8 (Surr)	*105*		*71 - 125*	*06/08/21 18:48*	*06/08/21 23:50*	*1*

Client Sample ID: DUP-1-20210602
Lab Sample ID: 480-185645-14
Date Collected: 06/02/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		130	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,1,2,2-Tetrachloroethane	ND		130	22	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		130	67	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,1,2-Trichloroethane	ND		130	28	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,1-Dichloroethane	ND		130	41	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,1-Dichloroethene	ND		130	46	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2,3-Trichlorobenzene	ND		130	61	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2,4-Trichlorobenzene	ND		130	51	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2,4-Trimethylbenzene	ND		130	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2-Dibromo-3-Chloropropane	ND		130	67	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2-Dibromoethane	ND		130	23	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2-Dichlorobenzene	ND		130	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2-Dichloroethane	ND		130	55	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,2-Dichloropropane	ND		130	22	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,3,5-Trimethylbenzene	ND		130	40	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,3-Dichlorobenzene	ND		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,4-Dichlorobenzene	ND		130	19	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
1,4-Dioxane	ND		2500	680	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	

Client Sample ID: DUP-1-20210602
Lab Sample ID: 480-185645-14
Date Collected: 06/02/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
2-Butanone (MEK)	ND		670	400	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
2-Hexanone	ND		670	270	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
4-Methyl-2-pentanone (MIBK)	ND		670	43	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Acetone	ND		670	550	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Benzene	ND		130	25	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Bromodichloromethane	ND		130	27	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Bromoform	ND		130	67	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Bromomethane	ND		130	29	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Carbon disulfide	ND		130	61	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Carbon tetrachloride	ND		130	34	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Chlorobenzene	ND		130	18	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Chlorobromomethane	ND		130	48	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Chloroethane	ND		130	28	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Chloroform	ND		130	92	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Chloromethane	ND		130	32	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
cis-1,2-Dichloroethene	ND		130	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
cis-1,3-Dichloropropene	ND		130	32	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Cyclohexane	ND		130	30	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Dibromochloromethane	ND		130	65	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Dichlorodifluoromethane	ND		130	58	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Ethylbenzene	ND		130	39	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Isopropylbenzene	ND		130	20	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Methyl acetate	ND		670	64	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Methyl tert-butyl ether	ND		130	50	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Methylcyclohexane	ND		130	62	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Methylene Chloride	ND		130	26	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
n-Butylbenzene	ND		130	39	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
N-Propylbenzene	ND		130	35	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
sec-Butylbenzene	ND		130	49	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Styrene	ND		130	32	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
tert-Butylbenzene	ND		130	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Tetrachloroethene	ND		130	18	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Toluene	**640**		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
trans-1,2-Dichloroethene	ND		130	31	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
trans-1,3-Dichloropropene	ND		130	13	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Trichloroethene	**53**	**J**	130	37	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	J
Trichlorofluoromethane	ND		130	63	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Vinyl chloride	ND		130	45	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	
Xylenes, Total	ND		270	74	ug/Kg	☼	06/08/21 13:48	06/09/21 13:21	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*	*06/08/21 13:48*	*06/09/21 13:21*	*1*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*	*06/08/21 13:48*	*06/09/21 13:21*	*1*
Toluene-d8 (Surr)	*100*		*50 - 149*	*06/08/21 13:48*	*06/09/21 13:21*	*1*

Client Sample ID: 40N 20E 4.0-5.0
Lab Sample ID: 480-185645-15

Date Collected: 06/02/21 09:06
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.9	0.43	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,1,2,2-Tetrachloroethane	ND	vs *3 F1	5.9	0.97	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.4	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,1,2-Trichloroethane	ND	vs	5.9	0.77	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,1-Dichloroethane	ND	vs	5.9	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,1-Dichloroethene	ND	vs	5.9	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,2,3-Trichlorobenzene	ND	vs *3 F1	5.9	0.63	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,2,4-Trichlorobenzene	ND	vs *3 F1	5.9	0.36	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,2,4-Trimethylbenzene	**1.9**	**J vs *3 F1**	5.9	1.1	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	J
1,2-Dibromo-3-Chloropropane	ND	vs *3	5.9	3.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,2-Dibromoethane	ND	vs	5.9	0.76	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,2-Dichlorobenzene	ND	vs *3 F1	5.9	0.47	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,2-Dichloroethane	ND	vs	5.9	0.30	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,2-Dichloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
1,3,5-Trimethylbenzene	**0.67**	**J vs *3 F1**	5.9	0.38	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	J
1,3-Dichlorobenzene	ND	vs *3 F1	5.9	0.31	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,4-Dichlorobenzene	ND	vs *3 F1	5.9	0.83	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
1,4-Dioxane	ND	vs F1	120	26	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
2-Butanone (MEK)	ND	vs F1	30	2.2	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Acetone	**7.3**	**J vs F1**	30	5.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Bromodichloromethane	ND	vs	5.9	0.80	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Bromoform	ND	vs F1	5.9	3.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Bromomethane	ND	vs	5.9	0.54	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Carbon disulfide	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Carbon tetrachloride	ND	vs	5.9	0.58	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Chlorobenzene	ND	vs F1	5.9	0.79	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Chlorobromomethane	ND	vs	5.9	0.43	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Chloroethane	ND	vs	5.9	1.3	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Chloroform	ND	vs	5.9	0.37	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Chloromethane	ND	vs	5.9	0.36	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
cis-1,2-Dichloroethene	**8.6**	**vs F1 F2**	5.9	0.76	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	J
cis-1,3-Dichloropropene	ND	vs	5.9	0.86	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Cyclohexane	ND	vs F1	5.9	0.83	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Dibromochloromethane	ND	vs	5.9	0.76	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Dichlorodifluoromethane	ND	vs	5.9	0.49	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Ethylbenzene	ND	vs F1	5.9	0.41	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Isopropylbenzene	ND	vs *3	5.9	0.90	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Methyl tert-butyl ether	ND	vs	5.9	0.58	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Methylcyclohexane	ND	vs F1	5.9	0.90	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
n-Butylbenzene	ND	vs *3 F1	5.9	0.52	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
N-Propylbenzene	ND	vs *3 F1	5.9	0.48	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
sec-Butylbenzene	ND	vs *3 F1	5.9	0.52	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
Styrene	ND	vs F1	5.9	0.30	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
tert-Butylbenzene	ND	vs *3 F1	5.9	0.62	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ

Client Sample ID: 40N 20E 4.0-5.0
Lab Sample ID: 480-185645-15

Date Collected: 06/02/21 09:06
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Tetrachloroethene	ND	vs F1	5.9	0.80	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Toluene	**16**	**vs F1**	5.9	0.45	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
trans-1,2-Dichloroethene	ND	vs	5.9	0.61	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Trichloroethene	**5.6**	**J vs**	5.9	1.3	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Trichlorofluoromethane	ND	vs	5.9	0.56	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	
Vinyl chloride	ND	vs	5.9	0.73	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	UJ
Xylenes, Total	ND	vs F1	12	1.0	ug/Kg	☼	06/07/21 19:46	06/08/21 05:48	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/07/21 19:46*	*06/08/21 05:48*	*1*
4-Bromofluorobenzene (Surr)	*83*		*72 - 126*	*06/07/21 19:46*	*06/08/21 05:48*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*06/07/21 19:46*	*06/08/21 05:48*	*1*

Client Sample ID: 40N 20E 13.5-14.1
Lab Sample ID: 480-185645-16

Date Collected: 06/02/21 09:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.9	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.9	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,1,2-Trichloroethane	ND	vs	5.9	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,1-Dichloroethane	ND	vs	5.9	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,1-Dichloroethene	ND	vs	5.9	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2,3-Trichlorobenzene	ND	vs	5.9	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2,4-Trichlorobenzene	ND	vs	5.9	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.9	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.9	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2-Dibromoethane	ND	vs	5.9	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2-Dichlorobenzene	ND	vs	5.9	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2-Dichloroethane	ND	vs	5.9	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,2-Dichloropropane	ND	vs	5.9	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,3,5-Trimethylbenzene	ND	vs	5.9	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,3-Dichlorobenzene	ND	vs	5.9	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,4-Dichlorobenzene	ND	vs	5.9	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
2-Butanone (MEK)	ND	vs	29	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Acetone	**6.9**	**J vs**	29	4.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	J
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Bromodichloromethane	ND	vs	5.9	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Bromoform	ND	vs	5.9	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Bromomethane	ND	vs	5.9	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Carbon disulfide	ND	vs	5.9	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Carbon tetrachloride	ND	vs	5.9	0.57	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Chlorobenzene	ND	vs	5.9	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Chlorobromomethane	ND	vs	5.9	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	

Client Sample ID: 40N 20E 13.5-14.1
Lab Sample ID: 480-185645-16
Date Collected: 06/02/21 09:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND	*+ vs	5.9	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Chloroform	ND	vs	5.9	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Chloromethane	ND	vs	5.9	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
cis-1,2-Dichloroethene	**20**	**vs**	5.9	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
cis-1,3-Dichloropropene	ND	vs	5.9	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Cyclohexane	ND	vs	5.9	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Dibromochloromethane	ND	vs	5.9	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Dichlorodifluoromethane	ND	vs	5.9	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Ethylbenzene	ND	vs	5.9	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Isopropylbenzene	ND	vs	5.9	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Methyl tert-butyl ether	ND	vs	5.9	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Methylcyclohexane	ND	vs	5.9	0.89	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
n-Butylbenzene	ND	vs	5.9	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
N-Propylbenzene	ND	vs	5.9	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
sec-Butylbenzene	ND	vs	5.9	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Styrene	ND	vs	5.9	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
tert-Butylbenzene	ND	vs	5.9	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Tetrachloroethene	ND	vs	5.9	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Toluene	**1.0**	**J vs**	5.9	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	J
trans-1,2-Dichloroethene	ND	vs	5.9	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Trichloroethene	**1.9**	**J vs**	5.9	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	J
Trichlorofluoromethane	ND	vs	5.9	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Vinyl chloride	ND	vs	5.9	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	
Xylenes, Total	ND	vs	12	0.99	ug/Kg	☼	06/07/21 22:23	06/08/21 12:20	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/07/21 22:23*	*06/08/21 12:20*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*06/07/21 22:23*	*06/08/21 12:20*	*1*
Toluene-d8 (Surr)	*98*		*71 - 125*	*06/07/21 22:23*	*06/08/21 12:20*	*1*

Client Sample ID: 20N 20E 11.0-11.5
Lab Sample ID: 480-185645-17
Date Collected: 06/02/21 09:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.1	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.1	0.99	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.1	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,1,2-Trichloroethane	ND	vs	6.1	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,1-Dichloroethane	ND	vs	6.1	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,1-Dichloroethene	**3.9**	**J vs**	6.1	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,2,3-Trichlorobenzene	ND	vs	6.1	0.65	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,2,4-Trichlorobenzene	ND	vs	6.1	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	UJ
1,2,4-Trimethylbenzene	ND	vs	6.1	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.1	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,2-Dibromoethane	ND	vs	6.1	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	

Client Sample ID: 20N 20E 11.0-11.5
Lab Sample ID: 480-185645-17
Date Collected: 06/02/21 09:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,2-Dichlorobenzene	ND	vs	6.1	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	VQ
1,2-Dichloroethane	ND	vs	6.1	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,2-Dichloropropane	ND	vs	6.1	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,3,5-Trimethylbenzene	ND	vs	6.1	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,3-Dichlorobenzene	ND	vs	6.1	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,4-Dichlorobenzene	ND	vs	6.1	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
1,4-Dioxane	ND	vs	120	27	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
2-Butanone (MEK)	ND	vs	31	2.2	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
2-Hexanone	ND	vs	31	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	31	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Acetone	**27**	**J vs**	31	5.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	J
Benzene	ND	vs	6.1	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Bromodichloromethane	ND	vs	6.1	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Bromoform	ND	vs	6.1	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Bromomethane	ND	vs	6.1	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Carbon disulfide	**15**	**vs**	6.1	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Carbon tetrachloride	ND	vs	6.1	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Chlorobenzene	ND	vs	6.1	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Chlorobromomethane	ND	vs	6.1	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Chloroethane	ND	*+ vs	6.1	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Chloroform	ND	vs	6.1	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Chloromethane	ND	vs	6.1	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
cis-1,2-Dichloroethene	**2600**	**E vs**	6.1	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	R
cis-1,3-Dichloropropene	ND	vs	6.1	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Cyclohexane	ND	vs	6.1	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Dibromochloromethane	ND	vs	6.1	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Dichlorodifluoromethane	ND	vs	6.1	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Ethylbenzene	ND	vs	6.1	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Isopropylbenzene	ND	vs	6.1	0.92	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Methyl acetate	ND	vs	31	3.7	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Methyl tert-butyl ether	ND	vs	6.1	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Methylcyclohexane	ND	vs	6.1	0.93	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Methylene Chloride	ND	vs	6.1	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
n-Butylbenzene	ND	vs	6.1	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
N-Propylbenzene	ND	vs	6.1	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
sec-Butylbenzene	ND	vs	6.1	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Styrene	ND	vs	6.1	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
tert-Butylbenzene	ND	vs	6.1	0.64	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Tetrachloroethene	ND	vs	6.1	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Toluene	ND	vs	6.1	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
trans-1,2-Dichloroethene	**9.2**	**vs**	6.1	0.63	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
trans-1,3-Dichloropropene	ND	vs	6.1	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Trichloroethene	**620**	**E vs**	6.1	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	R
Trichlorofluoromethane	ND	vs	6.1	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Vinyl chloride	ND	vs	6.1	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 12:45	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/07/21 22:23*	*06/08/21 12:45*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/07/21 22:23*	*06/08/21 12:45*	*1*

Client Sample ID: 20N 20E 11.0-11.5
Lab Sample ID: 480-185645-17
Date Collected: 06/02/21 09:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/07/21 22:23*	*06/08/21 12:45*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		130	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R
1,1,2,2-Tetrachloroethane	ND		130	22	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		130	67	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,1,2-Trichloroethane	ND		130	28	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,1-Dichloroethane	ND		130	41	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,1-Dichloroethene	ND		130	46	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2,3-Trichlorobenzene	ND		130	62	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2,4-Trichlorobenzene	ND		130	51	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2,4-Trimethylbenzene	ND		130	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2-Dibromo-3-Chloropropane	ND		130	67	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2-Dibromoethane	ND		130	23	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2-Dichlorobenzene	ND		130	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2-Dichloroethane	ND		130	55	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,2-Dichloropropane	ND		130	22	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,3,5-Trimethylbenzene	ND		130	40	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,3-Dichlorobenzene	ND		130	36	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,4-Dichlorobenzene	ND		130	19	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
1,4-Dioxane	ND		2500	680	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
2-Butanone (MEK)	ND		670	400	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
2-Hexanone	ND		670	270	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
4-Methyl-2-pentanone (MIBK)	ND		670	43	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Acetone	ND		670	550	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Benzene	ND		130	25	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Bromodichloromethane	ND		130	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Bromoform	ND		130	67	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Bromomethane	ND		130	29	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Carbon disulfide	ND		130	61	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Carbon tetrachloride	ND		130	34	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Chlorobenzene	ND		130	18	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Chlorobromomethane	ND		130	48	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Chloroethane	ND		130	28	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Chloroform	ND		130	92	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Chloromethane	ND		130	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	v
cis-1,2-Dichloroethene	**6300**		130	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
cis-1,3-Dichloropropene	ND		130	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R
Cyclohexane	ND		130	30	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Dibromochloromethane	ND		130	65	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Dichlorodifluoromethane	ND		130	58	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Ethylbenzene	ND		130	39	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Isopropylbenzene	ND		130	20	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Methyl acetate	ND		670	64	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Methyl tert-butyl ether	ND		130	51	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Methylcyclohexane	ND		130	63	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Methylene Chloride	ND		130	27	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
n-Butylbenzene	ND		130	39	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	v

Client Sample ID: 20N 20E 11.0-11.5
Lab Sample ID: 480-185645-17
Date Collected: 06/02/21 09:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
N-Propylbenzene	ND		130	35	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R
sec-Butylbenzene	ND		130	49	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Styrene	ND		130	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
tert-Butylbenzene	ND		130	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Tetrachloroethene	ND		130	18	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Toluene	ND		130	36	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
trans-1,2-Dichloroethene	ND		130	32	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
trans-1,3-Dichloropropene	ND		130	13	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	v
Trichloroethene	**4200**		130	37	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	
Trichlorofluoromethane	ND		130	63	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R
Vinyl chloride	ND		130	45	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R
Xylenes, Total	ND		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 18:46	1	R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*53 - 146*	*06/08/21 15:22*	*06/09/21 18:46*	*1*
4-Bromofluorobenzene (Surr)	*96*		*49 - 148*	*06/08/21 15:22*	*06/09/21 18:46*	*1*
Toluene-d8 (Surr)	*96*		*50 - 149*	*06/08/21 15:22*	*06/09/21 18:46*	*1*

Client Sample ID: DUP-2-20210602
Lab Sample ID: 480-185645-18
Date Collected: 06/02/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.2	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.2	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.2	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,1,2-Trichloroethane	ND	vs	6.2	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,1-Dichloroethane	ND	vs	6.2	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,1-Dichloroethene	**4.1**	**J vs**	6.2	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	J
1,2,3-Trichlorobenzene	ND	vs	6.2	0.66	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2,4-Trichlorobenzene	ND	vs	6.2	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	UJ
1,2,4-Trimethylbenzene	ND	vs	6.2	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.2	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2-Dibromoethane	ND	vs	6.2	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2-Dichlorobenzene	ND	vs	6.2	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2-Dichloroethane	ND	vs	6.2	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,2-Dichloropropane	ND	vs	6.2	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,3,5-Trimethylbenzene	ND	vs	6.2	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,3-Dichlorobenzene	ND	vs	6.2	0.32	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,4-Dichlorobenzene	ND	vs	6.2	0.87	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
1,4-Dioxane	ND	vs	120	27	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
2-Butanone (MEK)	ND	vs	31	2.3	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
2-Hexanone	ND	vs	31	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	31	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Acetone	**30**	**J vs**	31	5.2	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	J
Benzene	ND	vs	6.2	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Bromodichloromethane	ND	vs	6.2	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Bromoform	ND	vs	6.2	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Bromomethane	ND	vs	6.2	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	

Client Sample ID: DUP-2-20210602
Date Collected: 06/02/21 00:00
Date Received: 06/04/21 15:20

Lab Sample ID: 480-185645-18
Matrix: Solid
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Carbon disulfide	**17**	**vs**	6.2	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Carbon tetrachloride	ND	vs	6.2	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Chlorobenzene	ND	vs	6.2	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Chlorobromomethane	ND	vs	6.2	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Chloroethane	ND	*+ vs	6.2	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Chloroform	ND	vs	6.2	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Chloromethane	ND	vs	6.2	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
cis-1,2-Dichloroethene	**3500**	**E vs**	6.2	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	R
cis-1,3-Dichloropropene	ND	vs	6.2	0.89	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Cyclohexane	ND	vs	6.2	0.87	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Dibromochloromethane	ND	vs	6.2	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Dichlorodifluoromethane	ND	vs	6.2	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Ethylbenzene	ND	vs	6.2	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Isopropylbenzene	ND	vs	6.2	0.93	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Methyl acetate	ND	vs	31	3.7	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Methyl tert-butyl ether	ND	vs	6.2	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Methylcyclohexane	ND	vs	6.2	0.94	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Methylene Chloride	ND	vs	6.2	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
n-Butylbenzene	ND	vs	6.2	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
N-Propylbenzene	ND	vs	6.2	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
sec-Butylbenzene	ND	vs	6.2	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Styrene	ND	vs	6.2	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
tert-Butylbenzene	ND	vs	6.2	0.64	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Tetrachloroethene	ND	vs	6.2	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Toluene	**0.61**	**J vs**	6.2	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	J
trans-1,2-Dichloroethene	**11**	**vs**	6.2	0.64	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
trans-1,3-Dichloropropene	ND	vs	6.2	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Trichloroethene	**1800**	**E vs**	6.2	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	R
Trichlorofluoromethane	ND	vs	6.2	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Vinyl chloride	ND	vs	6.2	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 13:09	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/07/21 22:23*	*06/08/21 13:09*	*1*
4-Bromofluorobenzene (Surr)	*91*		*72 - 126*	*06/07/21 22:23*	*06/08/21 13:09*	*1*
Toluene-d8 (Surr)	*103*		*71 - 125*	*06/07/21 22:23*	*06/08/21 13:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R
1,1,2,2-Tetrachloroethane	ND		270	43	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		270	130	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,1,2-Trichloroethane	ND		270	56	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,1-Dichloroethane	ND		270	82	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,1-Dichloroethene	ND		270	92	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,2,3-Trichlorobenzene	ND		270	120	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,2,4-Trichlorobenzene	ND		270	100	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,2,4-Trimethylbenzene	ND		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,2-Dibromo-3-Chloropropane	ND		270	130	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,2-Dibromoethane	ND		270	47	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	

Client Sample ID: DUP-2-20210602
Date Collected: 06/02/21 00:00
Date Received: 06/04/21 15:20

Lab Sample ID: 480-185645-18
Matrix: Solid
Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,2-Dichlorobenzene	ND		270	68	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	VQ
1,2-Dichloroethane	ND		270	110	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R
1,2-Dichloropropane	ND		270	43	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,3,5-Trimethylbenzene	ND		270	80	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,3-Dichlorobenzene	ND		270	71	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,4-Dichlorobenzene	ND		270	37	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
1,4-Dioxane	ND		5100	1400	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
2-Butanone (MEK)	ND		1300	790	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
2-Hexanone	ND		1300	550	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
4-Methyl-2-pentanone (MIBK)	ND		1300	85	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Acetone	ND		1300	1100	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Benzene	ND		270	51	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Bromodichloromethane	ND		270	53	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Bromoform	ND		270	130	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Bromomethane	ND		270	59	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Carbon disulfide	ND		270	120	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Carbon tetrachloride	ND		270	68	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Chlorobenzene	ND		270	35	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Chlorobromomethane	ND		270	96	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Chloroethane	ND		270	55	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Chloroform	ND		270	180	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Chloromethane	ND		270	63	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	v
cis-1,2-Dichloroethene	**10000**		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
cis-1,3-Dichloropropene	ND		270	64	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R
Cyclohexane	ND		270	59	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Dibromochloromethane	ND		270	130	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Dichlorodifluoromethane	ND		270	120	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Ethylbenzene	ND		270	78	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Isopropylbenzene	ND		270	40	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Methyl acetate	ND		1300	130	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Methyl tert-butyl ether	ND		270	100	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Methylcyclohexane	ND		270	120	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Methylene Chloride	ND		270	53	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
n-Butylbenzene	ND		270	78	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
N-Propylbenzene	ND		270	70	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
sec-Butylbenzene	ND		270	98	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Styrene	ND		270	64	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
tert-Butylbenzene	ND		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Tetrachloroethene	ND		270	36	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Toluene	ND		270	71	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
trans-1,2-Dichloroethene	ND		270	63	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
trans-1,3-Dichloropropene	ND		270	26	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	v
Trichloroethene	**13000**		270	74	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	
Trichlorofluoromethane	ND		270	120	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R
Vinyl chloride	ND		270	89	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R
Xylenes, Total	ND		530	150	ug/Kg	☼	06/08/21 15:22	06/09/21 19:08	2	R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*53 - 146*	*06/08/21 15:22*	*06/09/21 19:08*	*2*
4-Bromofluorobenzene (Surr)	*96*		*49 - 148*	*06/08/21 15:22*	*06/09/21 19:08*	*2*

Client Sample ID: DUP-2-20210602
Lab Sample ID: 480-185645-18

Date Collected: 06/02/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 80.4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		50 - 149	06/08/21 15:22	06/09/21 19:08	2

Client Sample ID: 20N 40E 13.9-14.1
Lab Sample ID: 480-185645-19

Date Collected: 06/02/21 10:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,1,2,2-Tetrachloroethane	ND		120	19	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,1-Dichloroethene	ND		120	41	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2,3-Trichlorobenzene	ND		120	55	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2,4-Trichlorobenzene	ND		120	45	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2,4-Trimethylbenzene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2-Dibromo-3-Chloropropane	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2-Dichloroethane	ND		120	49	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,2-Dichloropropane	ND		120	19	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,3,5-Trimethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
1,4-Dioxane	ND		2300	610	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
2-Butanone (MEK)	ND		600	360	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
2-Hexanone	ND		600	250	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
4-Methyl-2-pentanone (MIBK)	ND		600	38	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Acetone	ND		600	490	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Benzene	ND		120	23	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Bromoform	ND		120	60	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Bromomethane	ND		120	26	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Carbon disulfide	ND		120	54	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Chlorobromomethane	ND		120	43	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Chloroform	ND		120	82	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Chloromethane	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
cis-1,2-Dichloroethene	**420**		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Dibromochloromethane	ND		120	58	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Dichlorodifluoromethane	ND		120	52	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Methyl acetate	ND		600	57	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	

Client Sample ID: 20N 40E 13.9-14.1
Lab Sample ID: 480-185645-19

Date Collected: 06/02/21 10:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Methylcyclohexane	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
N-Propylbenzene	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
sec-Butylbenzene	ND		120	44	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Styrene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
tert-Butylbenzene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Toluene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Trichloroethene	**1400**		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Trichlorofluoromethane	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Vinyl chloride	ND		120	40	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	
Xylenes, Total	ND		240	66	ug/Kg	☼	06/08/21 15:22	06/09/21 19:32	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*	*06/08/21 15:22*	*06/09/21 19:32*	*1*
4-Bromofluorobenzene (Surr)	*99*		*49 - 148*	*06/08/21 15:22*	*06/09/21 19:32*	*1*
Toluene-d8 (Surr)	*101*		*50 - 149*	*06/08/21 15:22*	*06/09/21 19:32*	*1*

Client Sample ID: 20N 60E 11.0-11.5
Lab Sample ID: 480-185645-20

Date Collected: 06/02/21 11:08
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 76.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.4	0.46	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.4	1.0	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.4	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,1,2-Trichloroethane	ND	vs	6.4	0.83	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,1-Dichloroethane	ND	vs	6.4	0.78	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,1-Dichloroethene	ND	vs	6.4	0.78	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2,3-Trichlorobenzene	ND	vs	6.4	0.68	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2,4-Trichlorobenzene	ND	vs	6.4	0.39	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2,4-Trimethylbenzene	ND	vs	6.4	1.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.4	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2-Dibromoethane	ND	vs	6.4	0.82	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2-Dichlorobenzene	ND	vs	6.4	0.50	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2-Dichloroethane	ND	vs	6.4	0.32	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,2-Dichloropropane	ND	vs	6.4	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,3,5-Trimethylbenzene	ND	vs	6.4	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,3-Dichlorobenzene	ND	vs	6.4	0.33	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,4-Dichlorobenzene	ND	vs	6.4	0.89	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
1,4-Dioxane	ND	vs	130	28	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
2-Butanone (MEK)	ND	vs	32	2.3	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
2-Hexanone	ND	vs	32	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	32	2.1	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Acetone	ND	vs	32	5.4	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	

