

**FINAL  
PHASE II ENVIRONMENTAL SITE ASSESSMENT**

**STATE CORRECTIONAL INSTITUTION – PITTSBURGH  
LAND USE FEASIBILITY STUDY  
3001 BEAVER AVENUE  
PITTSBURGH, PENNSYLVANIA 15233**



**Project No. 2390**

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**Prepared for:**



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## EXECUTIVE SUMMARY

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Rhea Engineers & Consultants, Inc. (Rhea) completed a Phase II Environmental Site Assessment (ESA) at the State Correctional Institution (SCI) – Pittsburgh facility (henceforth referred to as “subject property”) located at 3001 Beaver Avenue in Pittsburgh, Pennsylvania (PA) in support of potential future development activities. The subject property currently contains the vacant SCI – Pittsburgh facility, which contains approximately 43 structures and comprises 17 parcels across approximately 20 acres along the eastern bank of the Ohio River, northwest of downtown Pittsburgh.

A Phase I ESA was completed at the subject property in September 2022 by Rhea. The Phase I ESA identified Recognized Environmental Conditions (RECs) on and in proximity to the subject property. Based on these RECs, a Phase II ESA involving surface/subsurface soil sampling and groundwater sampling was recommended to characterize the environmental conditions present at the subject property.

This Phase II ESA was performed in accordance with American Society for Testing and Materials (ASTM) E1903-19 for the Pennsylvania Department of General Services (PADGS) to support the determination of the highest and best use of the subject property. Between January 11 and January 16, 2023, Rhea conducted a subsurface investigation which included the advancement of 12 soil borings (SB-01 through SB-12) and 12 temporary monitoring wells (MW-01 through MW-12).

### ***Soil Media***

Two soil samples were collected at each soil boring location and analyzed for volatile organic compounds (VOCs), Target Analyte List (TAL) metals, trivalent chromium, and hexavalent chromium.

One soil sample (SB-11-0-2) contained manganese (2,850 micrograms per liter [ $\mu\text{g/L}$ ]) at a concentration above the Pennsylvania Department of Environmental Protection (PADEP) Land Recycling Program Non-Residential Statewide Health Standard (Act 2) standard (2,000  $\mu\text{g/L}$ ). The presence of manganese is likely a result of natural processes as manganese is naturally occurring in rock and soil. The remaining soil samples collected during the subsurface investigation did not contain metals, including trivalent or hexavalent chromium, above their respective Act 2 standards. Additionally, none of the soil samples collected during the subsurface investigation contained VOCs above their respective Act 2 standard.

### ***Groundwater Media***

Groundwater samples were collected from twelve temporary monitoring wells and analyzed for VOCs, TAL metals, trivalent chromium, and hexavalent chromium.

Laboratory results indicate five VOCs (cis-1,2-dichloroethene [DCE], methyl acetate, tetrachloroethene [PCE], toluene, and trichloroethene [TCE]) were detected in groundwater. PCE was detected in seven wells (MW-01, -02, -03, -04, -05, -06, and -07), and exceeded the applicable Act 2 standard (5 µg/L) in wells MW-04 (63.7 µg/L), -05 (26.3 µg/L), and -06 (21 µg/L) located in the central portion of the subject property and well MW-03 (207 µg/L) located in the north/northeastern portion of the subject property. PCE impacts are often associated with dry-cleaning and metal degreasing activities, both of which have been documented at the subject property. PCE daughter products cis-1,2-DCE (26.3 µg/L) and TCE (10.9 µg/L) were detected in well MW-03, with TCE exceeding the applicable Act 2 standard (5 µg/L). Methyl acetate, toluene, and TCE were detected at other wells throughout the site, but at concentrations below their respective Act 2 standards.

Three metals (arsenic, iron, and manganese) were detected in groundwater samples at concentrations above their respective Act 2 standards. Arsenic exceeded the applicable Act 2 standard (10 µg/L) in MW-10 (39 µg/L) and MW-11 (13 µg/L), located in the western portion of the subject property. Iron and manganese concentrations exceeded the applicable Act 2 standard in four and six locations, respectively. The presence of arsenic in the groundwater may be related to naturally occurring conditions or may be related to the historic use of the coal fired power plant at the subject property as arsenic is a by-product of coal ash. Manganese and iron are naturally occurring in groundwater and concentrations may not be indicative of environmental contamination. No other metals, including trivalent and hexavalent chromium, were detected above Act 2 standards in the groundwater samples collected during the subsurface investigation.