Client Sample ID: 20N 60E 11.0-11.5
Lab Sample ID: 480-185645-20
Date Collected: 06/02/21 11:08
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 76.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Benzene	ND	vs	6.4	0.31	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Bromodichloromethane	ND	vs	6.4	0.85	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Bromoform	ND	vs	6.4	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Bromomethane	ND	vs	6.4	0.57	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Carbon disulfide	ND	vs	6.4	3.2	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Carbon tetrachloride	ND	vs	6.4	0.62	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Chlorobenzene	ND	vs	6.4	0.84	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Chlorobromomethane	ND	vs	6.4	0.46	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Chloroethane	ND	*+ vs	6.4	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	UJ
Chloroform	ND	vs	6.4	0.39	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Chloromethane	ND	vs	6.4	0.38	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
cis-1,2-Dichloroethene	**9.4**	**vs**	6.4	0.81	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
cis-1,3-Dichloropropene	ND	vs	6.4	0.92	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Cyclohexane	ND	vs	6.4	0.89	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Dibromochloromethane	ND	vs	6.4	0.81	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Dichlorodifluoromethane	ND	vs	6.4	0.53	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Ethylbenzene	ND	vs	6.4	0.44	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Isopropylbenzene	ND	vs	6.4	0.96	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Methyl acetate	ND	vs	32	3.8	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Methyl tert-butyl ether	ND	vs	6.4	0.62	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Methylcyclohexane	ND	vs	6.4	0.97	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Methylene Chloride	ND	vs	6.4	2.9	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
n-Butylbenzene	ND	vs	6.4	0.55	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
N-Propylbenzene	ND	vs	6.4	0.51	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
sec-Butylbenzene	ND	vs	6.4	0.55	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Styrene	ND	vs	6.4	0.32	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
tert-Butylbenzene	ND	vs	6.4	0.66	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Tetrachloroethene	ND	vs	6.4	0.85	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Toluene	ND	vs	6.4	0.48	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
trans-1,2-Dichloroethene	ND	vs	6.4	0.66	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
trans-1,3-Dichloropropene	ND	vs	6.4	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Trichloroethene	**1.9**	**J vs**	6.4	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	J
Trichlorofluoromethane	ND	vs	6.4	0.60	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	
Vinyl chloride	ND	vs	6.4	0.78	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	UJ
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	06/08/21 18:48	06/08/21 22:37	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*06/08/21 18:48*	*06/08/21 22:37*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*06/08/21 18:48*	*06/08/21 22:37*	*1*
Toluene-d8 (Surr)	*98*		*71 - 125*	*06/08/21 18:48*	*06/08/21 22:37*	*1*

Client Sample ID: 40N 60E 13.5-14.3
Lab Sample ID: 480-185645-21
Date Collected: 06/02/21 11:42
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.9	0.43	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.9	0.96	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	

Client Sample ID: 40N 60E 13.5-14.3
Lab Sample ID: 480-185645-21

Date Collected: 06/02/21 11:42
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 81.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,2-Trichloroethane	ND	vs	5.9	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	VQ
1,1-Dichloroethane	ND	vs	5.9	0.72	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,1-Dichloroethene	ND	vs	5.9	0.72	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2,3-Trichlorobenzene	ND	vs	5.9	0.63	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2,4-Trichlorobenzene	ND	vs	5.9	0.36	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2,4-Trimethylbenzene	ND	vs	5.9	1.1	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2-Dibromoethane	ND	vs	5.9	0.76	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2-Dichlorobenzene	ND	vs	5.9	0.46	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2-Dichloroethane	ND	vs	5.9	0.30	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,2-Dichloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,3,5-Trimethylbenzene	ND	vs	5.9	0.38	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,3-Dichlorobenzene	ND	vs	5.9	0.30	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,4-Dichlorobenzene	ND	vs	5.9	0.83	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	1.9	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Acetone	**11**	**J vs**	30	5.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	J
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Bromodichloromethane	ND	vs	5.9	0.79	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Bromoform	ND	vs	5.9	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Bromomethane	ND	vs	5.9	0.53	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Carbon disulfide	ND	vs	5.9	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Carbon tetrachloride	ND	vs	5.9	0.57	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Chlorobenzene	ND	vs	5.9	0.78	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Chlorobromomethane	ND	vs	5.9	0.43	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Chloroethane	ND	*+ vs	5.9	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	UJ
Chloroform	ND	vs	5.9	0.37	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Chloromethane	ND	vs	5.9	0.36	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
cis-1,2-Dichloroethene	**29**	**vs**	5.9	0.76	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
cis-1,3-Dichloropropene	ND	vs	5.9	0.85	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Cyclohexane	ND	vs	5.9	0.83	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Dibromochloromethane	ND	vs	5.9	0.76	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Dichlorodifluoromethane	ND	vs	5.9	0.49	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Ethylbenzene	ND	vs	5.9	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Isopropylbenzene	ND	vs	5.9	0.89	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Methyl tert-butyl ether	ND	vs	5.9	0.58	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Methylcyclohexane	**3.1**	**J vs**	5.9	0.90	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	J
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
n-Butylbenzene	ND	vs	5.9	0.51	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
N-Propylbenzene	ND	vs	5.9	0.47	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
sec-Butylbenzene	ND	vs	5.9	0.51	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Styrene	ND	vs	5.9	0.30	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
tert-Butylbenzene	ND	vs	5.9	0.61	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Tetrachloroethene	ND	vs	5.9	0.79	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Toluene	ND	vs	5.9	0.45	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
trans-1,2-Dichloroethene	ND	vs	5.9	0.61	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	

Client Sample ID: 40N 60E 13.5-14.3
Lab Sample ID: 480-185645-21
Date Collected: 06/02/21 11:42
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Trichloroethene	**2.0**	**J vs**	5.9	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	J
Trichlorofluoromethane	ND	vs	5.9	0.56	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	
Vinyl chloride	**4.0**	**J vs**	5.9	0.72	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	J
Xylenes, Total	ND	vs	12	0.99	ug/Kg	☼	06/08/21 18:48	06/08/21 23:01	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*	*06/08/21 18:48*	*06/08/21 23:01*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/08/21 18:48*	*06/08/21 23:01*	*1*
Toluene-d8 (Surr)	*98*		*71 - 125*	*06/08/21 18:48*	*06/08/21 23:01*	*1*

Client Sample ID: 60N 20E 10.5-11.0
Lab Sample ID: 480-185645-22
Date Collected: 06/02/21 13:47
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,1,2,2-Tetrachloroethane	ND		130	21	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		130	65	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,1,2-Trichloroethane	ND		130	27	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,1-Dichloroethane	ND		130	40	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,1-Dichloroethene	ND		130	45	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2,3-Trichlorobenzene	ND		130	59	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2,4-Trichlorobenzene	ND		130	49	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2,4-Trimethylbenzene	**48**	**J**	130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	J
1,2-Dibromo-3-Chloropropane	ND		130	65	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2-Dibromoethane	ND		130	23	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2-Dichlorobenzene	ND		130	33	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2-Dichloroethane	ND		130	53	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,2-Dichloropropane	ND		130	21	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,3,5-Trimethylbenzene	ND		130	39	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,3-Dichlorobenzene	ND		130	35	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,4-Dichlorobenzene	ND		130	18	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
1,4-Dioxane	ND		2500	660	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
2-Butanone (MEK)	ND		650	380	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
2-Hexanone	ND		650	270	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
4-Methyl-2-pentanone (MIBK)	ND		650	41	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Acetone	ND		650	530	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Benzene	ND		130	25	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Bromodichloromethane	ND		130	26	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Bromoform	ND		130	65	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Bromomethane	ND		130	28	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Carbon disulfide	ND		130	59	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Carbon tetrachloride	ND		130	33	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Chlorobenzene	ND		130	17	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Chlorobromomethane	ND		130	47	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Chloroethane	ND		130	27	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Chloroform	ND		130	89	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Chloromethane	ND		130	31	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	

Client Sample ID: 60N 20E 10.5-11.0
Lab Sample ID: 480-185645-22
Date Collected: 06/02/21 13:47
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
cis-1,2-Dichloroethene	**4200**		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
cis-1,3-Dichloropropene	ND		130	31	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Cyclohexane	ND		130	29	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Dibromochloromethane	ND		130	63	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Dichlorodifluoromethane	ND		130	56	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Ethylbenzene	ND		130	38	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Isopropylbenzene	ND		130	19	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Methyl acetate	ND		650	62	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Methyl tert-butyl ether	ND		130	49	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Methylcyclohexane	ND		130	61	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Methylene Chloride	ND		130	26	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
n-Butylbenzene	ND		130	38	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
N-Propylbenzene	ND		130	34	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
sec-Butylbenzene	ND		130	48	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Styrene	ND		130	31	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
tert-Butylbenzene	ND		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Tetrachloroethene	ND		130	17	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Toluene	ND		130	35	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
trans-1,2-Dichloroethene	ND		130	31	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
trans-1,3-Dichloropropene	ND		130	13	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Trichloroethene	**660**		130	36	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Trichlorofluoromethane	ND		130	61	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Vinyl chloride	ND		130	43	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	
Xylenes, Total	ND		260	72	ug/Kg	☼	06/08/21 13:48	06/09/21 15:40	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*53 - 146*	*06/08/21 13:48*	*06/09/21 15:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*49 - 148*	*06/08/21 13:48*	*06/09/21 15:40*	*1*
Toluene-d8 (Surr)	*101*		*50 - 149*	*06/08/21 13:48*	*06/09/21 15:40*	*1*

Client Sample ID: 60N 20E 2.5-3.5
Lab Sample ID: 480-185645-23
Date Collected: 06/02/21 13:33
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 69.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,1,2,2-Tetrachloroethane	ND		670	110	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		670	330	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,1,2-Trichloroethane	ND		670	140	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,1-Dichloroethane	ND		670	210	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,1-Dichloroethene	ND		670	230	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2,3-Trichlorobenzene	ND		670	310	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2,4-Trichlorobenzene	ND		670	250	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2,4-Trimethylbenzene	ND		670	190	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2-Dibromo-3-Chloropropane	ND		670	330	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2-Dibromoethane	ND		670	120	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2-Dichlorobenzene	ND		670	170	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2-Dichloroethane	ND		670	270	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,2-Dichloropropane	ND		670	110	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	

Client Sample ID: 60N 20E 2.5-3.5
Lab Sample ID: 480-185645-23

Date Collected: 06/02/21 13:33
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 69.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,3,5-Trimethylbenzene	ND		670	200	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	VQ
1,3-Dichlorobenzene	ND		670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,4-Dichlorobenzene	ND		670	93	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
1,4-Dioxane	ND		13000	3400	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
2-Butanone (MEK)	ND		3300	2000	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
2-Hexanone	ND		3300	1400	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
4-Methyl-2-pentanone (MIBK)	ND		3300	210	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Acetone	ND		3300	2700	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Benzene	ND		670	130	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Bromodichloromethane	ND		670	130	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Bromoform	ND		670	330	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Bromomethane	ND		670	150	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Carbon disulfide	ND		670	300	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Carbon tetrachloride	ND		670	170	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Chlorobenzene	ND		670	88	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Chlorobromomethane	ND		670	240	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Chloroethane	ND		670	140	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Chloroform	ND		670	460	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Chloromethane	ND		670	160	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
cis-1,2-Dichloroethene	ND		670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
cis-1,3-Dichloropropene	ND		670	160	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Cyclohexane	ND		670	150	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Dibromochloromethane	ND		670	320	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Dichlorodifluoromethane	ND		670	290	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Ethylbenzene	ND		670	190	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Isopropylbenzene	ND		670	100	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Methyl acetate	ND		3300	320	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Methyl tert-butyl ether	ND		670	250	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Methylcyclohexane	ND		670	310	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Methylene Chloride	ND		670	130	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
n-Butylbenzene	ND		670	190	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
N-Propylbenzene	ND		670	170	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
sec-Butylbenzene	ND		670	240	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Styrene	ND		670	160	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
tert-Butylbenzene	ND		670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Tetrachloroethene	ND		670	89	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Toluene	**630**	**J**	670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	J
trans-1,2-Dichloroethene	ND		670	160	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
trans-1,3-Dichloropropene	ND		670	65	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Trichloroethene	ND		670	180	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Trichlorofluoromethane	ND		670	310	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Vinyl chloride	ND		670	220	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	
Xylenes, Total	ND		1300	370	ug/Kg	☼	06/08/21 13:48	06/09/21 16:03	4	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*53 - 146*	*06/08/21 13:48*	*06/09/21 16:03*	*4*
4-Bromofluorobenzene (Surr)	*102*		*49 - 148*	*06/08/21 13:48*	*06/09/21 16:03*	*4*
Toluene-d8 (Surr)	*101*		*50 - 149*	*06/08/21 13:48*	*06/09/21 16:03*	*4*

Client Sample ID: 60N 40E 10.5-11.5
Lab Sample ID: 480-185645-24

Date Collected: 06/02/21 14:30
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 82.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.0	0.44	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.0	0.97	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.0	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,1,2-Trichloroethane	ND	vs	6.0	0.78	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,1-Dichloroethane	**2.1**	**J vs**	6.0	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	J
1,1-Dichloroethene	ND	vs	6.0	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2,3-Trichlorobenzene	ND	vs	6.0	0.64	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2,4-Trichlorobenzene	ND	vs	6.0	0.36	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2,4-Trimethylbenzene	ND	vs	6.0	1.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2-Dibromoethane	ND	vs	6.0	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2-Dichlorobenzene	ND	vs	6.0	0.47	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2-Dichloroethane	ND	vs	6.0	0.30	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,2-Dichloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,3,5-Trimethylbenzene	ND	vs	6.0	0.39	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,3-Dichlorobenzene	ND	vs	6.0	0.31	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,4-Dichlorobenzene	ND	vs	6.0	0.84	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Acetone	**11**	**J vs**	30	5.1	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	J
Benzene	ND	vs	6.0	0.29	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Bromodichloromethane	ND	vs	6.0	0.80	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Bromoform	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Bromomethane	ND	vs	6.0	0.54	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Carbon disulfide	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Carbon tetrachloride	ND	vs	6.0	0.58	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Chlorobenzene	ND	vs	6.0	0.79	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Chlorobromomethane	ND	vs	6.0	0.43	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Chloroethane	ND	*+ vs	6.0	1.4	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	UJ
Chloroform	ND	vs	6.0	0.37	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Chloromethane	ND	vs	6.0	0.36	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
cis-1,2-Dichloroethene	**4.5**	**J vs**	6.0	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	J
cis-1,3-Dichloropropene	ND	vs	6.0	0.86	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Cyclohexane	ND	vs	6.0	0.84	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Dibromochloromethane	ND	vs	6.0	0.77	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Dichlorodifluoromethane	ND	vs	6.0	0.50	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Ethylbenzene	ND	vs	6.0	0.41	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Isopropylbenzene	ND	vs	6.0	0.90	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Methyl tert-butyl ether	ND	vs	6.0	0.59	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Methylcyclohexane	ND	vs	6.0	0.91	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Methylene Chloride	ND	vs	6.0	2.8	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
n-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
N-Propylbenzene	ND	vs	6.0	0.48	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
sec-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Styrene	ND	vs	6.0	0.30	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
tert-Butylbenzene	ND	vs	6.0	0.62	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	

Client Sample ID: 60N 40E 10.5-11.5
Lab Sample ID: 480-185645-24
Date Collected: 06/02/21 14:30
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Tetrachloroethene	ND	vs	6.0	0.80	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Toluene	ND	vs	6.0	0.45	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
trans-1,2-Dichloroethene	**0.74**	**J vs**	6.0	0.62	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	J
trans-1,3-Dichloropropene	ND	vs	6.0	2.6	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Trichloroethene	ND	vs	6.0	1.3	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Trichlorofluoromethane	ND	vs	6.0	0.57	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	
Vinyl chloride	ND	vs	6.0	0.73	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	UJ
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/08/21 18:48	06/08/21 23:26	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*06/08/21 18:48*	*06/08/21 23:26*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/08/21 18:48*	*06/08/21 23:26*	*1*
Toluene-d8 (Surr)	*96*		*71 - 125*	*06/08/21 18:48*	*06/08/21 23:26*	*1*

Client Sample ID: 80N 40E 13.5-14.3
Lab Sample ID: 480-185645-25
Date Collected: 06/02/21 15:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.9	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.9	0.96	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,1,2-Trichloroethane	ND	vs	5.9	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,1-Dichloroethane	ND	vs	5.9	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,1-Dichloroethene	ND	vs	5.9	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2,3-Trichlorobenzene	ND	vs	5.9	0.63	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2,4-Trichlorobenzene	ND	vs	5.9	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.9	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2-Dibromoethane	ND	vs	5.9	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2-Dichlorobenzene	ND	vs	5.9	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2-Dichloroethane	ND	vs	5.9	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,2-Dichloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,3,5-Trimethylbenzene	ND	vs	5.9	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,3-Dichlorobenzene	ND	vs	5.9	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,4-Dichlorobenzene	ND	vs	5.9	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Acetone	**15**	**J vs**	30	5.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	J
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Bromodichloromethane	ND	vs	5.9	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Bromoform	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Bromomethane	ND	vs	5.9	0.53	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Carbon disulfide	ND	vs	5.9	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Carbon tetrachloride	ND	vs	5.9	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Chlorobenzene	ND	vs	5.9	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Chlorobromomethane	ND	vs	5.9	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	

Client Sample ID: 80N 40E 13.5-14.3
Lab Sample ID: 480-185645-25
Date Collected: 06/02/21 15:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND	*+ vs	5.9	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Chloroform	ND	vs	5.9	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Chloromethane	ND	vs	5.9	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
cis-1,2-Dichloroethene	**2.0**	**J vs**	5.9	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	J
cis-1,3-Dichloropropene	ND	vs	5.9	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Cyclohexane	ND	vs	5.9	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Dibromochloromethane	ND	vs	5.9	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Dichlorodifluoromethane	ND	vs	5.9	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Ethylbenzene	ND	vs	5.9	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Isopropylbenzene	ND	vs	5.9	0.90	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Methyl tert-butyl ether	ND	vs	5.9	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Methylcyclohexane	ND	vs	5.9	0.90	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
n-Butylbenzene	ND	vs	5.9	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
N-Propylbenzene	ND	vs	5.9	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
sec-Butylbenzene	ND	vs	5.9	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Styrene	ND	vs	5.9	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
tert-Butylbenzene	ND	vs	5.9	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Tetrachloroethene	ND	vs	5.9	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Toluene	**1.3**	**J vs**	5.9	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	J
trans-1,2-Dichloroethene	ND	vs	5.9	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Trichloroethene	**1.5**	**J vs**	5.9	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	J
Trichlorofluoromethane	ND	vs	5.9	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Vinyl chloride	ND	vs	5.9	0.72	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 15:13	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 126*	*06/07/21 22:23*	*06/08/21 15:13*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/07/21 22:23*	*06/08/21 15:13*	*1*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/07/21 22:23*	*06/08/21 15:13*	*1*

Client Sample ID: 100N 40E 14.0-14.5
Lab Sample ID: 480-185645-26
Date Collected: 06/03/21 09:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 84.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.8	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.8	0.94	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.8	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,1,2-Trichloroethane	ND	vs	5.8	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,1-Dichloroethane	ND	vs	5.8	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,1-Dichloroethene	ND	vs	5.8	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2,3-Trichlorobenzene	ND	vs	5.8	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2,4-Trichlorobenzene	ND	vs	5.8	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.8	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.8	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2-Dibromoethane	ND	vs	5.8	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	

Client Sample ID: 100N 40E 14.0-14.5
Lab Sample ID: 480-185645-26

Date Collected: 06/03/21 09:00
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 84.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,2-Dichlorobenzene	ND	vs	5.8	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2-Dichloroethane	ND	vs	5.8	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,2-Dichloropropane	ND	vs	5.8	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,3,5-Trimethylbenzene	ND	vs	5.8	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,3-Dichlorobenzene	ND	vs	5.8	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,4-Dichlorobenzene	ND	vs	5.8	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
1,4-Dioxane	ND	vs	120	25	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
2-Butanone (MEK)	ND	vs	29	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Acetone	**20**	**J vs**	29	4.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	J
Benzene	ND	vs	5.8	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Bromodichloromethane	ND	vs	5.8	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Bromoform	ND	vs	5.8	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Bromomethane	ND	vs	5.8	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Carbon disulfide	ND	vs	5.8	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Carbon tetrachloride	ND	vs	5.8	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Chlorobenzene	ND	vs	5.8	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Chlorobromomethane	ND	vs	5.8	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Chloroethane	ND	*+ vs	5.8	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Chloroform	ND	vs	5.8	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Chloromethane	ND	vs	5.8	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
cis-1,2-Dichloroethene	**17**	**vs**	5.8	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
cis-1,3-Dichloropropene	ND	vs	5.8	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Cyclohexane	ND	vs	5.8	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Dibromochloromethane	ND	vs	5.8	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Dichlorodifluoromethane	ND	vs	5.8	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Ethylbenzene	ND	vs	5.8	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Isopropylbenzene	ND	vs	5.8	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Methyl tert-butyl ether	ND	vs	5.8	0.57	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Methylcyclohexane	ND	vs	5.8	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Methylene Chloride	ND	vs	5.8	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
n-Butylbenzene	ND	vs	5.8	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
N-Propylbenzene	ND	vs	5.8	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
sec-Butylbenzene	ND	vs	5.8	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Styrene	ND	vs	5.8	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
tert-Butylbenzene	ND	vs	5.8	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Tetrachloroethene	ND	vs	5.8	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Toluene	**2.3**	**J vs**	5.8	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	J
trans-1,2-Dichloroethene	**1.5**	**J vs**	5.8	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	J
trans-1,3-Dichloropropene	ND	vs	5.8	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Trichloroethene	**6.0**	**vs**	5.8	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Trichlorofluoromethane	ND	vs	5.8	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Vinyl chloride	**17**	**vs**	5.8	0.71	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	
Xylenes, Total	ND	vs	12	0.98	ug/Kg	☼	06/07/21 22:23	06/08/21 15:37	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*	*06/07/21 22:23*	*06/08/21 15:37*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/07/21 22:23*	*06/08/21 15:37*	*1*

Client Sample ID: 100N 40E 14.0-14.5
Lab Sample ID: 480-185645-26
Date Collected: 06/03/21 09:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 84.6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		71 - 125	06/07/21 22:23	06/08/21 15:37	1

Client Sample ID: 120N 40E 5.3-5.7
Lab Sample ID: 480-185645-27
Date Collected: 06/03/21 09:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 76.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	6.5	0.47	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	6.5	1.1	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.5	1.5	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,1,2-Trichloroethane	ND	vs	6.5	0.85	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,1-Dichloroethane	ND	vs	6.5	0.80	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,1-Dichloroethene	ND	vs	6.5	0.80	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2,3-Trichlorobenzene	ND	vs	6.5	0.69	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2,4-Trichlorobenzene	ND	vs	6.5	0.40	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2,4-Trimethylbenzene	**3.3**	**J vs**	6.5	1.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
1,2-Dibromo-3-Chloropropane	ND	vs	6.5	3.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2-Dibromoethane	ND	vs	6.5	0.84	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2-Dichlorobenzene	ND	vs	6.5	0.51	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2-Dichloroethane	ND	vs	6.5	0.33	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,2-Dichloropropane	ND	vs	6.5	3.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,3,5-Trimethylbenzene	**1.2**	**J vs**	6.5	0.42	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
1,3-Dichlorobenzene	ND	vs	6.5	0.34	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,4-Dichlorobenzene	ND	vs	6.5	0.91	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
1,4-Dioxane	ND	vs	130	28	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
2-Butanone (MEK)	ND	vs	33	2.4	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
2-Hexanone	ND	vs	33	3.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	33	2.1	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Acetone	**58**	**vs**	33	5.5	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Benzene	ND	vs	6.5	0.32	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Bromodichloromethane	ND	vs	6.5	0.87	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Bromoform	ND	vs	6.5	3.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Bromomethane	ND	vs	6.5	0.59	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Carbon disulfide	ND	vs	6.5	3.3	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Carbon tetrachloride	ND	vs	6.5	0.63	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Chlorobenzene	ND	vs	6.5	0.86	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Chlorobromomethane	ND	vs	6.5	0.47	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Chloroethane	ND	*+ vs	6.5	1.5	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	UJ
Chloroform	ND	vs	6.5	0.40	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Chloromethane	ND	vs	6.5	0.39	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
cis-1,2-Dichloroethene	**5.0**	**J vs**	6.5	0.84	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
cis-1,3-Dichloropropene	ND	vs	6.5	0.94	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Cyclohexane	ND	vs	6.5	0.91	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Dibromochloromethane	ND	vs	6.5	0.84	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Dichlorodifluoromethane	ND	vs	6.5	0.54	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Ethylbenzene	**0.51**	**J vs**	6.5	0.45	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
Isopropylbenzene	ND	vs	6.5	0.98	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Methyl acetate	ND	vs	33	3.9	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	

Client Sample ID: 120N 40E 5.3-5.7
Lab Sample ID: 480-185645-27
Date Collected: 06/03/21 09:20
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 76.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Methyl tert-butyl ether	ND	vs	6.5	0.64	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Methylcyclohexane	ND	vs	6.5	0.99	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Methylene Chloride	ND	vs	6.5	3.0	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
n-Butylbenzene	ND	vs	6.5	0.57	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
N-Propylbenzene	ND	vs	6.5	0.52	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
sec-Butylbenzene	ND	vs	6.5	0.57	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Styrene	ND	vs	6.5	0.33	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
tert-Butylbenzene	ND	vs	6.5	0.68	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Tetrachloroethene	ND	vs	6.5	0.88	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Toluene	**1.3**	**J vs**	6.5	0.49	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
trans-1,2-Dichloroethene	ND	vs	6.5	0.67	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
trans-1,3-Dichloropropene	ND	vs	6.5	2.9	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Trichloroethene	**3.4**	**J vs**	6.5	1.4	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	J
Trichlorofluoromethane	ND	vs	6.5	0.62	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	
Vinyl chloride	ND	vs	6.5	0.80	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	UJ
Xylenes, Total	**1.2**	**J vs**	13	1.1	ug/Kg	☼	06/08/21 18:48	06/09/21 00:15	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/08/21 18:48*	*06/09/21 00:15*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/08/21 18:48*	*06/09/21 00:15*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*06/08/21 18:48*	*06/09/21 00:15*	*1*

Client Sample ID: 120N 40E 10.0-11.0
Lab Sample ID: 480-185645-28
Date Collected: 06/03/21 09:34
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,1,2,2-Tetrachloroethane	ND		120	19	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	59	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,1-Dichloroethene	ND		120	41	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2,3-Trichlorobenzene	ND		120	55	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2,4-Trichlorobenzene	ND		120	45	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2,4-Trimethylbenzene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2-Dibromo-3-Chloropropane	ND		120	59	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2-Dichlorobenzene	ND		120	30	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2-Dichloroethane	ND		120	49	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,2-Dichloropropane	ND		120	19	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,3,5-Trimethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
1,4-Dioxane	ND		2300	610	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
2-Butanone (MEK)	ND		590	350	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
2-Hexanone	ND		590	240	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
4-Methyl-2-pentanone (MIBK)	ND		590	38	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Acetone	ND		590	490	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	

Client Sample ID: 120N 40E 10.0-11.0
Lab Sample ID: 480-185645-28

Date Collected: 06/03/21 09:34
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Benzene	ND		120	23	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Bromoform	ND		120	59	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Bromomethane	ND		120	26	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Carbon disulfide	ND		120	54	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Carbon tetrachloride	ND		120	30	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Chlorobromomethane	ND		120	43	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Chloroform	ND		120	82	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Chloromethane	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
cis-1,2-Dichloroethene	**1200**		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
cis-1,3-Dichloropropene	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Cyclohexane	ND		120	26	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Dibromochloromethane	ND		120	58	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Dichlorodifluoromethane	ND		120	52	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Methyl acetate	ND		590	57	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Methylcyclohexane	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
N-Propylbenzene	ND		120	31	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
sec-Butylbenzene	ND		120	44	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Styrene	ND		120	29	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
tert-Butylbenzene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Toluene	ND		120	32	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Trichloroethene	ND		120	33	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Trichlorofluoromethane	ND		120	56	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Vinyl chloride	ND		120	40	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	
Xylenes, Total	ND		240	66	ug/Kg	☼	06/08/21 15:22	06/09/21 19:55	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*53 - 146*	*06/08/21 15:22*	*06/09/21 19:55*	*1*
4-Bromofluorobenzene (Surr)	*93*		*49 - 148*	*06/08/21 15:22*	*06/09/21 19:55*	*1*
Toluene-d8 (Surr)	*97*		*50 - 149*	*06/08/21 15:22*	*06/09/21 19:55*	*1*

Client Sample ID: 120N 60E 8.5-9.5
Lab Sample ID: 480-185645-29

Date Collected: 06/03/21 10:07
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.3	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.3	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	

Client Sample ID: 120N 60E 8.5-9.5
Lab Sample ID: 480-185645-29

Date Collected: 06/03/21 10:07
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,2-Trichloroethane	ND	vs	6.3	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	VQ
1,1-Dichloroethane	ND	vs	6.3	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,1-Dichloroethene	ND	vs	6.3	0.78	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2,3-Trichlorobenzene	ND	vs	6.3	0.67	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2,4-Trichlorobenzene	ND	vs	6.3	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	UJ
1,2,4-Trimethylbenzene	ND	vs	6.3	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.3	3.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2-Dibromoethane	ND	vs	6.3	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2-Dichlorobenzene	ND	vs	6.3	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2-Dichloroethane	ND	vs	6.3	0.32	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,2-Dichloropropane	ND	vs	6.3	3.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,3,5-Trimethylbenzene	ND	vs	6.3	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,3-Dichlorobenzene	ND	vs	6.3	0.33	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,4-Dichlorobenzene	ND	vs	6.3	0.89	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
1,4-Dioxane	ND	vs	130	28	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
2-Butanone (MEK)	ND	vs	32	2.3	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
2-Hexanone	ND	vs	32	3.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	32	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Acetone	ND	vs	32	5.3	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Benzene	ND	vs	6.3	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Bromodichloromethane	ND	vs	6.3	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Bromoform	ND	vs	6.3	3.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Bromomethane	ND	vs	6.3	0.57	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Carbon disulfide	ND	vs	6.3	3.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Carbon tetrachloride	ND	vs	6.3	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Chlorobenzene	ND	vs	6.3	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Chlorobromomethane	ND	vs	6.3	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Chloroethane	ND	*+ vs	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Chloroform	ND	vs	6.3	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Chloromethane	ND	vs	6.3	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
cis-1,2-Dichloroethene	**85**	**vs**	6.3	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
cis-1,3-Dichloropropene	ND	vs	6.3	0.91	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Cyclohexane	ND	vs	6.3	0.89	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Dibromochloromethane	ND	vs	6.3	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Dichlorodifluoromethane	ND	vs	6.3	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Ethylbenzene	ND	vs	6.3	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Isopropylbenzene	ND	vs	6.3	0.96	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Methyl acetate	ND	vs	32	3.8	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Methyl tert-butyl ether	ND	vs	6.3	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Methylcyclohexane	ND	vs	6.3	0.96	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Methylene Chloride	ND	vs	6.3	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
n-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
N-Propylbenzene	ND	vs	6.3	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
sec-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Styrene	ND	vs	6.3	0.32	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
tert-Butylbenzene	ND	vs	6.3	0.66	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Tetrachloroethene	ND	vs	6.3	0.85	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Toluene	ND	vs	6.3	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
trans-1,2-Dichloroethene	**2.1**	**J vs**	6.3	0.65	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	J

Client Sample ID: 120N 60E 8.5-9.5
Lab Sample ID: 480-185645-29
Date Collected: 06/03/21 10:07
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
trans-1,3-Dichloropropene	ND	vs	6.3	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	VQ
Trichloroethene	**20**	**vs**	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Trichlorofluoromethane	ND	vs	6.3	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	
Vinyl chloride	**1.4**	**J vs**	6.3	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	J
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:27	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*06/07/21 22:23*	*06/08/21 16:27*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*06/07/21 22:23*	*06/08/21 16:27*	*1*
Toluene-d8 (Surr)	*98*		*71 - 125*	*06/07/21 22:23*	*06/08/21 16:27*	*1*

Client Sample ID: DUP-1-20210603
Lab Sample ID: 480-185645-30
Date Collected: 06/03/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	6.3	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	6.3	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,1,2-Trichloroethane	ND	vs	6.3	0.81	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,1-Dichloroethane	ND	vs	6.3	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,1-Dichloroethene	ND	vs	6.3	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2,3-Trichlorobenzene	ND	vs	6.3	0.67	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2,4-Trichlorobenzene	ND	vs	6.3	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	UJ
1,2,4-Trimethylbenzene	ND	vs	6.3	1.2	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.3	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2-Dibromoethane	ND	vs	6.3	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2-Dichlorobenzene	ND	vs	6.3	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2-Dichloroethane	ND	vs	6.3	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,2-Dichloropropane	ND	vs	6.3	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,3,5-Trimethylbenzene	ND	vs	6.3	0.40	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,3-Dichlorobenzene	ND	vs	6.3	0.32	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,4-Dichlorobenzene	ND	vs	6.3	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
1,4-Dioxane	ND	vs	130	27	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
2-Butanone (MEK)	ND	vs	31	2.3	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
2-Hexanone	ND	vs	31	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	31	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Acetone	ND	vs	31	5.3	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Benzene	ND	vs	6.3	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Bromodichloromethane	ND	vs	6.3	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Bromoform	ND	vs	6.3	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Bromomethane	ND	vs	6.3	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Carbon disulfide	ND	vs	6.3	3.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Carbon tetrachloride	ND	vs	6.3	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Chlorobenzene	ND	vs	6.3	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Chlorobromomethane	ND	vs	6.3	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Chloroethane	ND	*+ vs	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Chloroform	ND	vs	6.3	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Chloromethane	ND	vs	6.3	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	

Client Sample ID: DUP-1-20210603
Lab Sample ID: 480-185645-30

Date Collected: 06/03/21 00:00
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
cis-1,2-Dichloroethene	**64**	**vs**	6.3	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
cis-1,3-Dichloropropene	ND	vs	6.3	0.90	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Cyclohexane	ND	vs	6.3	0.88	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Dibromochloromethane	ND	vs	6.3	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Dichlorodifluoromethane	ND	vs	6.3	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Ethylbenzene	ND	vs	6.3	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Isopropylbenzene	ND	vs	6.3	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Methyl acetate	ND	vs	31	3.8	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Methyl tert-butyl ether	ND	vs	6.3	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Methylcyclohexane	ND	vs	6.3	0.95	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Methylene Chloride	ND	vs	6.3	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
n-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
N-Propylbenzene	ND	vs	6.3	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
sec-Butylbenzene	ND	vs	6.3	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Styrene	ND	vs	6.3	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
tert-Butylbenzene	ND	vs	6.3	0.65	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Tetrachloroethene	ND	vs	6.3	0.84	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Toluene	ND	vs	6.3	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
trans-1,2-Dichloroethene	**1.4**	**J vs**	6.3	0.65	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	J
trans-1,3-Dichloropropene	ND	vs	6.3	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Trichloroethene	**22**	**vs**	6.3	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Trichlorofluoromethane	ND	vs	6.3	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Vinyl chloride	ND	vs	6.3	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 16:51	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*06/07/21 22:23*	*06/08/21 16:51*	*1*
4-Bromofluorobenzene (Surr)	*94*		*72 - 126*	*06/07/21 22:23*	*06/08/21 16:51*	*1*
Toluene-d8 (Surr)	*99*		*71 - 125*	*06/07/21 22:23*	*06/08/21 16:51*	*1*

Client Sample ID: 100N 60E 14.0-14.5
Lab Sample ID: 480-185645-31

Date Collected: 06/03/21 10:36
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.7	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2-Dichlorobenzene	ND	vs	5.7	0.44	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	

Client Sample ID: 100N 60E 14.0-14.5
Lab Sample ID: 480-185645-31
Date Collected: 06/03/21 10:36
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,3,5-Trimethylbenzene	ND	vs	5.7	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Acetone	**5.6**	**J vs**	28	4.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	J
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Carbon disulfide	ND	vs	5.7	2.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Chloroethane	ND	*+ vs	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
cis-1,2-Dichloroethene	**25**	**vs**	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Methylcyclohexane	ND	vs	5.7	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
n-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
N-Propylbenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
sec-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
tert-Butylbenzene	ND	vs	5.7	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
trans-1,2-Dichloroethene	**1.5**	**J vs**	5.7	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	J
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Trichloroethene	**1.9**	**J vs**	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	J
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	
Vinyl chloride	**2.3**	**J vs**	5.7	0.69	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	J
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	06/07/21 22:23	06/08/21 17:15	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 126*	*06/07/21 22:23*	*06/08/21 17:15*	*1*
4-Bromofluorobenzene (Surr)	*92*		*72 - 126*	*06/07/21 22:23*	*06/08/21 17:15*	*1*
Toluene-d8 (Surr)	*99*		*71 - 125*	*06/07/21 22:23*	*06/08/21 17:15*	*1*

Client Sample ID: 80N 60E 7.0-7.5
Lab Sample ID: 480-185645-32

Date Collected: 06/03/21 11:10
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.7	0.42	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.93	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,1-Dichloroethane	ND	vs	5.7	0.70	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2,3-Trichlorobenzene	ND	vs	5.7	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	UJ
1,2,4-Trimethylbenzene	ND	vs	5.7	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2-Dichlorobenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,2-Dichloropropane	ND	vs	5.7	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,3,5-Trimethylbenzene	ND	vs	5.7	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
2-Butanone (MEK)	ND	vs	29	2.1	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Acetone	ND	vs	29	4.8	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Bromodichloromethane	ND	vs	5.7	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Bromoform	ND	vs	5.7	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Carbon disulfide	ND	vs	5.7	2.9	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Chlorobenzene	ND	vs	5.7	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Chloroethane	ND	*+ vs	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Chloromethane	ND	vs	5.7	0.35	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
cis-1,2-Dichloroethene	**1.9**	**J vs**	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	J
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Methylcyclohexane	ND	vs	5.7	0.87	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
n-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
N-Propylbenzene	ND	vs	5.7	0.46	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
sec-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Styrene	ND	vs	5.7	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
tert-Butylbenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	

VQ

Client Sample ID: 80N 60E 7.0-7.5
Lab Sample ID: 480-185645-32
Date Collected: 06/03/21 11:10
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Tetrachloroethene	ND	vs	5.7	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
trans-1,2-Dichloroethene	ND	vs	5.7	0.59	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Trichloroethene	**1.6**	**J vs**	5.7	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	J
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Vinyl chloride	ND	vs	5.7	0.70	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	06/07/21 22:23	06/08/21 17:40	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/07/21 22:23*	*06/08/21 17:40*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/07/21 22:23*	*06/08/21 17:40*	*1*
Toluene-d8 (Surr)	*95*		*71 - 125*	*06/07/21 22:23*	*06/08/21 17:40*	*1*

Client Sample ID: 60N 60E 11.0-11.5
Lab Sample ID: 480-185645-33
Date Collected: 06/03/21 12:29
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	6.0	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,1,2,2-Tetrachloroethane	ND	vs	6.0	0.97	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.0	1.4	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,1,2-Trichloroethane	ND	vs	6.0	0.77	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,1-Dichloroethane	ND	vs	6.0	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,1-Dichloroethene	ND	vs	6.0	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2,3-Trichlorobenzene	ND	vs	6.0	0.63	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2,4-Trichlorobenzene	ND	vs	6.0	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	UJ
1,2,4-Trimethylbenzene	ND	vs	6.0	1.1	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2-Dibromoethane	ND	vs	6.0	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2-Dichlorobenzene	ND	vs	6.0	0.47	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2-Dichloroethane	ND	vs	6.0	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,2-Dichloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,3,5-Trimethylbenzene	ND	vs	6.0	0.38	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,3-Dichlorobenzene	ND	vs	6.0	0.31	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,4-Dichlorobenzene	ND	vs	6.0	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Acetone	**5.5**	**J vs**	30	5.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	J
Benzene	ND	vs	6.0	0.29	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Bromodichloromethane	ND	vs	6.0	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Bromoform	ND	vs	6.0	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Bromomethane	ND	vs	6.0	0.54	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Carbon disulfide	ND	vs	6.0	3.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Carbon tetrachloride	ND	vs	6.0	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Chlorobenzene	ND	vs	6.0	0.79	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Chlorobromomethane	ND	vs	6.0	0.43	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	

Client Sample ID: 60N 60E 11.0-11.5
Lab Sample ID: 480-185645-33
Date Collected: 06/03/21 12:29
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND	*+ vs	6.0	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Chloroform	ND	vs	6.0	0.37	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Chloromethane	ND	vs	6.0	0.36	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
cis-1,2-Dichloroethene	**370**	**E vs**	6.0	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	R
cis-1,3-Dichloropropene	ND	vs	6.0	0.86	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Cyclohexane	ND	vs	6.0	0.83	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Dibromochloromethane	ND	vs	6.0	0.76	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Dichlorodifluoromethane	ND	vs	6.0	0.49	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Ethylbenzene	ND	vs	6.0	0.41	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Isopropylbenzene	ND	vs	6.0	0.90	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Methyl tert-butyl ether	ND	vs	6.0	0.58	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Methylcyclohexane	ND	vs	6.0	0.91	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Methylene Chloride	ND	vs	6.0	2.7	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
n-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
N-Propylbenzene	ND	vs	6.0	0.48	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
sec-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Styrene	ND	vs	6.0	0.30	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
tert-Butylbenzene	ND	vs	6.0	0.62	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Tetrachloroethene	**2.6**	**J vs**	6.0	0.80	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	J
Toluene	ND	vs	6.0	0.45	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
trans-1,2-Dichloroethene	**1.6**	**J vs**	6.0	0.61	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	J
trans-1,3-Dichloropropene	ND	vs	6.0	2.6	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Trichloroethene	**3500**	**E vs**	6.0	1.3	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	R
Trichlorofluoromethane	ND	vs	6.0	0.56	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Vinyl chloride	ND	vs	6.0	0.73	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/07/21 22:23	06/08/21 18:04	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/07/21 22:23*	*06/08/21 18:04*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/07/21 22:23*	*06/08/21 18:04*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*06/07/21 22:23*	*06/08/21 18:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		260	72	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R
1,1,2,2-Tetrachloroethane	ND		260	42	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		260	130	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,1,2-Trichloroethane	ND		260	55	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,1-Dichloroethane	ND		260	81	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,1-Dichloroethene	ND		260	90	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2,3-Trichlorobenzene	ND		260	120	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2,4-Trichlorobenzene	ND		260	99	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2,4-Trimethylbenzene	ND		260	73	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2-Dibromo-3-Chloropropane	ND		260	130	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2-Dibromoethane	ND		260	46	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2-Dichlorobenzene	ND		260	67	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2-Dichloroethane	ND		260	110	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,2-Dichloropropane	ND		260	42	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,3,5-Trimethylbenzene	ND		260	79	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	

Client Sample ID: 60N 60E 11.0-11.5
Lab Sample ID: 480-185645-33
Date Collected: 06/03/21 12:29
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,3-Dichlorobenzene	ND		260	70	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R
1,4-Dichlorobenzene	ND		260	37	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
1,4-Dioxane	ND		5000	1300	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
2-Butanone (MEK)	ND		1300	770	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
2-Hexanone	ND		1300	530	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
4-Methyl-2-pentanone (MIBK)	ND		1300	83	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Acetone	ND		1300	1100	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Benzene	ND		260	50	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Bromodichloromethane	ND		260	52	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Bromoform	ND		260	130	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Bromomethane	ND		260	57	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Carbon disulfide	ND		260	120	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Carbon tetrachloride	ND		260	67	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Chlorobenzene	ND		260	34	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Chlorobromomethane	ND		260	94	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Chloroethane	ND		260	54	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Chloroform	ND		260	180	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Chloromethane	ND		260	62	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	v
cis-1,2-Dichloroethene	**620**		260	72	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
cis-1,3-Dichloropropene	ND		260	62	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R
Cyclohexane	ND		260	58	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Dibromochloromethane	ND		260	130	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Dichlorodifluoromethane	ND		260	110	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Ethylbenzene	ND		260	76	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Isopropylbenzene	ND		260	39	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Methyl acetate	ND		1300	120	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Methyl tert-butyl ether	ND		260	99	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Methylcyclohexane	ND		260	120	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Methylene Chloride	ND		260	52	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
n-Butylbenzene	ND		260	76	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
N-Propylbenzene	ND		260	68	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
sec-Butylbenzene	ND		260	96	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Styrene	ND		260	63	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
tert-Butylbenzene	ND		260	73	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Tetrachloroethene	ND		260	35	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Toluene	ND		260	70	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
trans-1,2-Dichloroethene	ND		260	62	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
trans-1,3-Dichloropropene	ND		260	26	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	v
Trichloroethene	**24000**		260	73	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	
Trichlorofluoromethane	ND		260	120	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R
Vinyl chloride	ND		260	87	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R
Xylenes, Total	ND		520	140	ug/Kg	☼	06/08/21 15:22	06/09/21 20:18	2	R

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*53 - 146*	*06/08/21 15:22*	*06/09/21 20:18*	*2*
4-Bromofluorobenzene (Surr)	*99*		*49 - 148*	*06/08/21 15:22*	*06/09/21 20:18*	*2*
Toluene-d8 (Surr)	*100*		*50 - 149*	*06/08/21 15:22*	*06/09/21 20:18*	*2*

Client Sample ID: 120 80E 13.9-14.6
Lab Sample ID: 480-185645-34

Date Collected: 06/03/21 13:12
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.6	0.41	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.6	0.91	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.6	1.3	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,1,2-Trichloroethane	ND	vs	5.6	0.73	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,1-Dichloroethane	ND	vs	5.6	0.68	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,1-Dichloroethene	ND	vs	5.6	0.68	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2,3-Trichlorobenzene	ND	vs	5.6	0.59	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2,4-Trichlorobenzene	ND	vs	5.6	0.34	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2,4-Trimethylbenzene	ND	vs	5.6	1.1	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2-Dibromoethane	ND	vs	5.6	0.72	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2-Dichlorobenzene	ND	vs	5.6	0.44	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2-Dichloroethane	ND	vs	5.6	0.28	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,2-Dichloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,3,5-Trimethylbenzene	ND	vs	5.6	0.36	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,3-Dichlorobenzene	ND	vs	5.6	0.29	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,4-Dichlorobenzene	ND	vs	5.6	0.78	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
2-Butanone (MEK)	ND	vs	28	2.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Acetone	**10**	**J vs**	28	4.7	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	J
Benzene	ND	vs	5.6	0.27	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Bromodichloromethane	ND	vs	5.6	0.75	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	UJ
Bromoform	ND	vs	5.6	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Bromomethane	ND	vs	5.6	0.50	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Carbon disulfide	ND	vs	5.6	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Carbon tetrachloride	ND	vs	5.6	0.54	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Chlorobenzene	ND	vs	5.6	0.74	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Chlorobromomethane	ND	vs	5.6	0.40	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Chloroethane	ND	*+ vs	5.6	1.3	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	UJ
Chloroform	ND	vs	5.6	0.35	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Chloromethane	ND	vs	5.6	0.34	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
cis-1,2-Dichloroethene	**3.7**	**J vs**	5.6	0.72	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	J
cis-1,3-Dichloropropene	ND	vs	5.6	0.81	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Cyclohexane	ND	vs	5.6	0.78	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Dibromochloromethane	ND	vs	5.6	0.72	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Dichlorodifluoromethane	ND	vs	5.6	0.46	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Ethylbenzene	ND	vs	5.6	0.39	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Isopropylbenzene	ND	vs	5.6	0.84	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Methyl tert-butyl ether	ND	vs	5.6	0.55	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Methylcyclohexane	ND	vs	5.6	0.85	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Methylene Chloride	ND	vs	5.6	2.6	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
n-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
N-Propylbenzene	ND	vs	5.6	0.45	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
sec-Butylbenzene	ND	vs	5.6	0.49	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Styrene	ND	vs	5.6	0.28	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
tert-Butylbenzene	ND	vs	5.6	0.58	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	

Client Sample ID: 120 80E 13.9-14.6
Lab Sample ID: 480-185645-34
Date Collected: 06/03/21 13:12
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Tetrachloroethene	ND	vs	5.6	0.75	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Toluene	ND	vs	5.6	0.42	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
trans-1,2-Dichloroethene	ND	vs	5.6	0.58	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
trans-1,3-Dichloropropene	ND	vs	5.6	2.5	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	
Trichloroethene	**1.2**	**J vs**	5.6	1.2	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	J
Trichlorofluoromethane	ND	vs	5.6	0.53	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	UJ
Vinyl chloride	ND	vs	5.6	0.68	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	UJ
Xylenes, Total	ND	vs	11	0.94	ug/Kg	☼	06/08/21 22:38	06/09/21 10:27	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*06/08/21 22:38*	*06/09/21 10:27*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/08/21 22:38*	*06/09/21 10:27*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*06/08/21 22:38*	*06/09/21 10:27*	*1*

Client Sample ID: 100N 80E 14.2-14.4
Lab Sample ID: 480-185645-35
Date Collected: 06/03/21 13:40
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	6.0	0.43	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	6.0	0.97	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.0	1.4	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,1,2-Trichloroethane	ND	vs	6.0	0.78	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,1-Dichloroethane	ND	vs	6.0	0.73	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,1-Dichloroethene	ND	vs	6.0	0.73	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2,3-Trichlorobenzene	ND	vs	6.0	0.64	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2,4-Trichlorobenzene	ND	vs	6.0	0.36	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2,4-Trimethylbenzene	ND	vs	6.0	1.1	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2-Dibromo-3-Chloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2-Dibromoethane	ND	vs	6.0	0.77	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2-Dichlorobenzene	ND	vs	6.0	0.47	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2-Dichloroethane	ND	vs	6.0	0.30	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,2-Dichloropropane	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,3,5-Trimethylbenzene	ND	vs	6.0	0.39	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,3-Dichlorobenzene	ND	vs	6.0	0.31	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,4-Dichlorobenzene	ND	vs	6.0	0.84	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Acetone	**7.9**	**J vs**	30	5.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	J
Benzene	ND	vs	6.0	0.29	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Bromodichloromethane	ND	vs	6.0	0.80	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	UJ
Bromoform	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Bromomethane	ND	vs	6.0	0.54	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Carbon disulfide	ND	vs	6.0	3.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Carbon tetrachloride	ND	vs	6.0	0.58	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Chlorobenzene	ND	vs	6.0	0.79	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Chlorobromomethane	ND	vs	6.0	0.43	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	

Client Sample ID: 100N 80E 14.2-14.4
Lab Sample ID: 480-185645-35
Date Collected: 06/03/21 13:40
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 82.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Chloroethane	ND	*+ vs	6.0	1.4	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	UJ
Chloroform	ND	vs	6.0	0.37	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Chloromethane	ND	vs	6.0	0.36	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
cis-1,2-Dichloroethene	**1.5**	**J vs**	6.0	0.77	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	J
cis-1,3-Dichloropropene	ND	vs	6.0	0.86	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Cyclohexane	ND	vs	6.0	0.84	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Dibromochloromethane	ND	vs	6.0	0.77	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Dichlorodifluoromethane	ND	vs	6.0	0.49	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Ethylbenzene	ND	vs	6.0	0.41	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Isopropylbenzene	ND	vs	6.0	0.90	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Methyl tert-butyl ether	ND	vs	6.0	0.59	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Methylcyclohexane	ND	vs	6.0	0.91	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Methylene Chloride	ND	vs	6.0	2.8	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
n-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
N-Propylbenzene	ND	vs	6.0	0.48	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
sec-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Styrene	ND	vs	6.0	0.30	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
tert-Butylbenzene	ND	vs	6.0	0.62	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Tetrachloroethene	ND	vs	6.0	0.80	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Toluene	ND	vs	6.0	0.45	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
trans-1,2-Dichloroethene	ND	vs	6.0	0.62	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
trans-1,3-Dichloropropene	ND	vs	6.0	2.6	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	
Trichloroethene	**2.3**	**J vs**	6.0	1.3	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	J
Trichlorofluoromethane	ND	vs	6.0	0.57	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	UJ
Vinyl chloride	ND	vs	6.0	0.73	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	UJ
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/08/21 22:38	06/09/21 10:52	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*06/08/21 22:38*	*06/09/21 10:52*	*1*
4-Bromofluorobenzene (Surr)	*97*		*72 - 126*	*06/08/21 22:38*	*06/09/21 10:52*	*1*
Toluene-d8 (Surr)	*96*		*71 - 125*	*06/08/21 22:38*	*06/09/21 10:52*	*1*

Client Sample ID: 100N 100E 14.0-14.2
Lab Sample ID: 480-185645-36
Date Collected: 06/03/21 14:38
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 93.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.4	0.39	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.4	0.87	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.4	1.2	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,1,2-Trichloroethane	ND	vs	5.4	0.70	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,1-Dichloroethane	ND	vs	5.4	0.66	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,1-Dichloroethene	ND	vs	5.4	0.66	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2,3-Trichlorobenzene	ND	vs	5.4	0.57	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2,4-Trichlorobenzene	ND	vs	5.4	0.33	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2,4-Trimethylbenzene	ND	vs	5.4	1.0	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.4	2.7	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2-Dibromoethane	ND	vs	5.4	0.69	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	

Client Sample ID: 100N 100E 14.0-14.2
Lab Sample ID: 480-185645-36

Date Collected: 06/03/21 14:38
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 93.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,2-Dichlorobenzene	ND	vs	5.4	0.42	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2-Dichloroethane	**0.91**	**J vs**	5.4	0.27	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,2-Dichloropropane	ND	vs	5.4	2.7	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,3,5-Trimethylbenzene	ND	vs	5.4	0.35	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,3-Dichlorobenzene	ND	vs	5.4	0.28	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,4-Dichlorobenzene	ND	vs	5.4	0.75	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
1,4-Dioxane	ND	vs	110	23	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
2-Butanone (MEK)	ND	vs	27	2.0	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
2-Hexanone	ND	vs	27	2.7	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	27	1.8	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Acetone	**6.9**	**J vs**	27	4.5	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	J
Benzene	ND	vs	5.4	0.26	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Bromodichloromethane	ND	vs	5.4	0.72	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	UJ
Bromoform	ND	vs	5.4	2.7	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Bromomethane	ND	vs	5.4	0.48	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Carbon disulfide	ND	vs	5.4	2.7	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Carbon tetrachloride	ND	vs	5.4	0.52	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Chlorobenzene	ND	vs	5.4	0.71	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Chlorobromomethane	ND	vs	5.4	0.39	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Chloroethane	ND	*+ vs	5.4	1.2	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	UJ
Chloroform	ND	vs	5.4	0.33	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Chloromethane	ND	vs	5.4	0.32	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
cis-1,2-Dichloroethene	**4.0**	**J vs**	5.4	0.69	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	J
cis-1,3-Dichloropropene	ND	vs	5.4	0.77	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Cyclohexane	ND	vs	5.4	0.75	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Dibromochloromethane	ND	vs	5.4	0.69	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Dichlorodifluoromethane	ND	vs	5.4	0.44	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Ethylbenzene	ND	vs	5.4	0.37	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Isopropylbenzene	ND	vs	5.4	0.81	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Methyl acetate	ND	vs	27	3.2	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Methyl tert-butyl ether	ND	vs	5.4	0.53	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Methylcyclohexane	ND	vs	5.4	0.82	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Methylene Chloride	ND	vs	5.4	2.5	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
n-Butylbenzene	ND	vs	5.4	0.47	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
N-Propylbenzene	ND	vs	5.4	0.43	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
sec-Butylbenzene	ND	vs	5.4	0.47	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Styrene	ND	vs	5.4	0.27	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
tert-Butylbenzene	ND	vs	5.4	0.56	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Tetrachloroethene	ND	vs	5.4	0.72	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Toluene	ND	vs	5.4	0.41	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
trans-1,2-Dichloroethene	ND	vs	5.4	0.55	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
trans-1,3-Dichloropropene	ND	vs	5.4	2.4	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Trichloroethene	ND	vs	5.4	1.2	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	
Trichlorofluoromethane	ND	vs	5.4	0.51	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	UJ
Vinyl chloride	**1.0**	**J vs**	5.4	0.66	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	J
Xylenes, Total	ND	vs	11	0.90	ug/Kg	☼	06/08/21 22:38	06/09/21 11:17	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*06/08/21 22:38*	*06/09/21 11:17*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 126*	*06/08/21 22:38*	*06/09/21 11:17*	*1*

Client Sample ID: 100N 100E 14.0-14.2
Lab Sample ID: 480-185645-36
Date Collected: 06/03/21 14:38
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 93.0

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		71 - 125	06/08/21 22:38	06/09/21 11:17	1