### ***Indoor Air Quality***

The concentration of PCE in groundwater at MW-03, MW-04, MW-05, and MW-06, and TCE in groundwater at MW-03, exceeds the Medium Specific Concentrations ( $MSC_{gw}$ ) for Regulated Substances in Groundwater under the Act 2 standard of 5 µg/L for both constituents. Since the groundwater concentration of PCE and TCE is greater than the  $MSC_{gw}$ , there is potential for vapor intrusion into buildings on the subject property.

### ***Recommendations***

It is Rhea's professional opinion that the previous industrial activities have not impacted site soils to an extent that would adversely affect future earth-disturbing activities at the subject property. Due to the level of manganese above the Act 2 standard for soil at SB-11, Rhea recommends that a Health and Safety Plan (HASP) and a Soil Management Plan (SMP) be prepared in order to develop procedures to limit potential exposure to impacted soil during future earth-disturbing site preparation and construction activities. No additional actions or investigations are recommended at this time for site soils.

The HASP should include appropriate health and safety procedures for site workers working within potentially impacted areas. The HASP should also provide procedures to avoid exposure to subsurface contamination. If potentially contaminated soils are planned to be transported, disposed of, or otherwise remediated, the site must abide by the provisions set forth in the PADEP Residual Waste Management regulations (25 Pa. Code Chapters 287 to 299).

The purpose of the SMP is to protect human health and the environment during the handling and/or excavation of soil as part of the redevelopment of the subject property. The SMP shall detail procedures to be followed to ensure that manganese in soil is managed at the subject property to limit exposure to workers and other receptors during earth-disturbing activities. The SMP would also address proper handling, stockpiling and disposal of any soils in proposed construction areas, maintenance of subject property grades, site surface water drainage/management and documentation.

Previous industrial activities have likely impacted groundwater on the subject property. Furthermore, screening of VOC groundwater data indicates potential for vapor intrusion in any buildings located on the subject property. To address the groundwater (VOCs and metals) and potential indoor air quality (IAQ) impacts (VOCs), Rhea recommends:

- + Additional groundwater samples be collected and analyzed from areas surrounding MW-03 to confirm the presence of PCE and TCE, further delineate the contamination plume, and to potentially identify its source. It should be noted that Rhea has submitted a proposal for recommended supplemental sampling activities to Michael Baker International (MBI) for approval by PADGS;
- + Evaluation of the vapor intrusion pathway may be warranted in the future for any existing buildings that are not planned for demolition. An evaluation of the vapor intrusion pathway was not included in Rhea's proposal for supplemental sampling at this time since the plans for retention or demolition of buildings has not been decided.
- + Future site development plans will likely need to incorporate both Institutional (deed restrictions on groundwater use) and Engineering Controls (i.e., active or passive vapor mitigation systems) to mitigate impacts from groundwater contamination.

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## ACRONYMS AND ABBREVIATIONS

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µg/L	Micrograms Per Liter
Act 2	PADEP Land Recycling Program Statewide Health Standard
AllProbe	AllProbe Environmental, Inc.
ALS	ALS Global
amsl	Above Mean Sea Level
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
cis-1,2-DCE	Cis-1,2-Dichloroethene
CFR	Code of Federal Regulations
COC	Chain-of-Custody
CSM	Conceptual Site Model
DO	Dissolved Oxygen
DOT	Department of Transportation
EOB	End of Boring
ESA	Environmental Site Assessment
eV	Electron Volt
ft	Feet/foot
GPS	Global Positioning System
HASP	Health and Safety Plan
HREC	Historic Recognized Environmental Condition
IAQ	Indoor Air Quality
IDW	Investigation-Derived Waste
J&E	Johnson and Ettinger
LUST	Leaking Underground Storage Tank
MBI	Michael Baker International
mg/kg	Milligrams Per Kilogram
mg/L	Milligrams Per Liter



ml/min	Milliliters Per Minute
MSC	Medium Specific Concentration
MSC <sub>gw</sub>	Medium Specific Concentration-groundwater
NTU	Nephelometric Turbidity Units
ORP	Oxidation Reduction Potential
P&P	Pedersen & Pedersen, Inc.
PA	Pennsylvania
PADEP	Pennsylvania Department of Environmental Protection
PADGS	Pennsylvania Department of General Services
PADOC	Pennsylvania Department of Corrections
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PG	Professional Geologist
PID	Photoionization Detector
PPE	Personal Protective Equipment
ppm	Parts Per Million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance / Quality Control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
Rhea	Rhea Engineers & Consultants, Inc.
SCI	State Correctional Institution
SMP	Soil Management Plan
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCE	Trichloroethene
TDS	Total Dissolved Solids
TOC	Top of Casing
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