Client Sample ID: 60N 80E 10.5-11.0
Lab Sample ID: 480-185645-37
Date Collected: 06/04/21 08:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 77.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		140	39	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,1,2,2-Tetrachloroethane	ND		140	23	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		140	71	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,1,2-Trichloroethane	ND		140	30	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,1-Dichloroethane	ND		140	44	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,1-Dichloroethene	ND		140	49	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2,3-Trichlorobenzene	ND		140	65	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2,4-Trichlorobenzene	ND		140	54	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2,4-Trimethylbenzene	ND		140	39	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2-Dibromo-3-Chloropropane	ND		140	71	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2-Dibromoethane	ND		140	25	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2-Dichlorobenzene	ND		140	36	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2-Dichloroethane	ND		140	58	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,2-Dichloropropane	ND		140	23	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,3,5-Trimethylbenzene	ND		140	43	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,3-Dichlorobenzene	ND		140	38	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,4-Dichlorobenzene	ND		140	20	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
1,4-Dioxane	ND		2700	720	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
2-Butanone (MEK)	ND		710	420	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
2-Hexanone	ND		710	290	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
4-Methyl-2-pentanone (MIBK)	ND		710	45	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Acetone	ND		710	580	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Benzene	ND		140	27	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Bromodichloromethane	ND		140	28	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Bromoform	ND		140	71	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Bromomethane	ND		140	31	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Carbon disulfide	ND		140	64	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Carbon tetrachloride	ND		140	36	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Chlorobenzene	ND		140	19	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Chlorobromomethane	ND		140	51	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Chloroethane	ND		140	29	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Chloroform	ND		140	97	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Chloromethane	ND		140	34	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
cis-1,2-Dichloroethene	**380**		140	39	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
cis-1,3-Dichloropropene	ND		140	34	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Cyclohexane	ND		140	31	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Dibromochloromethane	ND		140	68	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Dichlorodifluoromethane	ND		140	62	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Ethylbenzene	ND		140	41	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Isopropylbenzene	ND		140	21	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1
Methyl acetate	ND		710	67	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1

VQ

Client Sample ID: 60N 80E 10.5-11.0
Lab Sample ID: 480-185645-37

Date Collected: 06/04/21 08:25
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 77.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Methyl tert-butyl ether	ND		140	53	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	VQ
Methylcyclohexane	ND		140	66	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Methylene Chloride	ND		140	28	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
n-Butylbenzene	ND		140	41	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
N-Propylbenzene	ND		140	37	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
sec-Butylbenzene	ND		140	52	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Styrene	ND		140	34	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
tert-Butylbenzene	ND		140	39	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Tetrachloroethene	ND		140	19	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Toluene	ND		140	38	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
trans-1,2-Dichloroethene	ND		140	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
trans-1,3-Dichloropropene	ND		140	14	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Trichloroethene	**4600**		140	39	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Trichlorofluoromethane	ND		140	66	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Vinyl chloride	ND		140	47	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	
Xylenes, Total	ND		280	78	ug/Kg	☼	06/08/21 13:48	06/09/21 16:26	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*53 - 146*	*06/08/21 13:48*	*06/09/21 16:26*	*1*
4-Bromofluorobenzene (Surr)	*102*		*49 - 148*	*06/08/21 13:48*	*06/09/21 16:26*	*1*
Toluene-d8 (Surr)	*100*		*50 - 149*	*06/08/21 13:48*	*06/09/21 16:26*	*1*

Client Sample ID: 120N 100E 14.5-15.1
Lab Sample ID: 480-185645-38

Date Collected: 06/04/21 09:30
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	VQ
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,1-Dichloroethene	ND	vs	5.7	0.69	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2,4-Trichlorobenzene	ND	vs	5.7	0.34	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2,4-Trimethylbenzene	ND	vs	5.7	1.1	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2-Dichlorobenzene	ND	vs	5.7	0.44	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2-Dichloroethane	ND	vs	5.7	0.28	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,3,5-Trimethylbenzene	ND	vs	5.7	0.36	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,4-Dichlorobenzene	ND	vs	5.7	0.79	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Acetone	**7.3**	**J vs**	28	4.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	J

Client Sample ID: 120N 100E 14.5-15.1
Lab Sample ID: 480-185645-38
Date Collected: 06/04/21 09:30
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 85.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Carbon disulfide	ND	vs	5.7	2.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Chloroethane	ND	*+ vs	5.7	1.3	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	UJ
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
cis-1,2-Dichloroethene	**3.2**	**J vs**	5.7	0.72	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	J
cis-1,3-Dichloropropene	ND	vs	5.7	0.81	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Cyclohexane	ND	vs	5.7	0.79	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Dibromochloromethane	ND	vs	5.7	0.72	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Isopropylbenzene	ND	vs	5.7	0.85	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Methylcyclohexane	ND	vs	5.7	0.86	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
n-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
N-Propylbenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
sec-Butylbenzene	ND	vs	5.7	0.49	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
tert-Butylbenzene	ND	vs	5.7	0.59	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
trans-1,2-Dichloroethene	ND	vs	5.7	0.58	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	
Trichloroethene	**1.2**	**J vs**	5.7	1.2	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	J
Trichlorofluoromethane	ND	vs	5.7	0.53	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	UJ
Vinyl chloride	ND	vs	5.7	0.69	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	UJ
Xylenes, Total	ND	vs	11	0.95	ug/Kg	☼	06/09/21 17:28	06/09/21 21:34	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*06/09/21 17:28*	*06/09/21 21:34*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/09/21 17:28*	*06/09/21 21:34*	*1*
Toluene-d8 (Surr)	*96*		*71 - 125*	*06/09/21 17:28*	*06/09/21 21:34*	*1*

Client Sample ID: 120N 120E 14.0-14.6
Lab Sample ID: 480-185645-39
Date Collected: 06/04/21 10:10
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 90.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.5	0.40	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.5	0.89	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.5	1.2	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	

Client Sample ID: 120N 120E 14.0-14.6
Lab Sample ID: 480-185645-39

Date Collected: 06/04/21 10:10
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 90.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,2-Trichloroethane	ND	vs	5.5	0.71	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	VQ
1,1-Dichloroethane	ND	vs	5.5	0.67	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,1-Dichloroethene	ND	vs	5.5	0.67	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2,3-Trichlorobenzene	ND	vs	5.5	0.58	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2,4-Trichlorobenzene	ND	vs	5.5	0.33	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2,4-Trimethylbenzene	ND	vs	5.5	1.0	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.5	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2-Dibromoethane	ND	vs	5.5	0.70	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2-Dichlorobenzene	ND	vs	5.5	0.43	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2-Dichloroethane	ND	vs	5.5	0.27	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,2-Dichloropropane	ND	vs	5.5	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,3,5-Trimethylbenzene	ND	vs	5.5	0.35	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,3-Dichlorobenzene	ND	vs	5.5	0.28	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,4-Dichlorobenzene	ND	vs	5.5	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
2-Butanone (MEK)	ND	vs	27	2.0	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
2-Hexanone	ND	vs	27	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	27	1.8	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Acetone	**9.7**	**J vs**	27	4.6	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	J
Benzene	ND	vs	5.5	0.27	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Bromodichloromethane	ND	vs	5.5	0.73	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Bromoform	ND	vs	5.5	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Bromomethane	ND	vs	5.5	0.49	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Carbon disulfide	ND	vs	5.5	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Carbon tetrachloride	ND	vs	5.5	0.53	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Chlorobenzene	ND	vs	5.5	0.72	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Chlorobromomethane	ND	vs	5.5	0.39	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Chloroethane	ND	*+ vs	5.5	1.2	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	UJ
Chloroform	ND	vs	5.5	0.34	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Chloromethane	ND	vs	5.5	0.33	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
cis-1,2-Dichloroethene	ND	vs	5.5	0.70	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
cis-1,3-Dichloropropene	ND	vs	5.5	0.79	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Cyclohexane	ND	vs	5.5	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Dibromochloromethane	ND	vs	5.5	0.70	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Dichlorodifluoromethane	ND	vs	5.5	0.45	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Ethylbenzene	ND	vs	5.5	0.38	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Isopropylbenzene	ND	vs	5.5	0.82	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Methyl acetate	ND	vs	27	3.3	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Methyl tert-butyl ether	ND	vs	5.5	0.54	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Methylcyclohexane	ND	vs	5.5	0.83	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Methylene Chloride	ND	vs	5.5	2.5	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
n-Butylbenzene	ND	vs	5.5	0.48	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
N-Propylbenzene	ND	vs	5.5	0.44	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
sec-Butylbenzene	ND	vs	5.5	0.48	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Styrene	ND	vs	5.5	0.27	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
tert-Butylbenzene	ND	vs	5.5	0.57	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Tetrachloroethene	ND	vs	5.5	0.73	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Toluene	ND	vs	5.5	0.41	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
trans-1,2-Dichloroethene	ND	vs	5.5	0.56	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	

Client Sample ID: 120N 120E 14.0-14.6
Lab Sample ID: 480-185645-39
Date Collected: 06/04/21 10:10
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 90.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
trans-1,3-Dichloropropene	ND	vs	5.5	2.4	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Trichloroethene	ND	vs	5.5	1.2	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	
Trichlorofluoromethane	ND	vs	5.5	0.52	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	UJ
Vinyl chloride	ND	vs	5.5	0.67	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	UJ
Xylenes, Total	ND	vs	11	0.92	ug/Kg	☼	06/09/21 17:28	06/09/21 21:59	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*64 - 126*	*06/09/21 17:28*	*06/09/21 21:59*	*1*
4-Bromofluorobenzene (Surr)	*92*		*72 - 126*	*06/09/21 17:28*	*06/09/21 21:59*	*1*
Toluene-d8 (Surr)	*99*		*71 - 125*	*06/09/21 17:28*	*06/09/21 21:59*	*1*

Client Sample ID: 120N 140E 14.0 14.3
Lab Sample ID: 480-185645-40
Date Collected: 06/04/21 10:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND	vs	5.9	0.43	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,1,2,2-Tetrachloroethane	ND	vs	5.9	0.96	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.4	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,1,2-Trichloroethane	ND	vs	5.9	0.77	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,1-Dichloroethane	ND	vs	5.9	0.72	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,1-Dichloroethene	ND	vs	5.9	0.73	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2,3-Trichlorobenzene	ND	vs	5.9	0.63	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2,4-Trichlorobenzene	ND	vs	5.9	0.36	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2,4-Trimethylbenzene	ND	vs	5.9	1.1	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2-Dibromo-3-Chloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2-Dibromoethane	ND	vs	5.9	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2-Dichlorobenzene	ND	vs	5.9	0.46	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2-Dichloroethane	ND	vs	5.9	0.30	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,2-Dichloropropane	ND	vs	5.9	3.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,3,5-Trimethylbenzene	ND	vs	5.9	0.38	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,3-Dichlorobenzene	ND	vs	5.9	0.31	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,4-Dichlorobenzene	ND	vs	5.9	0.83	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
2-Butanone (MEK)	ND	vs	30	2.2	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
4-Methyl-2-pentanone (MIBK)	ND	vs	30	1.9	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Acetone	**5.9**	**J vs**	30	5.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	J
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Bromodichloromethane	ND	vs	5.9	0.80	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Bromoform	ND	vs	5.9	3.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Bromomethane	ND	vs	5.9	0.53	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Carbon disulfide	ND	vs	5.9	3.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Carbon tetrachloride	ND	vs	5.9	0.58	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Chlorobenzene	ND	vs	5.9	0.78	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Chlorobromomethane	ND	vs	5.9	0.43	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Chloroethane	ND	*+ vs	5.9	1.3	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	UJ
Chloroform	ND	vs	5.9	0.37	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Chloromethane	ND	vs	5.9	0.36	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	

Client Sample ID: 120N 140E 14.0 14.3
Lab Sample ID: 480-185645-40
Date Collected: 06/04/21 10:50
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 81.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
cis-1,2-Dichloroethene	**1.9**	**J vs**	5.9	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	J
cis-1,3-Dichloropropene	ND	vs	5.9	0.86	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Cyclohexane	ND	vs	5.9	0.83	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Dibromochloromethane	ND	vs	5.9	0.76	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Dichlorodifluoromethane	ND	vs	5.9	0.49	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Ethylbenzene	ND	vs	5.9	0.41	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Isopropylbenzene	ND	vs	5.9	0.90	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Methyl tert-butyl ether	ND	vs	5.9	0.58	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Methylcyclohexane	ND	vs	5.9	0.90	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
n-Butylbenzene	ND	vs	5.9	0.52	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
N-Propylbenzene	ND	vs	5.9	0.48	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
sec-Butylbenzene	ND	vs	5.9	0.52	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Styrene	ND	vs	5.9	0.30	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
tert-Butylbenzene	ND	vs	5.9	0.62	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Tetrachloroethene	ND	vs	5.9	0.80	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Toluene	ND	vs	5.9	0.45	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
trans-1,2-Dichloroethene	ND	vs	5.9	0.61	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	
Trichloroethene	**2.7**	**J vs**	5.9	1.3	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	J
Trichlorofluoromethane	ND	vs	5.9	0.56	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	UJ
Vinyl chloride	ND	vs	5.9	0.72	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	UJ
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/09/21 17:28	06/09/21 22:23	1	

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*06/09/21 17:28*	*06/09/21 22:23*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/09/21 17:28*	*06/09/21 22:23*	*1*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/09/21 17:28*	*06/09/21 22:23*	*1*

Client Sample ID: 105N 140E 14.0-14.3
Lab Sample ID: 480-185645-41
Date Collected: 06/04/21 12:30
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	VQ
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,1,2,2-Tetrachloroethane	ND		120	19	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	60	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,1-Dichloroethene	ND		120	42	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2,3-Trichlorobenzene	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2,4-Trichlorobenzene	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2,4-Trimethylbenzene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2-Dibromo-3-Chloropropane	ND		120	60	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2-Dichlorobenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2-Dichloroethane	ND		120	49	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	
1,2-Dichloropropane	ND		120	19	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1	

Client Sample ID: 105N 140E 14.0-14.3
Lab Sample ID: 480-185645-41
Date Collected: 06/04/21 12:30
Matrix: Solid
Date Received: 06/04/21 15:20
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
1,4-Dioxane	ND		2300	610	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
2-Butanone (MEK)	ND		600	360	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
2-Hexanone	ND		600	250	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
4-Methyl-2-pentanone (MIBK)	ND		600	38	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Acetone	ND		600	490	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Benzene	ND		120	23	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Bromoform	ND		120	60	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Bromomethane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Carbon disulfide	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Carbon tetrachloride	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Chlorobromomethane	ND		120	43	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Chloroform	ND		120	82	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Chloromethane	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
cis-1,2-Dichloroethene	**3900**		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
cis-1,3-Dichloropropene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Cyclohexane	ND		120	27	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Dibromochloromethane	ND		120	58	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Dichlorodifluoromethane	ND		120	52	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Ethylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Methyl acetate	ND		600	57	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Methylcyclohexane	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Methylene Chloride	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
N-Propylbenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
sec-Butylbenzene	ND		120	44	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Styrene	ND		120	29	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
tert-Butylbenzene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Toluene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Trichloroethene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Trichlorofluoromethane	ND		120	56	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Vinyl chloride	ND		120	40	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1
Xylenes, Total	ND		240	66	ug/Kg	☼	06/08/21 13:48	06/09/21 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*53 - 146*	*06/08/21 13:48*	*06/09/21 16:49*	*1*
4-Bromofluorobenzene (Surr)	*104*		*49 - 148*	*06/08/21 13:48*	*06/09/21 16:49*	*1*
Toluene-d8 (Surr)	*101*		*50 - 149*	*06/08/21 13:48*	*06/09/21 16:49*	*1*

VQ

Client Sample ID: 105N 120E 4.0-4.5
Lab Sample ID: 480-185645-42

Date Collected: 06/04/21 13:00
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,1,2,2-Tetrachloroethane	ND		120	19	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,1-Dichloroethene	ND		120	41	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2,3-Trichlorobenzene	ND		120	54	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2,4-Trichlorobenzene	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2,4-Trimethylbenzene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2-Dibromo-3-Chloropropane	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2-Dichlorobenzene	ND		120	30	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2-Dichloroethane	ND		120	48	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,2-Dichloropropane	ND		120	19	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,3,5-Trimethylbenzene	ND		120	36	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
1,4-Dioxane	ND		2200	600	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
2-Butanone (MEK)	ND		590	350	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
2-Hexanone	ND		590	240	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
4-Methyl-2-pentanone (MIBK)	ND		590	38	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Acetone	ND		590	490	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Benzene	ND		120	22	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Bromoform	ND		120	59	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Bromomethane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Carbon disulfide	ND		120	54	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Carbon tetrachloride	ND		120	30	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Chlorobenzene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Chlorobromomethane	ND		120	43	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Chloroethane	ND		120	25	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Chloroform	ND		120	81	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Chloromethane	ND		120	28	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
cis-1,2-Dichloroethene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
cis-1,3-Dichloropropene	ND		120	28	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Cyclohexane	ND		120	26	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Dibromochloromethane	ND		120	57	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Dichlorodifluoromethane	ND		120	52	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Ethylbenzene	ND		120	34	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Methyl acetate	ND		590	56	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Methylcyclohexane	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Methylene Chloride	ND		120	23	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
n-Butylbenzene	ND		120	35	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
N-Propylbenzene	ND		120	31	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
sec-Butylbenzene	ND		120	44	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Styrene	ND		120	28	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
tert-Butylbenzene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1

VQ

Client Sample ID: 105N 120E 4.0-4.5
Lab Sample ID: 480-185645-42

Date Collected: 06/04/21 13:00
Matrix: Solid

Date Received: 06/04/21 15:20
Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Toluene	ND		120	32	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Trichloroethene	ND		120	33	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Trichlorofluoromethane	ND		120	55	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Vinyl chloride	ND		120	40	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1
Xylenes, Total	ND		240	65	ug/Kg	☼	06/08/21 13:48	06/09/21 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*	*06/08/21 13:48*	*06/09/21 17:12*	*1*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*	*06/08/21 13:48*	*06/09/21 17:12*	*1*
Toluene-d8 (Surr)	*102*		*50 - 149*	*06/08/21 13:48*	*06/09/21 17:12*	*1*

VQ

ATTACHMENT B

CASE NARRATIVE AND CHAIN OF CUSTODY

Job Narrative
480-185645-1

Comments
No additional comments.

Receipt
The samples were received on 6/4/2021 3:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCVIS) associated with batch 480-584317 recovered above the upper control limit for Vinyl chloride. The sample(s) associated with this CCVIS were non-detect or below the reporting limit (RL) for the affected analyte; therefore, the data have been reported. The associated samples are impacted: 80N 0E 13.0-13.7 (480-185645-4), 60N 0E 11.0-11.5 (480-185645-5) and 40N 20E 4.0-5.0 (480-185645-15).

Method 8260C: Internal standard responses were outside of acceptance limits for the following samples: 40N 20E 4.0-5.0 (480-185645-15), 40N 20E 4.0-5.0 (480-185645-15[MS]) and 40N 20E 4.0-5.0 (480-185645-15[MSD]). The samples show evidence of matrix interference.

Method 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-584334 and analytical batch 480-584317 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The following samples are impacted: 40N 20E 4.0-5.0 (480-185645-15[MS]) and 40N 20E 4.0-5.0 (480-185645-15[MSD]).

Method 8260C: Internal standard responses were outside of acceptance limits for the following sample: 120N 20E 3.9-4.0 (480-185645-9). The sample shows evidence of matrix interference.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-584337 recovered outside acceptance criteria, low biased, for 1,2,4-Trichlorobenzene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The associated samples are: 40N 0E 13.0-13.9 (480-185645-7), 20N 0E 7.5-8.1 (480-185645-8), 120N 20E 3.9-4.0 (480-185645-9), 80N 20E 13.5-14.0 (480-185645-12), 40N 20E 13.5-14.1 (480-185645-16), 20N 20E 11.0-11.5 (480-185645-17), DUP-2-20210602 (480-185645-18), 80N 40E 13.5-14.3 (480-185645-25), 100N 40E 14.0-14.5 (480-185645-26), 120N 60E 8.5-9.5 (480-185645-29), DUP-1-20210603 (480-185645-30), 100N 60E 14.0-14.5 (480-185645-31), 80N 60E 7.0-7.5 (480-185645-32) and 60N 60E 11.0-11.5 (480-185645-33).

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-584335 and analytical batch 480-584337 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The associated samples are: 40N 0E 13.0-13.9 (480-185645-7), 20N 0E 7.5-8.1 (480-185645-8), 120N 20E 3.9-4.0 (480-185645-9), 80N 20E 13.5-14.0 (480-185645-12), 40N 20E 13.5-14.1 (480-185645-16), 20N 20E 11.0-11.5 (480-185645-17), DUP-2-20210602 (480-185645-18), 80N 40E 13.5-14.3 (480-185645-25), 100N 40E 14.0-14.5 (480-185645-26), 120N 60E 8.5-9.5 (480-185645-29), DUP-1-20210603 (480-185645-30), 100N 60E 14.0-14.5 (480-185645-31), 80N 60E 7.0-7.5 (480-185645-32) and 60N 60E 11.0-11.5 (480-185645-33).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-584521 recovered above the upper control limit for Chloroethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 120N 0E 2.0-2.5 (480-185645-1), 40N 20E 2.5-3.0 (480-185645-13), 20N 60E 11.0-11.5 (480-185645-20), 40N 60E 13.5-14.3 (480-185645-21), 60N 40E 10.5-11.5 (480-185645-24) and 120N 40E 5.3-5.7 (480-185645-27).

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-584533 and analytical batch 480-584521 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected above the reporting limit in the associated samples; therefore, the data have been reported. The associated samples are: 120N 0E 2.0-2.5 (480-185645-1), 40N 20E 2.5-3.0 (480-185645-13), 20N 60E 11.0-11.5 (480-185645-20), 40N 60E 13.5-14.3 (480-185645-21), 60N 40E 10.5-11.5 (480-185645-24) and 120N 40E 5.3-5.7 (480-185645-27).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-584551 recovered above the upper control limit for Chloroethane, Bromodichloromethane, Trichlorofluoromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 120 80E 13.9-14.6 (480-185645-34), 100N 80E 14.2-14.4 (480-185645-35) and 100N 100E 14.0-14.2 (480-185645-36).

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-584547 and analytical batch 480-584551 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The associated samples are: 120 80E 13.9-14.6 (480-185645-34), 100N 80E 14.2-14.4 (480-185645-35) and 100N 100E 14.0-14.2 (480-185645-36).

Method 8260C: The following samples were analyzed using medium level soil analysis to bring the concentration of target analytes within the calibration range: 100N 0E 10.5-11.0 (480-185645-2), 60N 0E 11.0-11.5 (480-185645-5), 60N 0E 12.5-13.0 (480-185645-6), DUP-1-20210602 (480-185645-14), 60N 20E 10.5-11.0 (480-185645-22), 60N 80E 10.5-11.0 (480-185645-37) and 105N 140E 14.0-14.3

(480-185645-41). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: 120N 20E 14.5-14.9 (480-185645-10) and 100N 20E 14.0-14.4 (480-185645-11). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were analyzed using medium level soil analysis and diluted due to the nature of the sample matrix: 60N 20E 2.5-3.5 (480-185645-23), 60N 20E 2.5-3.5 (480-185645-23[MS]) and 60N 20E 2.5-3.5 (480-185645-23[MSD]). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis due to the nature of the sample matrix: 105N 120E 4.0-4.5 (480-185645-42). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-584717 recovered above the upper control limit for Chloroethane, Trichlorofluoromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 120N 100E 14.5-15.1 (480-185645-38), 120N 120E 14.0-14.6 (480-185645-39) and 120N 140E 14.0 14.3 (480-185645-40).

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-584715 and analytical batch 480-584717 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The associated samples are: 120N 100E 14.5-15.1 (480-185645-38), 120N 120E 14.0-14.6 (480-185645-39) and 120N 140E 14.0 14.3 (480-185645-40).

Method 8260C: The following samples were analyzed using medium level soil analysis and were diluted to bring the concentration of target analytes within the calibration range: DUP-2-20210602 (480-185645-18) and 60N 60E 11.0-11.5 (480-185645-33). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were analyzed using medium level soil analysis to bring the concentration of target analytes within the calibration range: 100N 0E 13.0-13.5 (480-185645-3), 80N 20E 13.5-14.0 (480-185645-12), 20N 20E 11.0-11.5 (480-185645-17), 20N 40E 13.9-14.1 (480-185645-19), 120N 40E 10.0-11.0 (480-185645-28), 120N 40E 10.0-11.0 (480-185645-28[MS]) and 120N 40E 10.0-11.0 (480-185645-28[MSD]). Elevated reporting limits (RLs) are provided.

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

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Sam P. Connelly	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-161346-35469.1
Client Contact: George Kisluk	Phone: 716 393 0370	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin:	Page: Page 1 of 4
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone:	PO #: CallOut ID: 136077			
Email: george.kisluk@aecom.com	WO #:			
Project Name: Erdle	Project #: 48023857			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
120N, 0E - 2.0-2.5	6/1/21	0935	G	Solid	N	N	1		
100N, 0E - 10.5 - 11.0	6/1/21	1040	G	Solid	N	N	1		
100N, 0E - 13.0 - 13.5	6/1/21	1048	G	Solid	N	N	1		
80N, 0E - 13.0 - 13.7	6/1/21	1115	G	Solid	N	N	1		
60N, 0E - 11.0 - 11.5	6/1/21	1148	G	Solid	N	N	1		
60N, 0E - 12.5 - 13.0	6/1/21	1153	G	Solid	N	N	1		
40N, 0E - 13.0 - 13.9	6/1/21	1305	G	Solid	N	N	1		
20N, 0E - 7.5 - 8.1	6/1/21	1335	G	Solid	N	N	1		
120N, 20E - 3.9 - 4.0	6/1/21	1400	G	Solid	N	N	1		
120N, 20E - 14.5 - 14.9	6/1/21	1425	G	Solid	N	N	1		
100N, 20E - 14.0 - 14.4	6/1/21	1454	G	Solid	N	N	1		

480-185645 Chain of Custody

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Sam P Connelly	6/4/21 @ 1530	Aecom			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/4/21 1520	Company

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

Cooler Temperature(s) °C and Other Remarks: 4.7 #1 ICE

Ver: 11/01/2020

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Sean P Connolly	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-161346-35469.2
Client Contact: George Kisluk	Phone: (716) 393-0570	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin:	Page: Page 2 of 4
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone:	PO #: CallOut ID: 136077			
Email: george.kisluk@aecom.com	WO #:			
Project Name: Erdle	Project #: 48023857			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
SOW, 20E - 13.5 - 14.0	6/2/21	0535	G	Solid	N	N	1		
40N, 20E - 2.5 - 3.0	6/2/21	0857	G	Solid	N	N	1		
DUP - 1 - 20210602	6/2/21	—	G	Solid	N	N	1		
40N, 20E - 4.0 - 5.0 - MS/MSD	6/2/21	0906	G	Solid	N	Y	3		
40N, 20E - 13.5 - 14.1	6/2/21	0920	G	Solid	N	N	1		
20N, 20E - 11.0 - 11.5	6/2/21	0950	G	Solid	N	N	1		
DUP - 2 - 20210602	6/2/21	—	G	Solid	N	N	1		
20N, 40E - 13.9 - 14.1	6/2/21	1020	G	Solid	N	N	1		
20N, 60E - 11.0 - 11.5	6/2/21	1108	G	Solid	N	N	1		
40N, 60E - 13.5 - 14.3	6/2/21	1142	G	Solid	N	N	1		
60N, 20E - 10.5 - 11.0	6/2/21	1347	G	Solid	N	N	1		

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 6/4/21 @ 1530	Company: Aecom	Received by:
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Sean P. Connolly	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-161346-35469.3
Client Contact: George Kisluk	Phone: (716) 393-0820	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin:	Page: Page 3 of 4
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone:	PO #: CallOut ID: 136077			
Email: george.kisluk@aecom.com	WO #:			
Project Name: Erdle	Project #: 48023857			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
60N 20E -2.5 -7.5 MS/MSD	6/2/21	1333	G	Solid	N	Y	3		
60N 40E -10.5 -11.5	6/2/21	1430	G	Solid	N	N	1		
80N 40E -13.5 -14.3	6/2/21	1575	G	Solid	N	N	1		
100N, 40E -14.0 -14.5	6/3/21	0900	G	Solid	N	N	1		
120N, 40E -5.3 5.7	6/3/21	0920	G	Solid	N	N	1		
120N, 40E -10.0 -11.0 MS/MSD	6/3/21	0934	G	Solid	N	N	3		
120N, 60E -8.5-9.5	6/3/21	1007	G	Solid	N	N	1		
DUP-1-20210603	6/3/21	—	G	Solid	N	N	1		
100N, 60E -14.0 -14.5	6/3/21	1030	G	Solid	N	N	1		
80N 60E 7.0 -7.5	6/3/21	1110	G	Solid	N	N	1		
60N 60E -11.0 -11.5	6/3/21	1229	G	Solid	N	N	5		

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/4/21 1530	Aecom			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-161346-35469.4
Client Contact: George Kisluk	Phone:	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin:	Page: Page 4 of 8 4
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway, Suite 210	Due Date Requested:	Analysis Requested		
City: Amherst	TAT Requested (days):			Preservation Codes:
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Phone:	PO #: CallOut ID: 136077			Other:
Email: george.kisluk@aecom.com	WO #:			
Project Name: Erdle	Project #: 48023857			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
120N 80E - 13.9 - 14.4	6/3/21	1312	G	Solid	N	N	1		
120N 80E - 14.2 - 14.4	6/3/21	1340	G	Solid	N	N	1		
100N 100E - 14.0 14.2	6/3/21	1458	G	Solid	N	N	1		
60N, 80E - 10.5 - 11.0	6/4/21	0825	G	Solid	N	N	1		
120N, 100E - 14.5 - 15.1	6/4/21	0930	G	Solid	N	N	1		
120N, 120E - 14.0 - 14.6	6/4/21	1010	G	Solid	N	N	1		
120N, 140E - 14.0 - 14.3	6/4/21	1050	G	Solid	N	N	1		
105N, 140E - 14.0 - 14.3	6/4/21	1230	G	Solid	N	N	1		
105N, 120E - 4.0 - 4.5	6/4/21	1300	G	Solid	N	N	1		
				Solid					
				Solid					

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		6/4/21 1550				
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

DATA USABILITY SUMMARY REPORT

For

ERDLE PERFORATING #828072
SOIL SAMPLES

VOA
SDG No. 480-185755-1

Sampling Date: June 7-8, 2021

Submitted to:

AECOM
One John James Audubon Parkway
Suite 210
Amherst, New York, USA
716-313-0870

Prepared by:

Environmental Occupational & Public Health Consultants Inc. (EOPHC)
Environmental Data Validation Inc. (EDV, Inc.)
1326 Orangewood Ave
Pittsburgh, PA 15216
(412) 341-5281

Site: Erdle Perforating #828072
Client: AECOM
Laboratory: Eurofins TestAmerica

SDG #: 480-18755-1
Date: August 5, 2021
Reviewer: D. McGuire

Sample Identification Table

Client Sample ID	Laboratory ID	Matrix	VOC
120N/-20E (2-4)	480-185755-1	Soil	X
120N/-20E (12-13)	480-185755-2	Soil	X
0N/0E (12-13)	480-185755-3	Soil	X
0N/-20E (11-12)	480-185755-4	Soil	X
0N/-20E (12-13)	480-185755-5	Soil	X
80N/-20E (12-13)	480-185755-6	Soil	X
100N/-20E (12-13)	480-185755-7	Soil	X
140N/-20E (11-12)	480-185755-8	Soil	X
140N/-40E (12-13)	480-185755-9	Soil	X
OMW-2 (13-14)	480-185755-10	Soil	X
BMW-300 (13-14)	480-185755-11	Soil	X
OMW-2 (3.5-4)	480-185755-12	Soil	X

The data package contained twelve (12) soil samples. The samples were analyzed via Method SW-846 8260C. The adherence of laboratory analytical performance to these methods' analytical specifications was evaluated during the data validation process. The data package was evaluated for its usability as defined by the Guidance for the Development of Data Usability Summary Reports (DER-10, 11/09). USEPA Region II standard operating procedures were used as guidance documents. According to the NYSDEC Guidance for the Development of Data Usability Summary Reports, the following QC data were evaluated: blanks, instrument tunings, calibration standards, calibration verifications, laboratory controls, surrogate recoveries, spike recoveries, and sample data.

The following Attachments are a part of this report— all validated Form 1s are presented in Attachment A. All Case Narrative and Chain of Custody (COC) records are presented in Attachment B.

All QC data were within quality control limits, except the following issues:

Cover letter, Narrative and Data Reporting Forms (Form 1s): The deficiencies noted in the case narrative that affect data usability have been discussed in applicable sections. Data that have no impact on data usability are not discussed.

Chain of Custody (COC): Sample 480-185755-12 (OMW-2 (3.5-4) was received for VOC analyses; however, the sample was not listed on the COC.

Preservation: Preservation was acceptable.

Holding Time: Holding times were within acceptable criteria for all samples.

Blanks Quality Control: There was no blank contamination.

Calibration Quality Control: The recoveries were acceptable.

Laboratory Control Sample (LCS): The recoveries were acceptable.

Surrogates: The recoveries were acceptable.

Internal Standards: The recoveries were acceptable.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD): Sample results were not qualified based on MS/MSD results only.

Field Duplicate: Not applicable

Compound Quantitation: Reporting limits are elevated for several samples. These samples were analyzed using medium level analysis due to matrix interference and/or results outside of the calibration range. When a diluted sample result within the calibration range was reported for a sample compound, the result shall be used and the sample result outside the calibration range shall be qualified as rejected (R).

Additional Comments: Some Form 1s and case narratives are reporting criteria out of QC limits. If data were impacted due to the deficiency, it is discussed in the DUSR, and appropriate qualifier(s) applied. Therefore, all discussions in the DUSR relate to all conditions that affected data usability. When there are multiple analyses, the validator presents the best run (Attachment A).

Data usability: Data qualified with the "UJ" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "J" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "R" qualifier are not usable due to severe quality control issues. Data qualified with the "U" qualifier are usable at the reporting limit.

ATTACHMENT A

FORM 1s

Client Sample ID: 120N-20E (2-4)
Lab Sample ID: 480-185755-1
Date Collected: 06/07/21 09:45
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.4	0.47	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,1,2,2-Tetrachloroethane	ND	vs	6.4	1.0	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.4	1.5	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,1,2-Trichloroethane	ND	vs	6.4	0.84	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,1-Dichloroethane	ND	vs	6.4	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,1-Dichloroethene	ND	vs	6.4	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2,3-Trichlorobenzene	ND	vs	6.4	0.68	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2,4-Trichlorobenzene	ND	vs	6.4	0.39	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.4	3.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2-Dibromoethane	ND	vs	6.4	0.83	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2-Dichlorobenzene	ND	vs	6.4	0.50	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2-Dichloroethane	ND	vs	6.4	0.32	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,2-Dichloropropane	ND	vs	6.4	3.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,3-Dichlorobenzene	ND	vs	6.4	0.33	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,4-Dichlorobenzene	ND	vs	6.4	0.90	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
1,4-Dioxane	ND	vs	130	28	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
2-Butanone (MEK)	**56**	**vs**	32	2.4	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
2-Hexanone	ND	vs	32	3.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
4-Methyl-2-pentanone (MIBK)	ND	vs	32	2.1	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Acetone	**170**	**vs**	32	5.4	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Benzene	ND	vs	6.4	0.32	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Bromodichloromethane	ND	vs	6.4	0.86	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Bromoform	ND	vs	6.4	3.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Bromomethane	ND	vs	6.4	0.58	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Carbon disulfide	ND	vs	6.4	3.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Carbon tetrachloride	ND	vs	6.4	0.62	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Chlorobenzene	ND	vs	6.4	0.85	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Chlorobromomethane	ND	vs	6.4	0.46	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Chloroethane	ND	vs *+	6.4	1.5	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Chloroform	ND	vs	6.4	0.40	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Chloromethane	ND	vs	6.4	0.39	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
cis-1,2-Dichloroethene	**2.0**	**J vs**	6.4	0.82	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
cis-1,3-Dichloropropene	ND	vs	6.4	0.93	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Cyclohexane	ND	vs	6.4	0.90	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Dibromochloromethane	ND	vs	6.4	0.82	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Dichlorodifluoromethane	ND	vs	6.4	0.53	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Ethylbenzene	ND	vs	6.4	0.44	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Isopropylbenzene	ND	vs	6.4	0.97	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Methyl acetate	ND	vs	32	3.9	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Methyl tert-butyl ether	ND	vs	6.4	0.63	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Methylcyclohexane	ND	vs	6.4	0.98	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Methylene Chloride	ND	vs	6.4	3.0	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Styrene	ND	vs	6.4	0.32	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Tetrachloroethene	ND	vs	6.4	0.86	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Toluene	**5.0**	**J vs**	6.4	0.49	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
trans-1,2-Dichloroethene	ND	vs	6.4	0.66	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
trans-1,3-Dichloropropene	ND	vs	6.4	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Trichloroethene	**3.4**	**J vs**	6.4	1.4	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Trichlorofluoromethane	ND	vs	6.4	0.61	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Client Sample ID: 120N-20E (2-4)
Date Collected: 06/07/21 09:45
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-1
Matrix: Solid
Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	6.4	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	06/13/21 20:59	06/13/21 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*06/13/21 20:59*	*06/13/21 22:31*	*1*
4-Bromofluorobenzene (Surr)	*86*		*72 - 126*	*06/13/21 20:59*	*06/13/21 22:31*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*06/13/21 20:59*	*06/13/21 22:31*	*1*

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 120N-20E (12-13)
Lab Sample ID: 480-185755-2
Date Collected: 06/07/21 10:05
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.5	0.40	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,1,2,2-Tetrachloroethane	ND	vs	5.5	0.90	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.5	1.3	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,1,2-Trichloroethane	ND	vs	5.5	0.72	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,1-Dichloroethane	ND	vs	5.5	0.68	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,1-Dichloroethene	ND	vs	5.5	0.68	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2,3-Trichlorobenzene	ND	vs	5.5	0.59	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2,4-Trichlorobenzene	ND	vs	5.5	0.34	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.5	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2-Dibromoethane	ND	vs	5.5	0.71	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2-Dichlorobenzene	ND	vs	5.5	0.43	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2-Dichloroethane	ND	vs	5.5	0.28	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,2-Dichloropropane	ND	vs	5.5	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,3-Dichlorobenzene	ND	vs	5.5	0.29	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,4-Dichlorobenzene	ND	vs	5.5	0.78	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
2-Butanone (MEK)	ND	vs	28	2.0	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Acetone	**5.7**	**J vs**	28	4.7	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Benzene	ND	vs	5.5	0.27	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Bromodichloromethane	ND	vs	5.5	0.74	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Bromoform	ND	vs	5.5	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Bromomethane	ND	vs	5.5	0.50	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Carbon disulfide	ND	vs	5.5	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Carbon tetrachloride	ND	vs	5.5	0.54	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Chlorobenzene	ND	vs	5.5	0.73	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Chlorobromomethane	ND	vs	5.5	0.40	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Chloroethane	ND	vs *+	5.5	1.3	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Chloroform	ND	vs	5.5	0.34	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Chloromethane	ND	vs	5.5	0.33	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
cis-1,2-Dichloroethene	**160**	**vs**	5.5	0.71	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
cis-1,3-Dichloropropene	ND	vs	5.5	0.80	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Cyclohexane	ND	vs	5.5	0.78	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Dibromochloromethane	ND	vs	5.5	0.71	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Dichlorodifluoromethane	ND	vs	5.5	0.46	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Ethylbenzene	ND	vs	5.5	0.38	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Isopropylbenzene	ND	vs	5.5	0.84	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Methyl acetate	ND	vs	28	3.3	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Methyl tert-butyl ether	ND	vs	5.5	0.54	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Methylcyclohexane	ND	vs	5.5	0.84	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Methylene Chloride	ND	vs	5.5	2.6	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Styrene	ND	vs	5.5	0.28	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Tetrachloroethene	**0.89**	**J vs**	5.5	0.74	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Toluene	ND	vs	5.5	0.42	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
trans-1,2-Dichloroethene	**0.61**	**J vs**	5.5	0.57	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
trans-1,3-Dichloropropene	ND	vs	5.5	2.4	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Trichloroethene	**1000**	**E vs**	5.5	1.2	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Trichlorofluoromethane	ND	vs	5.5	0.52	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1

Client Sample ID: 120N-20E (12-13)
Date Collected: 06/07/21 10:05
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-2
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**4.4**	**J vs**	5.5	0.68	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1
Xylenes, Total	ND	vs	11	0.93	ug/Kg	☼	06/13/21 20:59	06/13/21 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*06/13/21 20:59*	*06/13/21 22:55*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 126*	*06/13/21 20:59*	*06/13/21 22:55*	*1*
Toluene-d8 (Surr)	*95*		*71 - 125*	*06/13/21 20:59*	*06/13/21 22:55*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		230	64	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,1,2,2-Tetrachloroethane	ND		230	38	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		230	120	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,1,2-Trichloroethane	ND		230	49	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,1-Dichloroethane	ND		230	72	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,1-Dichloroethene	ND		230	80	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2,3-Trichlorobenzene	ND		230	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2,4-Trichlorobenzene	ND		230	88	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2-Dibromo-3-Chloropropane	ND		230	120	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2-Dibromoethane	ND		230	41	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2-Dichlorobenzene	ND		230	59	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2-Dichloroethane	ND		230	95	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,2-Dichloropropane	ND		230	38	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,3-Dichlorobenzene	ND		230	62	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,4-Dichlorobenzene	ND		230	33	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
1,4-Dioxane	ND		4400	1200	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
2-Butanone (MEK)	ND		1200	690	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
2-Hexanone	ND		1200	480	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
4-Methyl-2-pentanone (MIBK)	ND		1200	74	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Acetone	ND		1200	960	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Benzene	ND		230	44	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Bromodichloromethane	ND		230	47	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Bromoform	ND		230	120	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Bromomethane	ND		230	51	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Carbon disulfide	ND		230	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Carbon tetrachloride	ND		230	59	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Chlorobenzene	ND		230	31	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Chlorobromomethane	ND		230	84	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Chloroethane	ND		230	48	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Chloroform	ND		230	160	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Chloromethane	ND		230	55	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
cis-1,2-Dichloroethene	**400**		230	64	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
cis-1,3-Dichloropropene	ND		230	56	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Cyclohexane	ND		230	52	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Dibromochloromethane	ND		230	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Dichlorodifluoromethane	ND		230	100	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Ethylbenzene	ND		230	68	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Isopropylbenzene	ND		230	35	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Methyl acetate	ND		1200	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Methyl tert-butyl ether	ND		230	88	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 120N-20E (12-13)
Lab Sample ID: 480-185755-2
Date Collected: 06/07/21 10:05
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	ND		230	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Methylene Chloride	ND		230	46	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Styrene	ND		230	56	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Tetrachloroethene	ND		230	31	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Toluene	ND		230	62	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
trans-1,2-Dichloroethene	ND		230	55	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
trans-1,3-Dichloropropene	ND		230	23	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Trichloroethene	**5600**		230	65	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Trichlorofluoromethane	ND		230	110	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Vinyl chloride	ND		230	78	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2
Xylenes, Total	ND		470	130	ug/Kg	☼	06/14/21 00:48	06/14/21 21:19	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*53 - 146*	*06/14/21 00:48*	*06/14/21 21:19*	*2*
4-Bromofluorobenzene (Surr)	*96*		*49 - 148*	*06/14/21 00:48*	*06/14/21 21:19*	*2*
Toluene-d8 (Surr)	*96*		*50 - 149*	*06/14/21 00:48*	*06/14/21 21:19*	*2*

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 0N-0E (12-13)
Lab Sample ID: 480-185755-3
Date Collected: 06/07/21 10:45
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2-Dichlorobenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Acetone	**5.1**	**J vs**	28	4.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Carbon disulfide	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Chloroethane	ND	vs *+	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
cis-1,2-Dichloroethene	**170**	**vs**	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Methylcyclohexane	ND	vs	5.7	0.87	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
trans-1,2-Dichloroethene	**0.95**	**J vs**	5.7	0.59	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Trichloroethene	**350**	**E vs**	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1

Client Sample ID: 0N-0E (12-13)

Date Collected: 06/07/21 10:45
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-3

Matrix: Solid
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	5.7	0.69	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	06/13/21 20:59	06/13/21 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/13/21 20:59*	*06/13/21 23:20*	*1*
4-Bromofluorobenzene (Surr)	*94*		*72 - 126*	*06/13/21 20:59*	*06/13/21 23:20*	*1*
Toluene-d8 (Surr)	*97*		*71 - 125*	*06/13/21 20:59*	*06/13/21 23:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		120	33	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,1,2,2-Tetrachloroethane	ND		120	19	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		120	59	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,1,2-Trichloroethane	ND		120	25	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,1-Dichloroethane	ND		120	37	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,1-Dichloroethene	ND		120	41	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2,3-Trichlorobenzene	ND		120	54	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2,4-Trichlorobenzene	ND		120	45	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2-Dibromo-3-Chloropropane	ND		120	59	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2-Dibromoethane	ND		120	21	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2-Dichlorobenzene	ND		120	30	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2-Dichloroethane	ND		120	48	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,2-Dichloropropane	ND		120	19	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,3-Dichlorobenzene	ND		120	32	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,4-Dichlorobenzene	ND		120	17	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
1,4-Dioxane	ND		2200	600	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
2-Butanone (MEK)	ND		590	350	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
2-Hexanone	ND		590	240	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
4-Methyl-2-pentanone (MIBK)	ND		590	38	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Acetone	ND		590	490	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Benzene	ND		120	22	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Bromodichloromethane	ND		120	24	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Bromoform	ND		120	59	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Bromomethane	ND		120	26	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Carbon disulfide	ND		120	54	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Carbon tetrachloride	ND		120	30	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Chlorobenzene	ND		120	16	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Chlorobromomethane	ND		120	43	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Chloroethane	ND		120	25	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Chloroform	ND		120	81	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Chloromethane	ND		120	28	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
cis-1,2-Dichloroethene	**580**		120	33	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
cis-1,3-Dichloropropene	ND		120	28	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Cyclohexane	ND		120	26	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Dibromochloromethane	ND		120	57	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Dichlorodifluoromethane	ND		120	52	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Ethylbenzene	ND		120	34	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Isopropylbenzene	ND		120	18	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Methyl acetate	ND		590	56	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 0N-0E (12-13)
Lab Sample ID: 480-185755-3
Date Collected: 06/07/21 10:45
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**110**	**J**	120	55	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Methylene Chloride	ND		120	23	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Styrene	ND		120	29	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Tetrachloroethene	ND		120	16	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Toluene	ND		120	32	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
trans-1,2-Dichloroethene	ND		120	28	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
trans-1,3-Dichloropropene	ND		120	12	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Trichloroethene	**2000**		120	33	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Trichlorofluoromethane	ND		120	55	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Vinyl chloride	ND		120	40	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1
Xylenes, Total	ND		240	66	ug/Kg	☼	06/14/21 00:48	06/14/21 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*	*06/14/21 00:48*	*06/14/21 21:43*	*1*
4-Bromofluorobenzene (Surr)	*100*		*49 - 148*	*06/14/21 00:48*	*06/14/21 21:43*	*1*
Toluene-d8 (Surr)	*98*		*50 - 149*	*06/14/21 00:48*	*06/14/21 21:43*	*1*

Client Sample ID: 0N-20E (11-12)

Date Collected: 06/07/21 11:20
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-4

Matrix: Solid
Percent Solids: 78.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.2	0.45	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,1,2,2-Tetrachloroethane	ND	vs	6.2	1.0	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.2	1.4	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,1,2-Trichloroethane	ND	vs	6.2	0.80	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,1-Dichloroethane	ND	vs	6.2	0.75	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,1-Dichloroethene	ND	vs	6.2	0.76	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2,3-Trichlorobenzene	ND	vs	6.2	0.66	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2,4-Trichlorobenzene	ND	vs	6.2	0.38	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.2	3.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2-Dibromoethane	ND	vs	6.2	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2-Dichlorobenzene	ND	vs	6.2	0.48	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2-Dichloroethane	ND	vs	6.2	0.31	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,2-Dichloropropane	ND	vs	6.2	3.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,3-Dichlorobenzene	ND	vs	6.2	0.32	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,4-Dichlorobenzene	ND	vs	6.2	0.86	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
1,4-Dioxane	ND	vs	120	27	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
2-Butanone (MEK)	ND	vs	31	2.3	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
2-Hexanone	ND	vs	31	3.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
4-Methyl-2-pentanone (MIBK)	ND	vs	31	2.0	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Acetone	**7.5**	**J vs**	31	5.2	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Benzene	ND	vs	6.2	0.30	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Bromodichloromethane	ND	vs	6.2	0.83	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Bromoform	ND	vs	6.2	3.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Bromomethane	ND	vs	6.2	0.56	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Carbon disulfide	ND	vs	6.2	3.1	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Carbon tetrachloride	ND	vs	6.2	0.60	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Chlorobenzene	ND	vs	6.2	0.81	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Chlorobromomethane	ND	vs	6.2	0.45	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Chloroethane	ND	vs *+	6.2	1.4	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Chloroform	ND	vs	6.2	0.38	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Chloromethane	ND	vs	6.2	0.37	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
cis-1,2-Dichloroethene	**0.99**	**J vs**	6.2	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
cis-1,3-Dichloropropene	ND	vs	6.2	0.89	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Cyclohexane	ND	vs	6.2	0.86	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Dibromochloromethane	ND	vs	6.2	0.79	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Dichlorodifluoromethane	ND	vs	6.2	0.51	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Ethylbenzene	ND	vs	6.2	0.43	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Isopropylbenzene	ND	vs	6.2	0.93	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Methyl acetate	ND	vs	31	3.7	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Methyl tert-butyl ether	ND	vs	6.2	0.61	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Methylcyclohexane	ND	vs	6.2	0.94	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Methylene Chloride	ND	vs	6.2	2.8	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Styrene	ND	vs	6.2	0.31	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Tetrachloroethene	ND	vs	6.2	0.83	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Toluene	ND	vs	6.2	0.47	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
trans-1,2-Dichloroethene	ND	vs	6.2	0.64	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
trans-1,3-Dichloropropene	ND	vs	6.2	2.7	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Trichloroethene	**1.4**	**J vs**	6.2	1.4	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Trichlorofluoromethane	ND	vs	6.2	0.58	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Client Sample ID: 0N-20E (11-12)
Date Collected: 06/07/21 11:20
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-4
Matrix: Solid
Percent Solids: 78.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	6.2	0.75	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/13/21 20:59	06/13/21 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*06/13/21 20:59*	*06/13/21 23:45*	*1*
4-Bromofluorobenzene (Surr)	*97*		*72 - 126*	*06/13/21 20:59*	*06/13/21 23:45*	*1*
Toluene-d8 (Surr)	*95*		*71 - 125*	*06/13/21 20:59*	*06/13/21 23:45*	*1*

Client Sample ID: 0N/-20E (12-13)

Date Collected: 06/07/21 11:55
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-5

Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.6	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,1,2,2-Tetrachloroethane	ND	vs	5.6	0.91	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.6	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,1,2-Trichloroethane	ND	vs	5.6	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,1-Dichloroethane	ND	vs	5.6	0.68	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,1-Dichloroethene	ND	vs	5.6	0.68	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2,3-Trichlorobenzene	ND	vs	5.6	0.59	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2,4-Trichlorobenzene	ND	vs	5.6	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2-Dibromoethane	ND	vs	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2-Dichlorobenzene	ND	vs	5.6	0.44	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2-Dichloroethane	ND	vs	5.6	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,2-Dichloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,3-Dichlorobenzene	ND	vs	5.6	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,4-Dichlorobenzene	ND	vs	5.6	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
2-Butanone (MEK)	ND	vs	28	2.0	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Acetone	**4.7**	**J vs**	28	4.7	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Benzene	ND	vs	5.6	0.27	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Bromodichloromethane	ND	vs	5.6	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Bromoform	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Bromomethane	ND	vs	5.6	0.50	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Carbon disulfide	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Carbon tetrachloride	ND	vs	5.6	0.54	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Chlorobenzene	ND	vs	5.6	0.74	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Chlorobromomethane	ND	vs	5.6	0.40	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Chloroethane	ND	vs *+	5.6	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Chloroform	ND	vs	5.6	0.35	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Chloromethane	ND	vs	5.6	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
cis-1,2-Dichloroethene	**45**	**vs**	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
cis-1,3-Dichloropropene	ND	vs	5.6	0.80	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Cyclohexane	ND	vs	5.6	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Dibromochloromethane	ND	vs	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Dichlorodifluoromethane	ND	vs	5.6	0.46	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Ethylbenzene	ND	vs	5.6	0.39	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Isopropylbenzene	ND	vs	5.6	0.84	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Methyl tert-butyl ether	ND	vs	5.6	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Methylcyclohexane	ND	vs	5.6	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Methylene Chloride	ND	vs	5.6	2.6	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Styrene	ND	vs	5.6	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Tetrachloroethene	ND	vs	5.6	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Toluene	ND	vs	5.6	0.42	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
trans-1,2-Dichloroethene	ND	vs	5.6	0.58	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
trans-1,3-Dichloropropene	ND	vs	5.6	2.5	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Trichloroethene	**3.0**	**J vs**	5.6	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Trichlorofluoromethane	ND	vs	5.6	0.53	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Client Sample ID: 0N/-20E (12-13)
Date Collected: 06/07/21 11:55
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-5
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	5.6	0.68	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1
Xylenes, Total	ND	vs	11	0.94	ug/Kg	☼	06/13/21 20:59	06/14/21 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*06/13/21 20:59*	*06/14/21 00:09*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/13/21 20:59*	*06/14/21 00:09*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*06/13/21 20:59*	*06/14/21 00:09*	*1*

Client Sample ID: 80N/-20E (12-13)

Date Collected: 06/07/21 13:10
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-6

Matrix: Solid
Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.93	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,1-Dichloroethane	ND	vs	5.7	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2,3-Trichlorobenzene	ND	vs	5.7	0.61	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2-Dichlorobenzene	ND	vs	5.7	0.45	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,2-Dichloropropane	ND	vs	5.7	2.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
2-Butanone (MEK)	ND	vs	29	2.1	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Acetone	**8.2**	**J vs**	29	4.8	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Bromodichloromethane	ND	vs	5.7	0.77	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Bromoform	ND	vs	5.7	2.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Carbon disulfide	ND	vs	5.7	2.9	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Chloroethane	ND	vs *+	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
cis-1,2-Dichloroethene	**70**	**vs**	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Methyl acetate	ND	vs	29	3.4	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Methylcyclohexane	ND	vs	5.7	0.87	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Styrene	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Tetrachloroethene	ND	vs	5.7	0.77	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
trans-1,2-Dichloroethene	ND	vs	5.7	0.59	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Trichloroethene	**3.6**	**J vs**	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 80N/-20E (12-13)
Lab Sample ID: 480-185755-6
Date Collected: 06/07/21 13:10
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	11	vs	5.7	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	06/13/21 20:59	06/14/21 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*06/13/21 20:59*	*06/14/21 00:34*	*1*
4-Bromofluorobenzene (Surr)	*94*		*72 - 126*	*06/13/21 20:59*	*06/14/21 00:34*	*1*
Toluene-d8 (Surr)	*95*		*71 - 125*	*06/13/21 20:59*	*06/14/21 00:34*	*1*