## 1.0 INTRODUCTION

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Rhea completed a Phase II ESA on the SCI – Pittsburgh facility, located at 3001 Beaver Avenue in Pittsburgh, PA (Figure 1). A Phase I ESA was completed by Rhea in September 2022.

Rhea was contracted by PADGS (the User) to perform a Phase II ESA to characterize soil and groundwater conditions within the 17 parcels that comprise the subject property. Rhea's Phase II ESA was performed in support of the determination of the highest and best use of the subject property. Authorization to proceed with this Phase II ESA was provided by Troy Traux of MBI, in reference to Rhea's proposal dated September 30, 2022.

### 1.1 Objective

Rhea performed a Phase II ESA in conformance with the scope and limitations of ASTM Practice E1903-19. The objective of the Phase II ESA was to characterize soil and groundwater conditions at the subject property in order to determine its highest and best use.

### 1.2 Scope of Services

This Phase II ESA scope of services included:

- + Geophysical survey (electromagnetic and ground-penetrating radar) to clear boring locations of utilities and subsurface features;
- + Laboratory analysis of two soil samples collected from each of the 12 boring locations; and
- + Installation of 12 temporary monitoring wells and laboratory analysis of a groundwater sample collected from each well location.

Soil borings and temporary monitoring wells were positioned throughout the subject property in a manner that provided spatial coverage of the subject property while also favoring areas of suspected contamination. Information obtained during the Phase II ESA has been organized and evaluated to determine the impact of the identified environmental conditions to the property and provide recommendations for additional investigative work, if needed.

## **1.3 Limiting Conditions and Methodologies Used**

### **1.3.1 Project Limits**

Information regarding the location of the subject property and the extent of area to be assessed were provided by Troy Truax of MBI and Brad Swartz of PADGS. Access to the subject property was provided by Jim Niehenke of the PA Department of Corrections (PADOCC). Figure 2 depicts the location of Rhea's Phase II ESA.

### **1.3.2 Limits to Methodologies Used**

While ESAs are useful tools to identify potential environmental concerns at a site, no ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, collected for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty.

Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

### **1.3.3 User Reliance**

The following assessment was conducted per the contractual agreement between Rhea and the User. Any reliance or use of this report by anyone other than the User, for whom the report was issued, without Rhea's explicit and written authorization, is explicitly prohibited. Any reliance or use of this assessment by any third party, without explicit authorization, does not make the said third party a third-party beneficiary to Rhea's agreement with the User. The unauthorized reliance on or use of any part of this report by a third party will be at the third party's risk, and no warranties or representations, either expressed or implied in this report, are associated with such use.

## 1.4 Report Organization

This report includes Rhea's observations, findings, and conclusions associated with the Phase II ESA. The report is organized into the following sections:

- + Section 1.0 – Introduction: Identifies the objective, special conditions, report organization, and limitations and exceptions;
- + Section 2.0 – Site Background: Provides general information about the Site and its features;
- + Section 3.0 – Summary of Field Activities: Description of the work performed and the rationale for performing it;
- + Section 4.0 – Evaluation and Presentation of Results;
- + Section 5.0 – Conclusions: Interpretation of the results in relation to the objectives of the investigation;
- + Section 6.0 – Recommendations: Discusses Rhea's professional recommendations based on the conclusions of the Phase II ESA;
- + Section 7.0 – Environmental Professionals: Presents the qualifications, statement, and signatures of the environmental professionals who conducted the Phase II ESA; and
- + Section 8.0 – References: Includes references used in the preparation of this report.