Client Sample ID: 100N-20E (12-13)
Lab Sample ID: 480-185755-7
Date Collected: 06/07/21 13:35
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 83.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.9	0.42	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,1,2,2-Tetrachloroethane	ND	vs	5.9	0.95	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.9	1.3	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,1,2-Trichloroethane	ND	vs	5.9	0.76	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,1-Dichloroethane	ND	vs	5.9	0.71	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,1-Dichloroethene	ND	vs	5.9	0.72	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2,3-Trichlorobenzene	ND	vs	5.9	0.62	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2,4-Trichlorobenzene	ND	vs	5.9	0.36	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.9	2.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2-Dibromoethane	ND	vs	5.9	0.75	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2-Dichlorobenzene	ND	vs	5.9	0.46	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2-Dichloroethane	ND	vs	5.9	0.29	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,2-Dichloropropane	ND	vs	5.9	2.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,3-Dichlorobenzene	ND	vs	5.9	0.30	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,4-Dichlorobenzene	ND	vs	5.9	0.82	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
1,4-Dioxane	ND	vs	120	26	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
2-Butanone (MEK)	**15**	**J vs**	29	2.1	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Acetone	**56**	**vs**	29	4.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Benzene	ND	vs	5.9	0.29	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Bromodichloromethane	ND	vs	5.9	0.78	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Bromoform	ND	vs	5.9	2.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Bromomethane	ND	vs	5.9	0.53	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Carbon disulfide	ND	vs	5.9	2.9	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Carbon tetrachloride	ND	vs	5.9	0.57	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Chlorobenzene	ND	vs	5.9	0.77	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Chlorobromomethane	ND	vs	5.9	0.42	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Chloroethane	ND	vs *+	5.9	1.3	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Chloroform	ND	vs	5.9	0.36	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Chloromethane	ND	vs	5.9	0.35	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
cis-1,2-Dichloroethene	ND	vs	5.9	0.75	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
cis-1,3-Dichloropropene	ND	vs	5.9	0.84	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Cyclohexane	ND	vs	5.9	0.82	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Dibromochloromethane	ND	vs	5.9	0.75	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Dichlorodifluoromethane	ND	vs	5.9	0.48	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Ethylbenzene	ND	vs	5.9	0.40	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Isopropylbenzene	ND	vs	5.9	0.88	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Methyl tert-butyl ether	ND	vs	5.9	0.57	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Methylcyclohexane	ND	vs	5.9	0.89	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Methylene Chloride	ND	vs	5.9	2.7	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Styrene	ND	vs	5.9	0.29	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Tetrachloroethene	ND	vs	5.9	0.79	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Toluene	ND	vs	5.9	0.44	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
trans-1,2-Dichloroethene	ND	vs	5.9	0.60	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
trans-1,3-Dichloropropene	ND	vs	5.9	2.6	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Trichloroethene	ND	vs	5.9	1.3	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Trichlorofluoromethane	ND	vs	5.9	0.55	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 100N-20E (12-13)
Lab Sample ID: 480-185755-7
Date Collected: 06/07/21 13:35
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 83.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	5.9	0.71	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1
Xylenes, Total	ND	vs	12	0.98	ug/Kg	☼	06/14/21 18:03	06/14/21 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/14/21 18:03*	*06/14/21 19:29*	*1*
4-Bromofluorobenzene (Surr)	*91*		*72 - 126*	*06/14/21 18:03*	*06/14/21 19:29*	*1*
Toluene-d8 (Surr)	*99*		*71 - 125*	*06/14/21 18:03*	*06/14/21 19:29*	*1*

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 140N-20E (11-12)
Lab Sample ID: 480-185755-8
Date Collected: 06/07/21 14:15
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.6	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,1,2,2-Tetrachloroethane	ND	vs	5.6	0.91	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.6	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,1,2-Trichloroethane	ND	vs	5.6	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,1-Dichloroethane	ND	vs	5.6	0.68	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,1-Dichloroethene	ND	vs	5.6	0.69	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2,3-Trichlorobenzene	ND	vs	5.6	0.60	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2,4-Trichlorobenzene	ND	vs	5.6	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2-Dibromoethane	ND	vs	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2-Dichlorobenzene	ND	vs	5.6	0.44	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2-Dichloroethane	ND	vs	5.6	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,2-Dichloropropane	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,3-Dichlorobenzene	ND	vs	5.6	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,4-Dichlorobenzene	ND	vs	5.6	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
2-Butanone (MEK)	**9.8**	**J vs**	28	2.1	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Acetone	**62**	**vs**	28	4.7	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Benzene	ND	vs	5.6	0.27	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Bromodichloromethane	ND	vs	5.6	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Bromoform	ND	vs	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Bromomethane	ND	vs	5.6	0.50	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Carbon disulfide	**24**	**vs**	5.6	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Carbon tetrachloride	ND	vs	5.6	0.54	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Chlorobenzene	ND	vs	5.6	0.74	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Chlorobromomethane	ND	vs	5.6	0.40	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Chloroethane	ND	vs *+	5.6	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Chloroform	ND	vs	5.6	0.35	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Chloromethane	ND	vs	5.6	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
cis-1,2-Dichloroethene	ND	vs	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
cis-1,3-Dichloropropene	ND	vs	5.6	0.81	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Cyclohexane	ND	vs	5.6	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Dibromochloromethane	ND	vs	5.6	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Dichlorodifluoromethane	ND	vs	5.6	0.46	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Ethylbenzene	ND	vs	5.6	0.39	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Isopropylbenzene	ND	vs	5.6	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Methyl tert-butyl ether	ND	vs	5.6	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Methylcyclohexane	ND	vs	5.6	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Methylene Chloride	ND	vs	5.6	2.6	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Styrene	ND	vs	5.6	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Tetrachloroethene	ND	vs	5.6	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Toluene	ND	vs	5.6	0.42	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
trans-1,2-Dichloroethene	ND	vs	5.6	0.58	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
trans-1,3-Dichloropropene	ND	vs	5.6	2.5	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Trichloroethene	ND	vs	5.6	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Trichlorofluoromethane	ND	vs	5.6	0.53	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 140N-20E (11-12)
Lab Sample ID: 480-185755-8
Date Collected: 06/07/21 14:15
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	5.6	0.68	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1
Xylenes, Total	ND	vs	11	0.94	ug/Kg	☼	06/13/21 20:59	06/14/21 01:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 126*	*06/13/21 20:59*	*06/14/21 01:23*	*1*
4-Bromofluorobenzene (Surr)	*92*		*72 - 126*	*06/13/21 20:59*	*06/14/21 01:23*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*06/13/21 20:59*	*06/14/21 01:23*	*1*

Client Sample ID: 140N-40E (12-13)

Date Collected: 06/08/21 08:28
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-9

Matrix: Solid
Percent Solids: 86.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.92	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,1,2-Trichloroethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,1-Dichloroethane	ND	vs	5.7	0.69	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,1-Dichloroethene	ND	vs	5.7	0.69	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2,3-Trichlorobenzene	ND	vs	5.7	0.60	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2,4-Trichlorobenzene	ND	vs	5.7	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2-Dichlorobenzene	ND	vs	5.7	0.44	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2-Dichloroethane	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,2-Dichloropropane	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,4-Dichlorobenzene	ND	vs	5.7	0.79	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
1,4-Dioxane	ND	vs	110	25	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
2-Butanone (MEK)	ND	vs	28	2.1	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
2-Hexanone	ND	vs	28	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
4-Methyl-2-pentanone (MIBK)	ND	vs	28	1.9	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Acetone	**7.0**	**J vs**	28	4.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Bromodichloromethane	ND	vs	5.7	0.76	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Bromoform	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Carbon disulfide	ND	vs	5.7	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Chlorobromomethane	ND	vs	5.7	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Chloroethane	ND	vs *+	5.7	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Chloroform	ND	vs	5.7	0.35	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Chloromethane	ND	vs	5.7	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
cis-1,2-Dichloroethene	**2.5**	**J vs**	5.7	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
cis-1,3-Dichloropropene	ND	vs	5.7	0.81	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Cyclohexane	ND	vs	5.7	0.79	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Dibromochloromethane	ND	vs	5.7	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Isopropylbenzene	ND	vs	5.7	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Methyl acetate	ND	vs	28	3.4	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Methyl tert-butyl ether	ND	vs	5.7	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Methylcyclohexane	ND	vs	5.7	0.86	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Styrene	ND	vs	5.7	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Tetrachloroethene	ND	vs	5.7	0.76	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
trans-1,2-Dichloroethene	ND	vs	5.7	0.58	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Trichloroethene	ND	vs	5.7	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Trichlorofluoromethane	ND	vs	5.7	0.53	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: 140N-40E (12-13)
Lab Sample ID: 480-185755-9
Date Collected: 06/08/21 08:28
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 86.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.7	J vs	5.7	0.69	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1
Xylenes, Total	ND	vs	11	0.95	ug/Kg	☼	06/13/21 20:59	06/14/21 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*06/13/21 20:59*	*06/14/21 01:47*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*06/13/21 20:59*	*06/14/21 01:47*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*06/13/21 20:59*	*06/14/21 01:47*	*1*

Client Sample ID: OMW-2 (13-14)
Lab Sample ID: 480-185755-10

Date Collected: 06/08/21 09:00
Matrix: Solid

Date Received: 06/08/21 16:27
Percent Solids: 88.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.5	0.40	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,1,2,2-Tetrachloroethane	ND	vs	5.5	0.89	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.5	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,1,2-Trichloroethane	ND	vs	5.5	0.71	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,1-Dichloroethane	ND	vs	5.5	0.67	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,1-Dichloroethene	ND	vs	5.5	0.67	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2,3-Trichlorobenzene	ND	vs	5.5	0.58	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2,4-Trichlorobenzene	ND	vs	5.5	0.33	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.5	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2-Dibromoethane	ND	vs	5.5	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2-Dichlorobenzene	ND	vs	5.5	0.43	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2-Dichloroethane	ND	vs	5.5	0.27	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,2-Dichloropropane	ND	vs	5.5	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,3-Dichlorobenzene	ND	vs	5.5	0.28	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,4-Dichlorobenzene	ND	vs	5.5	0.77	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
1,4-Dioxane	ND	vs	110	24	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
2-Butanone (MEK)	ND	vs	27	2.0	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
2-Hexanone	ND	vs	27	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
4-Methyl-2-pentanone (MIBK)	ND	vs	27	1.8	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Acetone	**5.0**	**J vs**	27	4.6	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Benzene	ND	vs	5.5	0.27	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Bromodichloromethane	ND	vs	5.5	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Bromoform	ND	vs	5.5	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Bromomethane	ND	vs	5.5	0.49	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Carbon disulfide	ND	vs	5.5	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Carbon tetrachloride	ND	vs	5.5	0.53	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Chlorobenzene	ND	vs	5.5	0.72	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Chlorobromomethane	ND	vs	5.5	0.39	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Chloroethane	ND	vs *+	5.5	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Chloroform	ND	vs	5.5	0.34	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Chloromethane	ND	vs	5.5	0.33	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
cis-1,2-Dichloroethene	**230**	**E vs**	5.5	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
cis-1,3-Dichloropropene	ND	vs	5.5	0.79	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Cyclohexane	ND	vs	5.5	0.77	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Dibromochloromethane	ND	vs	5.5	0.70	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Dichlorodifluoromethane	ND	vs	5.5	0.45	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Ethylbenzene	ND	vs	5.5	0.38	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Isopropylbenzene	ND	vs	5.5	0.82	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Methyl acetate	ND	vs	27	3.3	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Methyl tert-butyl ether	ND	vs	5.5	0.54	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Methylcyclohexane	ND	vs	5.5	0.83	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Methylene Chloride	ND	vs	5.5	2.5	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Styrene	ND	vs	5.5	0.27	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Tetrachloroethene	**28**	**vs**	5.5	0.73	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Toluene	**0.61**	**J vs**	5.5	0.41	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
trans-1,2-Dichloroethene	**0.84**	**J vs**	5.5	0.56	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
trans-1,3-Dichloropropene	ND	vs	5.5	2.4	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Trichloroethene	**4400**	**E vs**	5.5	1.2	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Trichlorofluoromethane	ND	vs	5.5	0.52	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1

Client Sample ID: OMW-2 (13-14)
Date Collected: 06/08/21 09:00
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-10
Matrix: Solid
Percent Solids: 88.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**8.9**	**vs**	5.5	0.67	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1
Xylenes, Total	ND	vs	11	0.92	ug/Kg	☼	06/13/21 20:59	06/14/21 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 126*	*06/13/21 20:59*	*06/14/21 02:11*	*1*
4-Bromofluorobenzene (Surr)	*94*		*72 - 126*	*06/13/21 20:59*	*06/14/21 02:11*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*06/13/21 20:59*	*06/14/21 02:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		480	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,1,2,2-Tetrachloroethane	ND		480	78	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		480	240	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,1,2-Trichloroethane	ND		480	100	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,1-Dichloroethane	ND		480	150	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,1-Dichloroethene	ND		480	170	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2,3-Trichlorobenzene	ND		480	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2,4-Trichlorobenzene	ND		480	180	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2-Dibromo-3-Chloropropane	ND		480	240	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2-Dibromoethane	ND		480	84	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2-Dichlorobenzene	ND		480	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2-Dichloroethane	ND		480	200	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,2-Dichloropropane	ND		480	78	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,3-Dichlorobenzene	ND		480	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,4-Dichlorobenzene	ND		480	67	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
1,4-Dioxane	ND		9100	2400	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
2-Butanone (MEK)	ND		2400	1400	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
2-Hexanone	ND		2400	980	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
4-Methyl-2-pentanone (MIBK)	ND		2400	150	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Acetone	ND		2400	2000	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Benzene	ND		480	91	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Bromodichloromethane	ND		480	96	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Bromoform	ND		480	240	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Bromomethane	ND		480	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Carbon disulfide	ND		480	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Carbon tetrachloride	ND		480	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Chlorobenzene	ND		480	63	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Chlorobromomethane	ND		480	170	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Chloroethane	ND		480	100	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Chloroform	ND		480	330	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Chloromethane	ND		480	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
cis-1,2-Dichloroethene	**530**		480	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
cis-1,3-Dichloropropene	ND		480	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Cyclohexane	ND		480	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Dibromochloromethane	ND		480	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Dichlorodifluoromethane	ND		480	210	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Ethylbenzene	ND		480	140	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Isopropylbenzene	ND		480	72	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Methyl acetate	ND		2400	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Methyl tert-butyl ether	ND		480	180	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: OMW-2 (13-14)
Lab Sample ID: 480-185755-10
Date Collected: 06/08/21 09:00
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 88.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	ND		480	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Methylene Chloride	ND		480	95	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Styrene	ND		480	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Tetrachloroethene	**400**	**J**	480	65	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Toluene	ND		480	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
trans-1,2-Dichloroethene	ND		480	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
trans-1,3-Dichloropropene	ND		480	47	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Trichloroethene	**31000**		480	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Trichlorofluoromethane	ND		480	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Vinyl chloride	ND		480	160	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4
Xylenes, Total	ND		960	270	ug/Kg	☼	06/14/21 00:48	06/14/21 22:06	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*53 - 146*	*06/14/21 00:48*	*06/14/21 22:06*	*4*
4-Bromofluorobenzene (Surr)	*99*		*49 - 148*	*06/14/21 00:48*	*06/14/21 22:06*	*4*
Toluene-d8 (Surr)	*96*		*50 - 149*	*06/14/21 00:48*	*06/14/21 22:06*	*4*

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Client Sample ID: BMW-300 (13-14)
Date Collected: 06/08/21 09:40
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-11
Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		460	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,1,2,2-Tetrachloroethane	ND		460	76	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		460	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,1,2-Trichloroethane	ND		460	98	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,1-Dichloroethane	ND		460	140	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,1-Dichloroethene	ND		460	160	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2,3-Trichlorobenzene	ND		460	210	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2,4-Trichlorobenzene	ND		460	180	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2-Dibromo-3-Chloropropane	ND		460	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2-Dibromoethane	ND		460	81	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2-Dichlorobenzene	ND		460	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2-Dichloroethane	ND		460	190	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,2-Dichloropropane	ND		460	75	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,3-Dichlorobenzene	ND		460	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,4-Dichlorobenzene	ND		460	65	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
1,4-Dioxane	ND		8800	2400	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
2-Butanone (MEK)	ND		2300	1400	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
2-Hexanone	ND		2300	950	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
4-Methyl-2-pentanone (MIBK)	ND		2300	150	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Acetone	ND		2300	1900	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Benzene	ND		460	88	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Bromodichloromethane	ND		460	93	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Bromoform	ND		460	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Bromomethane	ND		460	100	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Carbon disulfide	ND		460	210	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Carbon tetrachloride	ND		460	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Chlorobenzene	ND		460	61	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Chlorobromomethane	ND		460	170	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Chloroethane	ND		460	97	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Chloroform	ND		460	320	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Chloromethane	ND		460	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
cis-1,2-Dichloroethene	**2100**		460	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
cis-1,3-Dichloropropene	ND		460	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Cyclohexane	ND		460	100	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Dibromochloromethane	ND		460	230	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Dichlorodifluoromethane	ND		460	200	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Ethylbenzene	ND		460	140	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Isopropylbenzene	ND		460	70	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Methyl acetate	ND		2300	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Methyl tert-butyl ether	ND		460	180	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Methylcyclohexane	ND		460	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Methylene Chloride	ND		460	92	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Styrene	ND		460	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Tetrachloroethene	ND		460	62	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Toluene	ND		460	120	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
trans-1,2-Dichloroethene	ND		460	110	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
trans-1,3-Dichloropropene	ND		460	46	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Trichloroethene	**19000**		460	130	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Trichlorofluoromethane	ND		460	220	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4

Client: New York State D.E.C.
Job ID: 480-185755-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-300 (13-14)
Lab Sample ID: 480-185755-11
Date Collected: 06/08/21 09:40
Matrix: Solid
Date Received: 06/08/21 16:27
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		460	160	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4
Xylenes, Total	ND		930	260	ug/Kg	☼	06/14/21 00:48	06/14/21 22:29	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*53 - 146*	*06/14/21 00:48*	*06/14/21 22:29*	*4*
4-Bromofluorobenzene (Surr)	*101*		*49 - 148*	*06/14/21 00:48*	*06/14/21 22:29*	*4*
Toluene-d8 (Surr)	*98*		*50 - 149*	*06/14/21 00:48*	*06/14/21 22:29*	*4*

Client Sample ID: OMW-2 (3.5-4)
Date Collected: 06/08/21 08:55
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-12
Matrix: Solid
Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.1	0.44	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,1,2,2-Tetrachloroethane	ND	vs	6.1	0.99	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.1	1.4	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,1,2-Trichloroethane	ND	vs	6.1	0.79	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,1-Dichloroethane	ND	vs	6.1	0.74	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,1-Dichloroethene	ND	vs	6.1	0.75	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2,3-Trichlorobenzene	ND	vs	6.1	0.65	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2,4-Trichlorobenzene	ND	vs	6.1	0.37	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.1	3.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2-Dibromoethane	ND	vs	6.1	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2-Dichlorobenzene	ND	vs	6.1	0.48	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2-Dichloroethane	ND	vs	6.1	0.31	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,2-Dichloropropane	ND	vs	6.1	3.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,3-Dichlorobenzene	ND	vs	6.1	0.31	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,4-Dichlorobenzene	ND	vs	6.1	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
1,4-Dioxane	ND	vs	120	27	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
2-Butanone (MEK)	**12**	**J vs**	30	2.2	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Acetone	**43**	**vs**	30	5.1	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Benzene	ND	vs	6.1	0.30	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Bromodichloromethane	ND	vs	6.1	0.82	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Bromoform	ND	vs	6.1	3.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Bromomethane	ND	vs	6.1	0.55	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Carbon disulfide	ND	vs	6.1	3.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Carbon tetrachloride	ND	vs	6.1	0.59	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Chlorobenzene	ND	vs	6.1	0.80	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Chlorobromomethane	ND	vs	6.1	0.44	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Chloroethane	ND	vs *+	6.1	1.4	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Chloroform	ND	vs	6.1	0.38	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Chloromethane	ND	vs	6.1	0.37	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
cis-1,2-Dichloroethene	ND	vs	6.1	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
cis-1,3-Dichloropropene	ND	vs	6.1	0.88	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Cyclohexane	ND	vs	6.1	0.85	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Dibromochloromethane	ND	vs	6.1	0.78	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Dichlorodifluoromethane	ND	vs	6.1	0.50	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Ethylbenzene	ND	vs	6.1	0.42	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Isopropylbenzene	ND	vs	6.1	0.92	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Methyl acetate	ND	vs	30	3.7	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Methyl tert-butyl ether	ND	vs	6.1	0.60	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Methylcyclohexane	ND	vs	6.1	0.93	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Methylene Chloride	ND	vs	6.1	2.8	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Styrene	ND	vs	6.1	0.30	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Tetrachloroethene	ND	vs	6.1	0.82	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Toluene	**3.8**	**J vs**	6.1	0.46	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
trans-1,2-Dichloroethene	ND	vs	6.1	0.63	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
trans-1,3-Dichloropropene	ND	vs	6.1	2.7	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Trichloroethene	**5.8**	**J vs**	6.1	1.3	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Trichlorofluoromethane	ND	vs	6.1	0.58	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Client Sample ID: OMW-2 (3.5-4)
Date Collected: 06/08/21 08:55
Date Received: 06/08/21 16:27

Lab Sample ID: 480-185755-12
Matrix: Solid
Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	vs	6.1	0.74	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	06/13/21 20:59	06/14/21 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*64 - 126*	*06/13/21 20:59*	*06/14/21 03:01*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*06/13/21 20:59*	*06/14/21 03:01*	*1*
Toluene-d8 (Surr)	*93*		*71 - 125*	*06/13/21 20:59*	*06/14/21 03:01*	*1*

ATTACHMENT B

CASE NARRATIVE & COC

Case Narrative

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Job ID: 480-185755-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-185755-1

Comments
No additional comments.

Receipt
The samples were received on 6/8/2021 4:27 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method 8260C: The following sample was analyzed using medium level soil analysis to bring the concentration of target analytes within the calibration range: 0N-0E (12-13) (480-185755-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-585182 and analytical batch 480-585176 recovered outside control limits for the following analyte: Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples were affected : 120N-20E (2-4) (480-185755-1), 120N-20E (12-13) (480-185755-2), 0N-0E (12-13) (480-185755-3), 0N-20E (11-12) (480-185755-4), 0N/-20E (12-13) (480-185755-5), 80N/-20E (12-13) (480-185755-6), 140N-20E (11-12) (480-185755-8), 140N-40E (12-13) (480-185755-9), OMW-2 (13-14) (480-185755-10) and OMW-2 (3.5-4) (480-185755-12).

Method 8260C: The laboratory control sample (LCS) for preparation batch 480-585343 and analytical batch 480-585327 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated sample is: 100N-20E (12-13) (480-185755-7).

Method 8260C: The following samples were analyzed using medium level soil analysis and was diluted to bring the concentration of target analytes within the calibration range: 120N-20E (12-13) (480-185755-2), OMW-2 (13-14) (480-185755-10) and BMW-300 (13-14) (480-185755-11). Elevated reporting limits (RLs) are provided.

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

Sample Summary

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-185755-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-185755-1	120N-20E (2-4)	Solid	06/07/21 09:45	06/08/21 16:27	
480-185755-2	120N-20E (12-13)	Solid	06/07/21 10:05	06/08/21 16:27	
480-185755-3	0N-0E (12-13)	Solid	06/07/21 10:45	06/08/21 16:27	
480-185755-4	0N-20E (11-12)	Solid	06/07/21 11:20	06/08/21 16:27	
480-185755-5	0N/-20E (12-13)	Solid	06/07/21 11:55	06/08/21 16:27	
480-185755-6	80N/-20E (12-13)	Solid	06/07/21 13:10	06/08/21 16:27	
480-185755-7	100N-20E (12-13)	Solid	06/07/21 13:35	06/08/21 16:27	
480-185755-8	140N-20E (11-12)	Solid	06/07/21 14:15	06/08/21 16:27	
480-185755-9	140N-40E (12-13)	Solid	06/08/21 08:28	06/08/21 16:27	
480-185755-10	OMW-2 (13-14)	Solid	06/08/21 09:00	06/08/21 16:27	
480-185755-11	BMW-300 (13-14)	Solid	06/08/21 09:40	06/08/21 16:27	
480-185755-12	OMW-2 (3.5-4)	Solid	06/08/21 08:55	06/08/21 16:27	

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Kevin T. McGowan	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-161559-35469.1
Client Contact: George Kisluk	Phone: 716-923-1101	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin:	Page: Page 1 of 5
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			Preservation Codes:
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone: 716-923-1321	PO #: CallOut ID: 136077			
Email: george.kisluk@aecom.com	WO #:			
Project Name: Erdle	Project #: 48023857			
Site:	SSOW#:			

480-185755 Chain of Custody

Hexane
None
AsNaO2
Na2O4S
Na2SO3
Na2S2O3
2SO4
3P Dodecahydrate
.cetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL list	Total Number of container	Special Instructions/Note:
			Preservation Code:				N		
120N/-20E (2-4)	6/7/21	09:45	G	Solid	N	N	1	1	
120N/-20E (12-13)		10:05		Solid			1	1	
0N/0E (12-13)		10:45		Solid			1	1	
0N/-20E (11-12)		11:20		Solid			1	1	
0N/20E (12-13)		11:55		Solid			1	1	
80N/-20E (12-13)		13:10		Solid			1	1	
100N/-20E (12-13)		13:35		Solid			1	1	
140N/-20E (11-12)		14:15		Solid			1	1	
140N/-40E (12-13)	6/8/21	08:28		Solid			1	1	
OMW-2 (13-14)		09:00		Solid			1	1	
BMW-300 (13-14)		09:10		Solid			1	1	

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Client Drop off

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/8/21 15:12	Aecom		6/8/21 1515	Aecom
2		6/8/21 1650	Aecom		6/8/21 16:27	
3						

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

Cooler Temperature(s) °C and Other Remarks: #1 2.8

Ver: 11/01/2020

DATA USABILITY SUMMARY REPORT

For

ERDLE PERFORATING #828072
WATER SAMPLES

VOA
SDG No. 480-188293-1

Sampling Date: August 11-12, 2021

Submitted to:

AECOM
One John James Audubon Parkway
Suite 210
Amherst, New York, USA
716-313-0870

Prepared by:

Environmental Occupational & Public Health Consultants Inc. (EOPHC)
Environmental Data Validation Inc. (EDV, Inc.)
1326 Orangewood Ave
Pittsburgh, PA 15216
(412) 341-5281

Site: Erdle Perforating #828072
SDG #: 480-188293-1
Client: AECOM
Date: September 24, 2021

Laboratory: Eurofins TestAmerica
Reviewer: D. McGuire

Sample Identification Table

Client Sample ID	Laboratory ID	Matrix	VOC
OMW-2	480-188293-1	Water	X
OMW-2D	480-188293-2	Water	X
QMW-2DD	480-188293-3	Water	X
FD-081121	480-188293-4	Water	X
BMW-1DD	480-188293-5	Water	X
BMW-1D	480-188293-6	Water	X
OMW-1	480-188293-7	Water	X
BMW-3DD	480-188293-8	Water	X
BMW-3D	480-188293-9	Water	X
TRIP BLANK	480-188293-10	Water	X

The data package contained ten (10) water samples, which included one (1) field duplicate sample and one (1) trip blank sample. A MS/MSD pair was also presented. The samples were analyzed via Method SW-846 8260C. The adherence of laboratory analytical performance to this method's analytical specifications was evaluated during the data validation process. The data package was evaluated for its usability as defined by the Guidance for the Development of Data Usability Summary Reports (DER-10, 11/09). USEPA Region II standard operating procedures were used as guidance documents. According to the NYSDEC Guidance for the Development of Data Usability Summary Reports, the following QC data were evaluated: blanks, instrument tunings, calibration standards, calibration verifications, laboratory controls, surrogate recoveries, spike recoveries, and sample data.

The following Attachments are a part of this report— all validated Form 1s are presented in Attachment A. All Case Narrative and Chain of Custody (COC) records are presented in Attachment B.

All QC data were within quality control limits, except the following issues:

Cover letter, Narrative and Data Reporting Forms (Form 1s): The deficiencies noted in the case narrative that affect data usability have been discussed in applicable sections. Data that have no impact on data usability are not discussed.

Chain of Custody (COC): All samples listed in the Sample Identification Table were present on the COC.

Preservation: Preservation was acceptable.

Holding Time: Holding times were within acceptable criteria for all samples.

Blanks Quality Control: There was no blank contamination present.

Calibration Quality Control: The following were qualified due to calibration issues;

Sample ID	Compound	Qualifier
480-188293-1, 480-188293-2, 480-188293-3, 480-188293-4, 480-188293-5, 480-188293-6, 480-188293-7, 480-188293-8, 480-188293-9	2-Hexanone, Carbon tetrachloride, Dibromochloromethane	UJ
480-188293-2, 480-188293-6	1,2-Dibromo-3-chloropropane	UJ

Laboratory Control Sample (LCS): Some recoveries were outside QC criterion but no data were impacted.

Surrogates: The recoveries were acceptable.

Internal Standards: The recoveries were acceptable.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD): Sample results were not qualified based on MS/MSD results only.