## 1.5 Limitations and Exceptions

Rhea reviewed pertinent documentation regarding the property's environmental condition that was provided, and reasonably and practicably available to the user. This documentation includes, but is not limited to, previous ESAs, other environmental studies, and technical reports or documents pertinent to an understanding of the known or potential presence of target analytes at the property; oral histories concerning releases or disposal affecting the property; and the user's detailed knowledge of the nature of any specialized activities and operations conducted at the property that inherently pose the potential for the presence of substances on the property as per the ASTM E1903-19 Standard.

It should be noted that the findings summarized in this report are relevant to the dates of the investigation. The usability of data collected by Rhea may have a finite lifetime and should not be relied upon to represent future conditions. The Phase II ESA and reporting efforts were prepared in accordance with the ASTM E1903-19 Standard and generally accepted professional practices, principles, and procedures existing at the time of its preparation. Rhea has reviewed the available information for the subject property and will not be responsible for conditions arising from concealed, withheld, or incorrect information.

It should also be noted that, in general, Phase II ESAs are intended to develop and present sound, scientifically valid data concerning actual site conditions. It shall not be the role of a Phase II Assessor to provide legal or business advice.

## 2.0 SITE BACKGROUND

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### 2.1 Site Location and Description

This Phase II ESA was conducted at the SCI – Pittsburgh facility located at 3001 Beaver Avenue in Pittsburgh, PA (Figure 1). The subject property is located approximately four miles northwest of downtown Pittsburgh and immediately adjacent to the Ohio River. The subject property contains the vacant SCI – Pittsburgh facility, which contains approximately 43 buildings and comprises 17 parcels across approximately 20 acres. The subject property has been used as a correctional facility since at least the mid 1880's along with various support facilities, including hospitals, dining facilities, power plants, laundry facilities (including drycleaning), industrial manufacturing facilities, and machine shops, among others. Operations at these facilities likely included the use of hazardous substances. On-site chemical storage at the time of Rhea's September 2022 Phase I ESA included various quantities of sealant, air compressor oil, adhesive, paint, solvent, antifreeze, acetylene canisters, water treatment chemicals, refrigerants, lubricant, motor oil, gasoline, and lead acid batteries in multiple buildings throughout the subject property. The subject property is surrounded by commercial and industrial properties, including Engineered Polymer Solutions Inc. and the Allegheny County Sanitary Authority to the north, various commercial warehouses to the east, a Duquesne Light Company service center to the south, and the Ohio River to the west. The subject property is generally flat with an elevation of approximately 720 feet (ft) above mean sea level (amsl).

### 2.2 Previous Environmental Investigations

The following subsections detail previous investigations conducted on, or associated with, the subject property.

#### 2.2.1 Phase I ESA – November 2017

In November 2017, Pedersen & Pedersen, Inc. (P&P) completed a Phase I ESA on the SCI – Pittsburgh facility. The Phase I ESA identified the following RECs:

- + Historic aboveground storage tanks (ASTs) identified on nearby or adjacent properties;
- + Historic industrial activities on adjacent properties;
- + Resource Conservation and Recovery Act (RCRA) Waste Generators on nearby or adjacent properties;

- + Manufacturing operations on the subject property which generated hazardous waste;
- + Leaking Underground Storage Tanks (LUSTs) on and adjacent to the subject property;
- + Underground Storage Tanks (USTs) currently in use at the subject property;
- + Archive USTs and ASTs on and adjacent to the subject property; and
- + Historical Auto Shops and Dry Cleaners on nearby or adjacent properties.

Based on these RECs, P&P recommended that a Phase II ESA, which was to include the analysis of surface, subsurface, and groundwater samples for VOCs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), TAL metals, dioxins and furans, and oil and grease, be conducted to determine the environmental condition of the subject property.

## **2.2.2 Phase II ESA – July 2019**

In July 2019, Rhea completed a Phase II ESA on the SCI – Pittsburgh facility in accordance with the recommendations outlined in the November 2017 Phase I ESA conducted by P&P. The Phase II ESA identified the following findings:

Four soil samples contained one metal (lead) at a concentration above their respective Act 2 standard. Additionally, manganese exceeded the applicable Act 2 standard in soil samples collected at three different borings.