Field Duplicate: RPDs are calculated when both parent and duplicate sample report detects. The following RPDs were calculated;

Compound	Sample ID (ug/kg) BMW-2D	Sample ID (ug/kg) FD-081121	RPD
Cis-1,2-Dichloroethene	170	190	11.1%
Trichloroethene	130	150	14.3%
Vinyl chloride	8	8.7	8.4%

Compound Quantitation: Reporting limits are elevated for several samples. These samples were analyzed using at a dilution due to matrix interference and/or results outside of the calibration range. When a diluted sample result within the calibration range was reported for a sample compound, the result shall be used and the sample result outside the calibration range shall be qualified as rejected (R).

Additional Comments: Some Form 1s and case narratives are reporting criteria out of QC limits. If data were impacted due to the deficiency, it is discussed in the DUSR, and appropriate qualifier(s) applied. Therefore, all discussions in the DUSR relate to all conditions that affected data usability. When there are multiple analyses, the validator presents the best run (Attachment A).

Data usability: Data qualified with the "UJ" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "J" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "R" qualifier are not usable due to severe quality control issues. Data qualified with the "U" qualifier are usable at the reporting limit.

ATTACHMENT A

VALIDATED AND QUALIFIED DATA SHEETS (FORM 1s)

DLM 9/24/21

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: OMW-2
Date Collected: 08/11/21 15:10
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-1
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			1000	820	ug/L			08/18/21 15:19	1000
1,1,2,2-Tetrachloroethane	ND			1000	210	ug/L			08/18/21 15:19	1000
1,1,2-Trichloroethane	ND			1000	230	ug/L			08/18/21 15:19	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			1000	310	ug/L			08/18/21 15:19	1000
1,1-Dichloroethane	ND			1000	380	ug/L			08/18/21 15:19	1000
1,1-Dichloroethene	ND			1000	290	ug/L			08/18/21 15:19	1000
1,2,4-Trichlorobenzene	ND			1000	410	ug/L			08/18/21 15:19	1000
1,2-Dibromo-3-Chloropropane	ND	*+		1000	390	ug/L			08/18/21 15:19	1000
1,2-Dichlorobenzene	ND			1000	790	ug/L			08/18/21 15:19	1000
1,2-Dichloroethane	ND			1000	210	ug/L			08/18/21 15:19	1000
1,2-Dichloropropane	ND			1000	720	ug/L			08/18/21 15:19	1000
1,3-Dichlorobenzene	ND			1000	780	ug/L			08/18/21 15:19	1000
1,4-Dichlorobenzene	ND			1000	840	ug/L			08/18/21 15:19	1000
2-Butanone (MEK)	ND			10000	1300	ug/L			08/18/21 15:19	1000
2-Hexanone	ND		UJ	5000	1200	ug/L			08/18/21 15:19	1000
4-Methyl-2-pentanone (MIBK)	ND			5000	2100	ug/L			08/18/21 15:19	1000
Acetone	ND			10000	3000	ug/L			08/18/21 15:19	1000
Benzene	ND			1000	410	ug/L			08/18/21 15:19	1000
Bromodichloromethane	ND			1000	390	ug/L			08/18/21 15:19	1000
Bromoform	ND			1000	260	ug/L			08/18/21 15:19	1000
Bromomethane	ND			1000	690	ug/L			08/18/21 15:19	1000
Carbon disulfide	ND			1000	190	ug/L			08/18/21 15:19	1000
Carbon tetrachloride	ND	*+	UJ	1000	270	ug/L			08/18/21 15:19	1000
Chlorobenzene	ND			1000	750	ug/L			08/18/21 15:19	1000
Dibromochloromethane	ND	*+	UJ	1000	320	ug/L			08/18/21 15:19	1000
Chloroethane	ND			1000	320	ug/L			08/18/21 15:19	1000
Chloroform	ND			1000	340	ug/L			08/18/21 15:19	1000
Chloromethane	ND			1000	350	ug/L			08/18/21 15:19	1000
cis-1,2-Dichloroethene	**27000**			1000	810	ug/L			08/18/21 15:19	1000
cis-1,3-Dichloropropene	ND			1000	360	ug/L			08/18/21 15:19	1000
Cyclohexane	ND			1000	180	ug/L			08/18/21 15:19	1000
Dichlorodifluoromethane	ND			1000	680	ug/L			08/18/21 15:19	1000
Ethylbenzene	ND			1000	740	ug/L			08/18/21 15:19	1000
1,2-Dibromoethane	ND			1000	730	ug/L			08/18/21 15:19	1000
Isopropylbenzene	ND			1000	790	ug/L			08/18/21 15:19	1000
Methyl acetate	ND			2500	1300	ug/L			08/18/21 15:19	1000
Methyl tert-butyl ether	ND			1000	160	ug/L			08/18/21 15:19	1000
Methylcyclohexane	ND			1000	160	ug/L			08/18/21 15:19	1000
Methylene Chloride	ND			1000	440	ug/L			08/18/21 15:19	1000
Styrene	ND			1000	730	ug/L			08/18/21 15:19	1000
Tetrachloroethene	ND			1000	360	ug/L			08/18/21 15:19	1000
Toluene	ND			1000	510	ug/L			08/18/21 15:19	1000
trans-1,2-Dichloroethene	ND			1000	900	ug/L			08/18/21 15:19	1000
trans-1,3-Dichloropropene	ND			1000	370	ug/L			08/18/21 15:19	1000
Trichloroethene	**150000**	**E**	R	1000	460	ug/L			08/18/21 15:19	1000
Trichlorofluoromethane	ND			1000	880	ug/L			08/18/21 15:19	1000
Vinyl chloride	**2200**			1000	900	ug/L			08/18/21 15:19	1000
Xylenes, Total	ND			2000	660	ug/L			08/18/21 15:19	1000

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: OMW-2

Date Collected: 08/11/21 15:10
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-1

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/18/21 15:19*	*1000*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*08/18/21 15:19*	*1000*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*08/18/21 15:19*	*1000*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*08/18/21 15:19*	*1000*

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		R	4000	3300	ug/L			08/19/21 14:51	4000
1,1,2,2-Tetrachloroethane	ND			4000	840	ug/L			08/19/21 14:51	4000
1,1,2-Trichloroethane	ND			4000	920	ug/L			08/19/21 14:51	4000
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			4000	1200	ug/L			08/19/21 14:51	4000
1,1-Dichloroethane	ND			4000	1500	ug/L			08/19/21 14:51	4000
1,1-Dichloroethene	ND			4000	1200	ug/L			08/19/21 14:51	4000
1,2,4-Trichlorobenzene	ND			4000	1600	ug/L			08/19/21 14:51	4000
1,2-Dibromo-3-Chloropropane	ND	*+		4000	1600	ug/L			08/19/21 14:51	4000
1,2-Dichlorobenzene	ND			4000	3200	ug/L			08/19/21 14:51	4000
1,2-Dichloroethane	ND			4000	840	ug/L			08/19/21 14:51	4000
1,2-Dichloropropane	ND			4000	2900	ug/L			08/19/21 14:51	4000
1,3-Dichlorobenzene	ND			4000	3100	ug/L			08/19/21 14:51	4000
1,4-Dichlorobenzene	ND			4000	3400	ug/L			08/19/21 14:51	4000
2-Butanone (MEK)	ND			40000	5300	ug/L			08/19/21 14:51	4000
2-Hexanone	ND	*+		20000	5000	ug/L			08/19/21 14:51	4000
4-Methyl-2-pentanone (MIBK)	ND			20000	8400	ug/L			08/19/21 14:51	4000
Acetone	ND			40000	12000	ug/L			08/19/21 14:51	4000
Benzene	ND			4000	1600	ug/L			08/19/21 14:51	4000
Bromodichloromethane	ND			4000	1600	ug/L			08/19/21 14:51	4000
Bromoform	ND			4000	1000	ug/L			08/19/21 14:51	4000
Bromomethane	ND			4000	2800	ug/L			08/19/21 14:51	4000
Carbon disulfide	ND			4000	760	ug/L			08/19/21 14:51	4000
Carbon tetrachloride	ND			4000	1100	ug/L			08/19/21 14:51	4000
Chlorobenzene	ND			4000	3000	ug/L			08/19/21 14:51	4000
Dibromochloromethane	ND	*+		4000	1300	ug/L			08/19/21 14:51	4000
Chloroethane	ND			4000	1300	ug/L			08/19/21 14:51	4000
Chloroform	ND			4000	1400	ug/L			08/19/21 14:51	4000
Chloromethane	ND			4000	1400	ug/L			08/19/21 14:51	4000
cis-1,2-Dichloroethene	**25000**			4000	3200	ug/L			08/19/21 14:51	4000
cis-1,3-Dichloropropene	ND			4000	1400	ug/L			08/19/21 14:51	4000
Cyclohexane	ND			4000	720	ug/L			08/19/21 14:51	4000
Dichlorodifluoromethane	ND			4000	2700	ug/L			08/19/21 14:51	4000
Ethylbenzene	ND			4000	3000	ug/L			08/19/21 14:51	4000
1,2-Dibromoethane	ND			4000	2900	ug/L			08/19/21 14:51	4000
Isopropylbenzene	ND			4000	3200	ug/L			08/19/21 14:51	4000
Methyl acetate	ND			10000	5200	ug/L			08/19/21 14:51	4000
Methyl tert-butyl ether	ND			4000	640	ug/L			08/19/21 14:51	4000
Methylcyclohexane	ND			4000	640	ug/L			08/19/21 14:51	4000
Methylene Chloride	ND			4000	1800	ug/L			08/19/21 14:51	4000
Styrene	ND			4000	2900	ug/L			08/19/21 14:51	4000
Tetrachloroethene	ND			4000	1400	ug/L			08/19/21 14:51	4000
Toluene	ND			4000	2000	ug/L			08/19/21 14:51	4000
trans-1,2-Dichloroethene	ND			4000	3600	ug/L			08/19/21 14:51	4000

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: OMW-2
Lab Sample ID: 480-188293-1
Date Collected: 08/11/21 15:10
Matrix: Water
Date Received: 08/12/21 15:18

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		R	4000	1500	ug/L			08/19/21 14:51	4000
Trichloroethene	**140000**			4000	1800	ug/L			08/19/21 14:51	4000
Trichlorofluoromethane	ND		R	4000	3500	ug/L			08/19/21 14:51	4000
Vinyl chloride	ND		R	4000	3600	ug/L			08/19/21 14:51	4000
Xylenes, Total	ND		R	8000	2600	ug/L			08/19/21 14:51	4000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/19/21 14:51*	*4000*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/19/21 14:51*	*4000*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*08/19/21 14:51*	*4000*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*08/19/21 14:51*	*4000*

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: BMW-2D
Date Collected: 08/11/21 13:18
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-2
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			4.0	3.3	ug/L			08/19/21 15:14	4
1,1,2,2-Tetrachloroethane	ND			4.0	0.84	ug/L			08/19/21 15:14	4
1,1,2-Trichloroethane	ND			4.0	0.92	ug/L			08/19/21 15:14	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			4.0	1.2	ug/L			08/19/21 15:14	4
1,1-Dichloroethane	ND			4.0	1.5	ug/L			08/19/21 15:14	4
1,1-Dichloroethene	ND			4.0	1.2	ug/L			08/19/21 15:14	4
1,2,4-Trichlorobenzene	ND			4.0	1.6	ug/L			08/19/21 15:14	4
1,2-Dibromo-3-Chloropropane	ND	*+	UJ	4.0	1.6	ug/L			08/19/21 15:14	4
1,2-Dichlorobenzene	ND			4.0	3.2	ug/L			08/19/21 15:14	4
1,2-Dichloroethane	ND			4.0	0.84	ug/L			08/19/21 15:14	4
1,2-Dichloropropane	ND			4.0	2.9	ug/L			08/19/21 15:14	4
1,3-Dichlorobenzene	ND			4.0	3.1	ug/L			08/19/21 15:14	4
1,4-Dichlorobenzene	ND			4.0	3.4	ug/L			08/19/21 15:14	4
2-Butanone (MEK)	ND			40	5.3	ug/L			08/19/21 15:14	4
2-Hexanone	ND	*+	UJ	20	5.0	ug/L			08/19/21 15:14	4
4-Methyl-2-pentanone (MIBK)	ND			20	8.4	ug/L			08/19/21 15:14	4
Acetone	ND			40	12	ug/L			08/19/21 15:14	4
Benzene	ND			4.0	1.6	ug/L			08/19/21 15:14	4
Bromodichloromethane	ND			4.0	1.6	ug/L			08/19/21 15:14	4
Bromoform	ND			4.0	1.0	ug/L			08/19/21 15:14	4
Bromomethane	ND			4.0	2.8	ug/L			08/19/21 15:14	4
Carbon disulfide	ND			4.0	0.76	ug/L			08/19/21 15:14	4
Carbon tetrachloride	ND		UJ	4.0	1.1	ug/L			08/19/21 15:14	4
Chlorobenzene	ND			4.0	3.0	ug/L			08/19/21 15:14	4
Dibromochloromethane	ND	*+	UJ	4.0	1.3	ug/L			08/19/21 15:14	4
Chloroethane	ND			4.0	1.3	ug/L			08/19/21 15:14	4
Chloroform	ND			4.0	1.4	ug/L			08/19/21 15:14	4
Chloromethane	ND			4.0	1.4	ug/L			08/19/21 15:14	4
cis-1,2-Dichloroethene	**170**			4.0	3.2	ug/L			08/19/21 15:14	4
cis-1,3-Dichloropropene	ND			4.0	1.4	ug/L			08/19/21 15:14	4
Cyclohexane	ND			4.0	0.72	ug/L			08/19/21 15:14	4
Dichlorodifluoromethane	ND			4.0	2.7	ug/L			08/19/21 15:14	4
Ethylbenzene	ND			4.0	3.0	ug/L			08/19/21 15:14	4
1,2-Dibromoethane	ND			4.0	2.9	ug/L			08/19/21 15:14	4
Isopropylbenzene	ND			4.0	3.2	ug/L			08/19/21 15:14	4
Methyl acetate	ND			10	5.2	ug/L			08/19/21 15:14	4
Methyl tert-butyl ether	ND			4.0	0.64	ug/L			08/19/21 15:14	4
Methylcyclohexane	ND			4.0	0.64	ug/L			08/19/21 15:14	4
Methylene Chloride	ND			4.0	1.8	ug/L			08/19/21 15:14	4
Styrene	ND			4.0	2.9	ug/L			08/19/21 15:14	4
Tetrachloroethene	ND			4.0	1.4	ug/L			08/19/21 15:14	4
Toluene	ND			4.0	2.0	ug/L			08/19/21 15:14	4
trans-1,2-Dichloroethene	ND			4.0	3.6	ug/L			08/19/21 15:14	4
trans-1,3-Dichloropropene	ND			4.0	1.5	ug/L			08/19/21 15:14	4
Trichloroethene	**130**			4.0	1.8	ug/L			08/19/21 15:14	4
Trichlorofluoromethane	ND			4.0	3.5	ug/L			08/19/21 15:14	4
Vinyl chloride	**8.0**			4.0	3.6	ug/L			08/19/21 15:14	4
Xylenes, Total	ND			8.0	2.6	ug/L			08/19/21 15:14	4

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-2D
Lab Sample ID: 480-188293-2
Date Collected: 08/11/21 13:18
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		08/19/21 15:14	4
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		08/19/21 15:14	4
4-Bromofluorobenzene (Surr)	93		73 - 120		08/19/21 15:14	4
Dibromofluoromethane (Surr)	97		75 - 123		08/19/21 15:14	4

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: BMW-2DD
Date Collected: 08/11/21 14:30
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-3
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			1.0	0.82	ug/L			08/18/21 16:06	1
1,1,2,2-Tetrachloroethane	ND			1.0	0.21	ug/L			08/18/21 16:06	1
1,1,2-Trichloroethane	ND			1.0	0.23	ug/L			08/18/21 16:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			1.0	0.31	ug/L			08/18/21 16:06	1
1,1-Dichloroethane	ND			1.0	0.38	ug/L			08/18/21 16:06	1
1,1-Dichloroethene	ND			1.0	0.29	ug/L			08/18/21 16:06	1
1,2,4-Trichlorobenzene	ND			1.0	0.41	ug/L			08/18/21 16:06	1
1,2-Dibromo-3-Chloropropane	ND	*+		1.0	0.39	ug/L			08/18/21 16:06	1
1,2-Dichlorobenzene	ND			1.0	0.79	ug/L			08/18/21 16:06	1
1,2-Dichloroethane	ND			1.0	0.21	ug/L			08/18/21 16:06	1
1,2-Dichloropropane	ND			1.0	0.72	ug/L			08/18/21 16:06	1
1,3-Dichlorobenzene	ND			1.0	0.78	ug/L			08/18/21 16:06	1
1,4-Dichlorobenzene	ND			1.0	0.84	ug/L			08/18/21 16:06	1
2-Butanone (MEK)	ND			10	1.3	ug/L			08/18/21 16:06	1
2-Hexanone	ND		UJ	5.0	1.2	ug/L			08/18/21 16:06	1
4-Methyl-2-pentanone (MIBK)	ND			5.0	2.1	ug/L			08/18/21 16:06	1
Acetone	ND			10	3.0	ug/L			08/18/21 16:06	1
Benzene	ND			1.0	0.41	ug/L			08/18/21 16:06	1
Bromodichloromethane	ND			1.0	0.39	ug/L			08/18/21 16:06	1
Bromoform	ND			1.0	0.26	ug/L			08/18/21 16:06	1
Bromomethane	ND			1.0	0.69	ug/L			08/18/21 16:06	1
Carbon disulfide	**0.72**	**J**		1.0	0.19	ug/L			08/18/21 16:06	1
Carbon tetrachloride	ND	*+	UJ	1.0	0.27	ug/L			08/18/21 16:06	1
Chlorobenzene	ND			1.0	0.75	ug/L			08/18/21 16:06	1
Dibromochloromethane	ND	*+	UJ	1.0	0.32	ug/L			08/18/21 16:06	1
Chloroethane	ND			1.0	0.32	ug/L			08/18/21 16:06	1
Chloroform	ND			1.0	0.34	ug/L			08/18/21 16:06	1
Chloromethane	ND			1.0	0.35	ug/L			08/18/21 16:06	1
cis-1,2-Dichloroethene	ND			1.0	0.81	ug/L			08/18/21 16:06	1
cis-1,3-Dichloropropene	ND			1.0	0.36	ug/L			08/18/21 16:06	1
Cyclohexane	**0.28**	**J**		1.0	0.18	ug/L			08/18/21 16:06	1
Dichlorodifluoromethane	ND			1.0	0.68	ug/L			08/18/21 16:06	1
Ethylbenzene	ND			1.0	0.74	ug/L			08/18/21 16:06	1
1,2-Dibromoethane	ND			1.0	0.73	ug/L			08/18/21 16:06	1
Isopropylbenzene	ND			1.0	0.79	ug/L			08/18/21 16:06	1
Methyl acetate	ND			2.5	1.3	ug/L			08/18/21 16:06	1
Methyl tert-butyl ether	ND			1.0	0.16	ug/L			08/18/21 16:06	1
Methylcyclohexane	**0.65**	**J**		1.0	0.16	ug/L			08/18/21 16:06	1
Methylene Chloride	ND			1.0	0.44	ug/L			08/18/21 16:06	1
Styrene	ND			1.0	0.73	ug/L			08/18/21 16:06	1
Tetrachloroethene	ND			1.0	0.36	ug/L			08/18/21 16:06	1
Toluene	ND			1.0	0.51	ug/L			08/18/21 16:06	1
trans-1,2-Dichloroethene	ND			1.0	0.90	ug/L			08/18/21 16:06	1
trans-1,3-Dichloropropene	ND			1.0	0.37	ug/L			08/18/21 16:06	1
Trichloroethene	**0.48**	**J**		1.0	0.46	ug/L			08/18/21 16:06	1
Trichlorofluoromethane	ND			1.0	0.88	ug/L			08/18/21 16:06	1
Vinyl chloride	ND			1.0	0.90	ug/L			08/18/21 16:06	1
Xylenes, Total	ND			2.0	0.66	ug/L			08/18/21 16:06	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-2DD
Lab Sample ID: 480-188293-3
Date Collected: 08/11/21 14:30
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		08/18/21 16:06	1
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		08/18/21 16:06	1
4-Bromofluorobenzene (Surr)	100		73 - 120		08/18/21 16:06	1
Dibromofluoromethane (Surr)	101		75 - 123		08/18/21 16:06	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: FD-081121
Date Collected: 08/11/21 00:00
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-4
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			8.0	6.6	ug/L			08/18/21 16:29	8
1,1,2,2-Tetrachloroethane	ND			8.0	1.7	ug/L			08/18/21 16:29	8
1,1,2-Trichloroethane	ND			8.0	1.8	ug/L			08/18/21 16:29	8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			8.0	2.5	ug/L			08/18/21 16:29	8
1,1-Dichloroethane	ND			8.0	3.0	ug/L			08/18/21 16:29	8
1,1-Dichloroethene	ND			8.0	2.3	ug/L			08/18/21 16:29	8
1,2,4-Trichlorobenzene	ND			8.0	3.3	ug/L			08/18/21 16:29	8
1,2-Dibromo-3-Chloropropane	ND	*+		8.0	3.1	ug/L			08/18/21 16:29	8
1,2-Dichlorobenzene	ND			8.0	6.3	ug/L			08/18/21 16:29	8
1,2-Dichloroethane	ND			8.0	1.7	ug/L			08/18/21 16:29	8
1,2-Dichloropropane	ND			8.0	5.8	ug/L			08/18/21 16:29	8
1,3-Dichlorobenzene	ND			8.0	6.2	ug/L			08/18/21 16:29	8
1,4-Dichlorobenzene	ND			8.0	6.7	ug/L			08/18/21 16:29	8
2-Butanone (MEK)	ND			80	11	ug/L			08/18/21 16:29	8
2-Hexanone	ND		UJ	40	9.9	ug/L			08/18/21 16:29	8
4-Methyl-2-pentanone (MIBK)	ND			40	17	ug/L			08/18/21 16:29	8
Acetone	ND			80	24	ug/L			08/18/21 16:29	8
Benzene	ND			8.0	3.3	ug/L			08/18/21 16:29	8
Bromodichloromethane	ND			8.0	3.1	ug/L			08/18/21 16:29	8
Bromoform	ND			8.0	2.1	ug/L			08/18/21 16:29	8
Bromomethane	ND			8.0	5.5	ug/L			08/18/21 16:29	8
Carbon disulfide	ND			8.0	1.5	ug/L			08/18/21 16:29	8
Carbon tetrachloride	ND	*+	UJ	8.0	2.2	ug/L			08/18/21 16:29	8
Chlorobenzene	ND			8.0	6.0	ug/L			08/18/21 16:29	8
Dibromochloromethane	ND	*+	UJ	8.0	2.6	ug/L			08/18/21 16:29	8
Chloroethane	ND			8.0	2.6	ug/L			08/18/21 16:29	8
Chloroform	ND			8.0	2.7	ug/L			08/18/21 16:29	8
Chloromethane	ND			8.0	2.8	ug/L			08/18/21 16:29	8
cis-1,2-Dichloroethene	**190**			8.0	6.5	ug/L			08/18/21 16:29	8
cis-1,3-Dichloropropene	ND			8.0	2.9	ug/L			08/18/21 16:29	8
Cyclohexane	ND			8.0	1.4	ug/L			08/18/21 16:29	8
Dichlorodifluoromethane	ND			8.0	5.4	ug/L			08/18/21 16:29	8
Ethylbenzene	ND			8.0	5.9	ug/L			08/18/21 16:29	8
1,2-Dibromoethane	ND			8.0	5.8	ug/L			08/18/21 16:29	8
Isopropylbenzene	ND			8.0	6.3	ug/L			08/18/21 16:29	8
Methyl acetate	ND			20	10	ug/L			08/18/21 16:29	8
Methyl tert-butyl ether	ND			8.0	1.3	ug/L			08/18/21 16:29	8
Methylcyclohexane	ND			8.0	1.3	ug/L			08/18/21 16:29	8
Methylene Chloride	ND			8.0	3.5	ug/L			08/18/21 16:29	8
Styrene	ND			8.0	5.8	ug/L			08/18/21 16:29	8
Tetrachloroethene	ND			8.0	2.9	ug/L			08/18/21 16:29	8
Toluene	ND			8.0	4.1	ug/L			08/18/21 16:29	8
trans-1,2-Dichloroethene	ND			8.0	7.2	ug/L			08/18/21 16:29	8
trans-1,3-Dichloropropene	ND			8.0	3.0	ug/L			08/18/21 16:29	8
Trichloroethene	**150**			8.0	3.7	ug/L			08/18/21 16:29	8
Trichlorofluoromethane	ND			8.0	7.0	ug/L			08/18/21 16:29	8
Vinyl chloride	**8.7**			8.0	7.2	ug/L			08/18/21 16:29	8
Xylenes, Total	ND			16	5.3	ug/L			08/18/21 16:29	8

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: FD-081121
Lab Sample ID: 480-188293-4
Date Collected: 08/11/21 00:00
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		08/18/21 16:29	8
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		08/18/21 16:29	8
4-Bromofluorobenzene (Surr)	97		73 - 120		08/18/21 16:29	8
Dibromofluoromethane (Surr)	101		75 - 123		08/18/21 16:29	8

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: BMW-1DD
Date Collected: 08/12/21 09:45
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-5
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			1.0	0.82	ug/L			08/18/21 16:52	1
1,1,2,2-Tetrachloroethane	ND			1.0	0.21	ug/L			08/18/21 16:52	1
1,1,2-Trichloroethane	ND			1.0	0.23	ug/L			08/18/21 16:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			1.0	0.31	ug/L			08/18/21 16:52	1
1,1-Dichloroethane	ND			1.0	0.38	ug/L			08/18/21 16:52	1
1,1-Dichloroethene	ND			1.0	0.29	ug/L			08/18/21 16:52	1
1,2,4-Trichlorobenzene	ND			1.0	0.41	ug/L			08/18/21 16:52	1
1,2-Dibromo-3-Chloropropane	ND	*+		1.0	0.39	ug/L			08/18/21 16:52	1
1,2-Dichlorobenzene	ND			1.0	0.79	ug/L			08/18/21 16:52	1
1,2-Dichloroethane	ND			1.0	0.21	ug/L			08/18/21 16:52	1
1,2-Dichloropropane	ND			1.0	0.72	ug/L			08/18/21 16:52	1
1,3-Dichlorobenzene	ND			1.0	0.78	ug/L			08/18/21 16:52	1
1,4-Dichlorobenzene	ND			1.0	0.84	ug/L			08/18/21 16:52	1
2-Butanone (MEK)	ND			10	1.3	ug/L			08/18/21 16:52	1
2-Hexanone	ND		UJ	5.0	1.2	ug/L			08/18/21 16:52	1
4-Methyl-2-pentanone (MIBK)	ND			5.0	2.1	ug/L			08/18/21 16:52	1
Acetone	ND			10	3.0	ug/L			08/18/21 16:52	1
Benzene	ND			1.0	0.41	ug/L			08/18/21 16:52	1
Bromodichloromethane	ND			1.0	0.39	ug/L			08/18/21 16:52	1
Bromoform	ND			1.0	0.26	ug/L			08/18/21 16:52	1
Bromomethane	ND			1.0	0.69	ug/L			08/18/21 16:52	1
Carbon disulfide	**0.20**	**J**		1.0	0.19	ug/L			08/18/21 16:52	1
Carbon tetrachloride	ND	*+	UJ	1.0	0.27	ug/L			08/18/21 16:52	1
Chlorobenzene	ND			1.0	0.75	ug/L			08/18/21 16:52	1
Dibromochloromethane	ND	*+	UJ	1.0	0.32	ug/L			08/18/21 16:52	1
Chloroethane	ND			1.0	0.32	ug/L			08/18/21 16:52	1
Chloroform	ND			1.0	0.34	ug/L			08/18/21 16:52	1
Chloromethane	ND			1.0	0.35	ug/L			08/18/21 16:52	1
cis-1,2-Dichloroethene	ND			1.0	0.81	ug/L			08/18/21 16:52	1
cis-1,3-Dichloropropene	ND			1.0	0.36	ug/L			08/18/21 16:52	1
Cyclohexane	ND			1.0	0.18	ug/L			08/18/21 16:52	1
Dichlorodifluoromethane	ND			1.0	0.68	ug/L			08/18/21 16:52	1
Ethylbenzene	ND			1.0	0.74	ug/L			08/18/21 16:52	1
1,2-Dibromoethane	ND			1.0	0.73	ug/L			08/18/21 16:52	1
Isopropylbenzene	ND			1.0	0.79	ug/L			08/18/21 16:52	1
Methyl acetate	ND			2.5	1.3	ug/L			08/18/21 16:52	1
Methyl tert-butyl ether	ND			1.0	0.16	ug/L			08/18/21 16:52	1
Methylcyclohexane	ND			1.0	0.16	ug/L			08/18/21 16:52	1
Methylene Chloride	ND			1.0	0.44	ug/L			08/18/21 16:52	1
Styrene	ND			1.0	0.73	ug/L			08/18/21 16:52	1
Tetrachloroethene	ND			1.0	0.36	ug/L			08/18/21 16:52	1
Toluene	ND			1.0	0.51	ug/L			08/18/21 16:52	1
trans-1,2-Dichloroethene	ND			1.0	0.90	ug/L			08/18/21 16:52	1
trans-1,3-Dichloropropene	ND			1.0	0.37	ug/L			08/18/21 16:52	1
Trichloroethene	**1.3**			1.0	0.46	ug/L			08/18/21 16:52	1
Trichlorofluoromethane	ND			1.0	0.88	ug/L			08/18/21 16:52	1
Vinyl chloride	ND			1.0	0.90	ug/L			08/18/21 16:52	1
Xylenes, Total	ND			2.0	0.66	ug/L			08/18/21 16:52	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-1DD
Lab Sample ID: 480-188293-5
Date Collected: 08/12/21 09:45
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		08/18/21 16:52	1
1,2-Dichloroethane-d4 (Surr)	106		77 - 120		08/18/21 16:52	1
4-Bromofluorobenzene (Surr)	101		73 - 120		08/18/21 16:52	1
Dibromofluoromethane (Surr)	103		75 - 123		08/18/21 16:52	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: BMW-1D
Date Collected: 08/12/21 10:38
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-6
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			25	21	ug/L			08/19/21 15:37	25
1,1,2,2-Tetrachloroethane	ND			25	5.3	ug/L			08/19/21 15:37	25
1,1,2-Trichloroethane	ND			25	5.8	ug/L			08/19/21 15:37	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			25	7.8	ug/L			08/19/21 15:37	25
1,1-Dichloroethane	ND			25	9.5	ug/L			08/19/21 15:37	25
1,1-Dichloroethene	ND			25	7.3	ug/L			08/19/21 15:37	25
1,2,4-Trichlorobenzene	ND			25	10	ug/L			08/19/21 15:37	25
1,2-Dibromo-3-Chloropropane	ND	*+	UJ	25	9.8	ug/L			08/19/21 15:37	25
1,2-Dichlorobenzene	ND			25	20	ug/L			08/19/21 15:37	25
1,2-Dichloroethane	ND			25	5.3	ug/L			08/19/21 15:37	25
1,2-Dichloropropane	ND			25	18	ug/L			08/19/21 15:37	25
1,3-Dichlorobenzene	ND			25	20	ug/L			08/19/21 15:37	25
1,4-Dichlorobenzene	ND			25	21	ug/L			08/19/21 15:37	25
2-Butanone (MEK)	ND			250	33	ug/L			08/19/21 15:37	25
2-Hexanone	ND	*+	UJ	130	31	ug/L			08/19/21 15:37	25
4-Methyl-2-pentanone (MIBK)	ND			130	53	ug/L			08/19/21 15:37	25
Acetone	ND			250	75	ug/L			08/19/21 15:37	25
Benzene	ND			25	10	ug/L			08/19/21 15:37	25
Bromodichloromethane	ND			25	9.8	ug/L			08/19/21 15:37	25
Bromoform	ND			25	6.5	ug/L			08/19/21 15:37	25
Bromomethane	ND			25	17	ug/L			08/19/21 15:37	25
Carbon disulfide	ND			25	4.8	ug/L			08/19/21 15:37	25
Carbon tetrachloride	ND		UJ	25	6.8	ug/L			08/19/21 15:37	25
Chlorobenzene	ND			25	19	ug/L			08/19/21 15:37	25
Dibromochloromethane	ND	*+	UJ	25	8.0	ug/L			08/19/21 15:37	25
Chloroethane	ND			25	8.0	ug/L			08/19/21 15:37	25
Chloroform	ND			25	8.5	ug/L			08/19/21 15:37	25
Chloromethane	ND			25	8.8	ug/L			08/19/21 15:37	25
cis-1,2-Dichloroethene	**490**			25	20	ug/L			08/19/21 15:37	25
cis-1,3-Dichloropropene	ND			25	9.0	ug/L			08/19/21 15:37	25
Cyclohexane	ND			25	4.5	ug/L			08/19/21 15:37	25
Dichlorodifluoromethane	ND			25	17	ug/L			08/19/21 15:37	25
Ethylbenzene	ND			25	19	ug/L			08/19/21 15:37	25
1,2-Dibromoethane	ND			25	18	ug/L			08/19/21 15:37	25
Isopropylbenzene	ND			25	20	ug/L			08/19/21 15:37	25
Methyl acetate	ND			63	33	ug/L			08/19/21 15:37	25
Methyl tert-butyl ether	ND			25	4.0	ug/L			08/19/21 15:37	25
Methylcyclohexane	ND			25	4.0	ug/L			08/19/21 15:37	25
Methylene Chloride	ND			25	11	ug/L			08/19/21 15:37	25
Styrene	ND			25	18	ug/L			08/19/21 15:37	25
Tetrachloroethene	ND			25	9.0	ug/L			08/19/21 15:37	25
Toluene	ND			25	13	ug/L			08/19/21 15:37	25
trans-1,2-Dichloroethene	ND			25	23	ug/L			08/19/21 15:37	25
trans-1,3-Dichloropropene	ND			25	9.3	ug/L			08/19/21 15:37	25
Trichloroethene	**2300**			25	12	ug/L			08/19/21 15:37	25
Trichlorofluoromethane	ND			25	22	ug/L			08/19/21 15:37	25
Vinyl chloride	ND			25	23	ug/L			08/19/21 15:37	25
Xylenes, Total	ND			50	17	ug/L			08/19/21 15:37	25

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-1D
Lab Sample ID: 480-188293-6
Date Collected: 08/12/21 10:38
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		08/19/21 15:37	25
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		08/19/21 15:37	25
4-Bromofluorobenzene (Surr)	98		73 - 120		08/19/21 15:37	25
Dibromofluoromethane (Surr)	101		75 - 123		08/19/21 15:37	25

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: OMW-1
Date Collected: 08/12/21 11:26
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-7
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			10	8.2	ug/L			08/18/21 17:39	10
1,1,2,2-Tetrachloroethane	ND			10	2.1	ug/L			08/18/21 17:39	10
1,1,2-Trichloroethane	ND			10	2.3	ug/L			08/18/21 17:39	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			10	3.1	ug/L			08/18/21 17:39	10
1,1-Dichloroethane	ND			10	3.8	ug/L			08/18/21 17:39	10
1,1-Dichloroethene	ND			10	2.9	ug/L			08/18/21 17:39	10
1,2,4-Trichlorobenzene	ND			10	4.1	ug/L			08/18/21 17:39	10
1,2-Dibromo-3-Chloropropane	ND	*+		10	3.9	ug/L			08/18/21 17:39	10
1,2-Dichlorobenzene	ND			10	7.9	ug/L			08/18/21 17:39	10
1,2-Dichloroethane	ND			10	2.1	ug/L			08/18/21 17:39	10
1,2-Dichloropropane	ND			10	7.2	ug/L			08/18/21 17:39	10
1,3-Dichlorobenzene	ND			10	7.8	ug/L			08/18/21 17:39	10
1,4-Dichlorobenzene	ND			10	8.4	ug/L			08/18/21 17:39	10
2-Butanone (MEK)	ND			100	13	ug/L			08/18/21 17:39	10
2-Hexanone	ND		UJ	50	12	ug/L			08/18/21 17:39	10
4-Methyl-2-pentanone (MIBK)	ND			50	21	ug/L			08/18/21 17:39	10
Acetone	ND			100	30	ug/L			08/18/21 17:39	10
Benzene	ND			10	4.1	ug/L			08/18/21 17:39	10
Bromodichloromethane	ND			10	3.9	ug/L			08/18/21 17:39	10
Bromoform	ND			10	2.6	ug/L			08/18/21 17:39	10
Bromomethane	ND			10	6.9	ug/L			08/18/21 17:39	10
Carbon disulfide	ND			10	1.9	ug/L			08/18/21 17:39	10
Carbon tetrachloride	ND	*+	UJ	10	2.7	ug/L			08/18/21 17:39	10
Chlorobenzene	ND			10	7.5	ug/L			08/18/21 17:39	10
Dibromochloromethane	ND	*+	UJ	10	3.2	ug/L			08/18/21 17:39	10
Chloroethane	ND			10	3.2	ug/L			08/18/21 17:39	10
Chloroform	ND			10	3.4	ug/L			08/18/21 17:39	10
Chloromethane	ND			10	3.5	ug/L			08/18/21 17:39	10
cis-1,2-Dichloroethene	**260**			10	8.1	ug/L			08/18/21 17:39	10
cis-1,3-Dichloropropene	ND			10	3.6	ug/L			08/18/21 17:39	10
Cyclohexane	ND			10	1.8	ug/L			08/18/21 17:39	10
Dichlorodifluoromethane	ND			10	6.8	ug/L			08/18/21 17:39	10
Ethylbenzene	ND			10	7.4	ug/L			08/18/21 17:39	10
1,2-Dibromoethane	ND			10	7.3	ug/L			08/18/21 17:39	10
Isopropylbenzene	ND			10	7.9	ug/L			08/18/21 17:39	10
Methyl acetate	ND			25	13	ug/L			08/18/21 17:39	10
Methyl tert-butyl ether	ND			10	1.6	ug/L			08/18/21 17:39	10
Methylcyclohexane	ND			10	1.6	ug/L			08/18/21 17:39	10
Methylene Chloride	ND			10	4.4	ug/L			08/18/21 17:39	10
Styrene	ND			10	7.3	ug/L			08/18/21 17:39	10
Tetrachloroethene	ND			10	3.6	ug/L			08/18/21 17:39	10
Toluene	ND			10	5.1	ug/L			08/18/21 17:39	10
trans-1,2-Dichloroethene	ND			10	9.0	ug/L			08/18/21 17:39	10
trans-1,3-Dichloropropene	ND			10	3.7	ug/L			08/18/21 17:39	10
Trichloroethene	ND			10	4.6	ug/L			08/18/21 17:39	10
Trichlorofluoromethane	ND			10	8.8	ug/L			08/18/21 17:39	10
Vinyl chloride	**99**			10	9.0	ug/L			08/18/21 17:39	10
Xylenes, Total	ND			20	6.6	ug/L			08/18/21 17:39	10

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: OMW-1
Lab Sample ID: 480-188293-7
Date Collected: 08/12/21 11:26
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		08/18/21 17:39	10
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		08/18/21 17:39	10
4-Bromofluorobenzene (Surr)	97		73 - 120		08/18/21 17:39	10
Dibromofluoromethane (Surr)	101		75 - 123		08/18/21 17:39	10

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: BMW-3DD
Date Collected: 08/12/21 13:05
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-8
Matrix: Water

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			1.0	0.82	ug/L			08/18/21 18:02	1
1,1,2,2-Tetrachloroethane	ND			1.0	0.21	ug/L			08/18/21 18:02	1
1,1,2-Trichloroethane	ND			1.0	0.23	ug/L			08/18/21 18:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			1.0	0.31	ug/L			08/18/21 18:02	1
1,1-Dichloroethane	ND			1.0	0.38	ug/L			08/18/21 18:02	1
1,1-Dichloroethene	ND			1.0	0.29	ug/L			08/18/21 18:02	1
1,2,4-Trichlorobenzene	ND			1.0	0.41	ug/L			08/18/21 18:02	1
1,2-Dibromo-3-Chloropropane	ND	*+		1.0	0.39	ug/L			08/18/21 18:02	1
1,2-Dichlorobenzene	ND			1.0	0.79	ug/L			08/18/21 18:02	1
1,2-Dichloroethane	ND			1.0	0.21	ug/L			08/18/21 18:02	1
1,2-Dichloropropane	ND			1.0	0.72	ug/L			08/18/21 18:02	1
1,3-Dichlorobenzene	ND			1.0	0.78	ug/L			08/18/21 18:02	1
1,4-Dichlorobenzene	ND			1.0	0.84	ug/L			08/18/21 18:02	1
2-Butanone (MEK)	ND			10	1.3	ug/L			08/18/21 18:02	1
2-Hexanone	ND		UJ	5.0	1.2	ug/L			08/18/21 18:02	1
4-Methyl-2-pentanone (MIBK)	ND			5.0	2.1	ug/L			08/18/21 18:02	1
Acetone	ND			10	3.0	ug/L			08/18/21 18:02	1
Benzene	ND			1.0	0.41	ug/L			08/18/21 18:02	1
Bromodichloromethane	ND			1.0	0.39	ug/L			08/18/21 18:02	1
Bromoform	ND			1.0	0.26	ug/L			08/18/21 18:02	1
Bromomethane	ND			1.0	0.69	ug/L			08/18/21 18:02	1
Carbon disulfide	ND			1.0	0.19	ug/L			08/18/21 18:02	1
Carbon tetrachloride	ND	*+	UJ	1.0	0.27	ug/L			08/18/21 18:02	1
Chlorobenzene	ND			1.0	0.75	ug/L			08/18/21 18:02	1
Dibromochloromethane	ND	*+	UJ	1.0	0.32	ug/L			08/18/21 18:02	1
Chloroethane	ND			1.0	0.32	ug/L			08/18/21 18:02	1
Chloroform	ND			1.0	0.34	ug/L			08/18/21 18:02	1
Chloromethane	ND			1.0	0.35	ug/L			08/18/21 18:02	1
cis-1,2-Dichloroethene	ND			1.0	0.81	ug/L			08/18/21 18:02	1
cis-1,3-Dichloropropene	ND			1.0	0.36	ug/L			08/18/21 18:02	1
Cyclohexane	ND			1.0	0.18	ug/L			08/18/21 18:02	1
Dichlorodifluoromethane	ND			1.0	0.68	ug/L			08/18/21 18:02	1
Ethylbenzene	ND			1.0	0.74	ug/L			08/18/21 18:02	1
1,2-Dibromoethane	ND			1.0	0.73	ug/L			08/18/21 18:02	1
Isopropylbenzene	ND			1.0	0.79	ug/L			08/18/21 18:02	1
Methyl acetate	ND			2.5	1.3	ug/L			08/18/21 18:02	1
Methyl tert-butyl ether	ND			1.0	0.16	ug/L			08/18/21 18:02	1
Methylcyclohexane	ND			1.0	0.16	ug/L			08/18/21 18:02	1
Methylene Chloride	ND			1.0	0.44	ug/L			08/18/21 18:02	1
Styrene	ND			1.0	0.73	ug/L			08/18/21 18:02	1
Tetrachloroethene	ND			1.0	0.36	ug/L			08/18/21 18:02	1
Toluene	ND			1.0	0.51	ug/L			08/18/21 18:02	1
trans-1,2-Dichloroethene	ND			1.0	0.90	ug/L			08/18/21 18:02	1
trans-1,3-Dichloropropene	ND			1.0	0.37	ug/L			08/18/21 18:02	1
Trichloroethene	**1.9**			1.0	0.46	ug/L			08/18/21 18:02	1
Trichlorofluoromethane	ND			1.0	0.88	ug/L			08/18/21 18:02	1
Vinyl chloride	ND			1.0	0.90	ug/L			08/18/21 18:02	1
Xylenes, Total	ND			2.0	0.66	ug/L			08/18/21 18:02	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-3DD
Lab Sample ID: 480-188293-8
Date Collected: 08/12/21 13:05
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		08/18/21 18:02	1
1,2-Dichloroethane-d4 (Surr)	107		77 - 120		08/18/21 18:02	1
4-Bromofluorobenzene (Surr)	98		73 - 120		08/18/21 18:02	1
Dibromofluoromethane (Surr)	102		75 - 123		08/18/21 18:02	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-3D
Lab Sample ID: 480-188293-9
Date Collected: 08/12/21 13:55
Matrix: Water
Date Received: 08/12/21 15:18

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

Analyte	Result	Qualifier	DV qual	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND			1.0	0.82	ug/L			08/18/21 18:25	1
1,1,2,2-Tetrachloroethane	ND			1.0	0.21	ug/L			08/18/21 18:25	1
1,1,2-Trichloroethane	ND			1.0	0.23	ug/L			08/18/21 18:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND			1.0	0.31	ug/L			08/18/21 18:25	1
1,1-Dichloroethane	**0.57**	**J**		1.0	0.38	ug/L			08/18/21 18:25	1
1,1-Dichloroethene	ND			1.0	0.29	ug/L			08/18/21 18:25	1
1,2,4-Trichlorobenzene	ND			1.0	0.41	ug/L			08/18/21 18:25	1
1,2-Dibromo-3-Chloropropane	ND	*+		1.0	0.39	ug/L			08/18/21 18:25	1
1,2-Dichlorobenzene	ND			1.0	0.79	ug/L			08/18/21 18:25	1
1,2-Dichloroethane	ND			1.0	0.21	ug/L			08/18/21 18:25	1
1,2-Dichloropropane	ND			1.0	0.72	ug/L			08/18/21 18:25	1
1,3-Dichlorobenzene	ND			1.0	0.78	ug/L			08/18/21 18:25	1
1,4-Dichlorobenzene	ND			1.0	0.84	ug/L			08/18/21 18:25	1
2-Butanone (MEK)	ND			10	1.3	ug/L			08/18/21 18:25	1
2-Hexanone	ND		UJ	5.0	1.2	ug/L			08/18/21 18:25	1
4-Methyl-2-pentanone (MIBK)	ND			5.0	2.1	ug/L			08/18/21 18:25	1
Acetone	ND			10	3.0	ug/L			08/18/21 18:25	1
Benzene	ND			1.0	0.41	ug/L			08/18/21 18:25	1
Bromodichloromethane	ND			1.0	0.39	ug/L			08/18/21 18:25	1
Bromoform	ND			1.0	0.26	ug/L			08/18/21 18:25	1
Bromomethane	ND			1.0	0.69	ug/L			08/18/21 18:25	1
Carbon disulfide	ND			1.0	0.19	ug/L			08/18/21 18:25	1
Carbon tetrachloride	ND	*+	UJ	1.0	0.27	ug/L			08/18/21 18:25	1
Chlorobenzene	ND			1.0	0.75	ug/L			08/18/21 18:25	1
Dibromochloromethane	ND	*+	UJ	1.0	0.32	ug/L			08/18/21 18:25	1
Chloroethane	ND			1.0	0.32	ug/L			08/18/21 18:25	1
Chloroform	ND			1.0	0.34	ug/L			08/18/21 18:25	1
Chloromethane	ND			1.0	0.35	ug/L			08/18/21 18:25	1
cis-1,2-Dichloroethene	**3.2**			1.0	0.81	ug/L			08/18/21 18:25	1
cis-1,3-Dichloropropene	ND			1.0	0.36	ug/L			08/18/21 18:25	1
Cyclohexane	ND			1.0	0.18	ug/L			08/18/21 18:25	1
Dichlorodifluoromethane	ND			1.0	0.68	ug/L			08/18/21 18:25	1
Ethylbenzene	ND			1.0	0.74	ug/L			08/18/21 18:25	1
1,2-Dibromoethane	ND			1.0	0.73	ug/L			08/18/21 18:25	1
Isopropylbenzene	ND			1.0	0.79	ug/L			08/18/21 18:25	1
Methyl acetate	ND			2.5	1.3	ug/L			08/18/21 18:25	1
Methyl tert-butyl ether	ND			1.0	0.16	ug/L			08/18/21 18:25	1
Methylcyclohexane	ND			1.0	0.16	ug/L			08/18/21 18:25	1
Methylene Chloride	ND			1.0	0.44	ug/L			08/18/21 18:25	1
Styrene	ND			1.0	0.73	ug/L			08/18/21 18:25	1
Tetrachloroethene	ND			1.0	0.36	ug/L			08/18/21 18:25	1
Toluene	ND			1.0	0.51	ug/L			08/18/21 18:25	1
trans-1,2-Dichloroethene	ND			1.0	0.90	ug/L			08/18/21 18:25	1
trans-1,3-Dichloropropene	ND			1.0	0.37	ug/L			08/18/21 18:25	1
Trichloroethene	**3.3**			1.0	0.46	ug/L			08/18/21 18:25	1
Trichlorofluoromethane	ND			1.0	0.88	ug/L			08/18/21 18:25	1
Vinyl chloride	ND			1.0	0.90	ug/L			08/18/21 18:25	1
Xylenes, Total	ND			2.0	0.66	ug/L			08/18/21 18:25	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: BMW-3D
Lab Sample ID: 480-188293-9
Date Collected: 08/12/21 13:55
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		08/18/21 18:25	1
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		08/18/21 18:25	1
4-Bromofluorobenzene (Surr)	97		73 - 120		08/18/21 18:25	1
Dibromofluoromethane (Surr)	101		75 - 123		08/18/21 18:25	1

Client: New York State D.E.C.
Project/Site: Erdle Perforating #828072

Job ID: 480-188293-1

Client Sample ID: TRIP BLANK
Date Collected: 08/12/21 00:00
Date Received: 08/12/21 15:18

Lab Sample ID: 480-188293-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			08/18/21 18:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/18/21 18:49	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/18/21 18:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			08/18/21 18:49	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			08/18/21 18:49	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			08/18/21 18:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/18/21 18:49	1
1,2-Dibromo-3-Chloropropane	ND	*+	1.0	0.39	ug/L			08/18/21 18:49	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/18/21 18:49	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/18/21 18:49	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/18/21 18:49	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/18/21 18:49	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/18/21 18:49	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/18/21 18:49	1
2-Hexanone	ND		5.0	1.2	ug/L			08/18/21 18:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/18/21 18:49	1
Acetone	ND		10	3.0	ug/L			08/18/21 18:49	1
Benzene	ND		1.0	0.41	ug/L			08/18/21 18:49	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/18/21 18:49	1
Bromoform	ND		1.0	0.26	ug/L			08/18/21 18:49	1
Bromomethane	ND		1.0	0.69	ug/L			08/18/21 18:49	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/18/21 18:49	1
Carbon tetrachloride	ND	*+	1.0	0.27	ug/L			08/18/21 18:49	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/18/21 18:49	1
Dibromochloromethane	ND	*+	1.0	0.32	ug/L			08/18/21 18:49	1
Chloroethane	ND		1.0	0.32	ug/L			08/18/21 18:49	1
Chloroform	ND		1.0	0.34	ug/L			08/18/21 18:49	1
Chloromethane	ND		1.0	0.35	ug/L			08/18/21 18:49	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			08/18/21 18:49	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/18/21 18:49	1
Cyclohexane	ND		1.0	0.18	ug/L			08/18/21 18:49	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/18/21 18:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/18/21 18:49	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/18/21 18:49	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/18/21 18:49	1
Methyl acetate	ND		2.5	1.3	ug/L			08/18/21 18:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			08/18/21 18:49	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/18/21 18:49	1
Methylene Chloride	ND		1.0	0.44	ug/L			08/18/21 18:49	1
Styrene	ND		1.0	0.73	ug/L			08/18/21 18:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/18/21 18:49	1
Toluene	ND		1.0	0.51	ug/L			08/18/21 18:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/18/21 18:49	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/18/21 18:49	1
Trichloroethene	ND		1.0	0.46	ug/L			08/18/21 18:49	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/18/21 18:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/18/21 18:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/18/21 18:49	1

Client: New York State D.E.C.
Job ID: 480-188293-1
Project/Site: Erdle Perforating #828072

Client Sample ID: TRIP BLANK
Lab Sample ID: 480-188293-10
Date Collected: 08/12/21 00:00
Matrix: Water
Date Received: 08/12/21 15:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		08/18/21 18:49	1
1,2-Dichloroethane-d4 (Surr)	105		77 - 120		08/18/21 18:49	1
4-Bromofluorobenzene (Surr)	99		73 - 120		08/18/21 18:49	1
Dibromofluoromethane (Surr)	104		75 - 123		08/18/21 18:49	1

ATTACHMENT B

CASE NARRATIVE AND CHAIN OF CUSTODY

Job ID: 480-188293-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-188293-1

Comments
No additional comments.

Receipt
The samples were received on 8/12/2021 3:18 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS VOA
Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: OMW-2 (480-188293-1), FD-081121 (480-188293-4) and OMW-1 (480-188293-7). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-593207 recovered above the upper control limit for 2-Hexanone, Carbon tetrachloride and Chlorodibromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: OMW-2 (480-188293-1), BMW-2DD (480-188293-3), FD-081121 (480-188293-4), BMW-1DD (480-188293-5), OMW-1 (480-188293-7), BMW-3DD (480-188293-8), BMW-3D (480-188293-9) and TRIP BLANK (480-188293-10).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-593207 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane, Carbon tetrachloride and Chlorodibromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: OMW-2 (480-188293-1), BMW-2DD (480-188293-3), FD-081121 (480-188293-4), BMW-1DD (480-188293-5), OMW-1 (480-188293-7), BMW-3DD (480-188293-8), BMW-3D (480-188293-9) and TRIP BLANK (480-188293-10).

Method 8260C: The continuing calibration verification (CCVIS) associated with batch 480-593371 recovered above the upper control limit for Carbon tetrachloride, 2-Hexanone, Chlorodibromomethane and 1,2-Dibromo-3-Chloropropane. The sample(s) associated with this CCVIS were non-detect for the affected analytes; therefore, the data have been reported. The associated samples are impacted: OMW-2 (480-188293-1), BMW-2D (480-188293-2) and BMW-1D (480-188293-6).

Method 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-593207 were outside control limits. Sample matrix interference is suspected. The associated samples are impacted: BMW-2DD (480-188293-3[MS]) and BMW-2DD (480-188293-3[MSD]).

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: OMW-2 (480-188293-1), BMW-2D (480-188293-2) and BMW-1D (480-188293-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-593371 recovered outside control limits for the following analytes: 2-Hexanone, Chlorodibromomethane and 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: OMW-2 (480-188293-1), BMW-2D (480-188293-2) and BMW-1D (480-188293-6).

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

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Kevin McGraw / Tom Urban	Lab PM: Johnson, Orlette S	Carrier Tracking No(s):	COC No: 480-163100-35833.1
Client Contact: George Kisluk	Phone: 716-923-1101	E-Mail: Orlette.Johnson@Eurofinset.com	State of Origin: NY	Page: Page 1 of 2
Company: AECOM	PWSID:			Job #:

Address: One John James Audubon Parkway Suite 210	Due Date Requested:	Analysis Requested
City: Amherst	TAT Requested (days):	
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No	
Phone: 716-923-1321	PO #: CallOut ID: 140025	
Email: george.kisluk@aecom.com	WO #:	
Project Name: Erdle Perforating #828072	Project #: 48023857	
Site: NYSDEC Groups	SSOW#:	

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

480-188293 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL list OLM04.2	Total	Special Instructions/Note:
		Preservation Code:					A		
OMW-2	8/11/21	15:10	G	Water	N	N	3	3	
BMW-20		13:18		Water			3	3	
BMW-200		14:30		Water		X	9	9	MS/MSD
FD-08112		—		Water		N	3	3	
BMW-100	8/12/21	09:45	G	Water	N	N	3	3	
BMW-10		10:38		Water					
OMW-1		11:26		Water					
BMW-30D		13:05		Water					
BMW-30		13:55		Water					
Trip Blank	—	—	—	Water			2	2	
				Water					

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tom Urban / Tom Urban	8/12/21 @ 15:18	AECOM	[illegible] Jay @ 15:18	8-12-21	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks: 3.4 #1

Ver: 06/08/2021