Groundwater samples were collected from eight temporary monitoring wells and analyzed for VOCs, SVOCs, PAHs, TAL metals, and PCBs. Three VOCs were detected in groundwater. PCE was detected in three wells and exceeded the applicable Act 2 standard (5 µg/L) in centrally located temporary monitoring well MW-03. PCE impacts are often associated with dry-cleaning and metal degreasing activities, both of which have been documented at the subject property. Cis-1,2-DCE and chloroform were each detected in one well, but at concentrations below their respective Act 2 standards. Three metals (arsenic, iron, and manganese) were detected in groundwater samples at concentrations above their respective Act 2 standards. Natural sources of arsenic in groundwater include the dissolution and desorption of naturally occurring minerals pyrite and iron oxide, respectively. The

presence of arsenic in groundwater may also be related to the historic use of the coal fired power plant at the subject property as arsenic is a by-product of coal ash. Manganese and iron are naturally occurring in groundwater and concentrations may not be indicative of environmental contamination.

The concentration of PCE in groundwater at MW-03 exceeds the Johnson and Ettinger (J&E) Non-Residential Used Aquifer IAQ screening level. Since the groundwater concentration of PCE is greater than the J&E PA default screening level for PCE, there is potential for vapor intrusion into buildings on the subject property.

### **2.2.3 Phase I ESA – September 2022**

In September 2022, Rhea completed a Phase I ESA on the SCI – Pittsburgh facility. The Phase I ESA identified the following RECs:

- + Historic site use, including the likely use of hazardous chemicals in support of site operations.
- + Historic ASTs on adjoining and surrounding properties.
- + Known soil and groundwater concentrations for arsenic, iron, lead, manganese, and PCE above applicable Act 2 standards on the subject property.
- + Potential for leachate emanating from a coal storage area on the subject property to impact soil and groundwater.
- + A historic REC (HREC) was also identified for a LUST case that occurred in November 1997. Because the LUST case has been addressed to the satisfaction of the PADEP without subjecting the property to any required controls, it is considered a HREC.

Based on these RECs, Rhea recommended that a Phase II ESA, which was to include the analysis of surface soil, subsurface soil, and groundwater samples for VOCs, TAL metals, trivalent chromium, and hexavalent chromium, be conducted to determine the environmental condition of the subject property. This Phase II ESA report has generally been completed in accordance with the recommendations outlined in the September 2022 Phase I ESA.



## 3.0 SUMMARY OF FIELD ACTIVITIES

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### 3.1 Subsurface Investigation

Erik Hartle and Tyler Newell of Rhea, under the supervision of Michael Stoehr, Professional Geologist (PG) and Zachary Wicks, Project Manager, conducted a subsurface investigation between January 11 and January 16, 2023 at the SCI – Pittsburgh facility. The investigation included the advancement of 12 soil borings and the installation of 12 temporary monitoring wells. The preparation and field methods associated with the subsurface investigation are discussed below.

#### 3.1.1 Conceptual Site Model

The conceptual site model (CSM) takes into consideration the potential distributions of contaminants with respect to the properties, behaviors, and fate and transport characteristics of the contaminant at a site. The description of the potential pathways includes the hazardous materials' source, the release mechanism, a medium allowing movement of the hazardous materials, and the presence of the receptor. The SCI - Pittsburgh facility is not currently in use or permanently occupied. Potable water is provided to the subject property, so groundwater is not used for drinking or other purposes. Ingestion or dermal contact with soils is unlikely (much of the subject property is paved or covered with concrete) but could be encountered during intrusive activities during construction or by utility companies.

The CSM and sampling plan were developed in general accordance with ASTM Standard E1903-19: *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*. Soil borings and temporary monitoring wells were positioned throughout the subject property in a manner that provided spatial coverage of the subject property while also favoring areas of suspected contamination. The selection of soil boring and temporary monitoring well locations was limited by the number of buildings and the amount of reinforced concrete present at the subject property. Twelve soil borings were advanced to a depth of 15 feet below ground surface (bgs) or until sampler refusal was encountered. Soil boring locations are presented on Figure 3.

Each of the twelve soil boring locations was converted to a temporary monitoring well. The temporary monitoring wells were installed to a depth between approximately 17 and 30 ft bgs and screened across the groundwater interface. The location of each temporary monitoring well is presented on Figure 3. Temporary monitoring well installation information is provided in Table 3-2.

### 3.1.2 Sampling and Analysis Plan

The sampling and analysis plan developed for the SCI - Pittsburgh Phase II ESA was created based on the recommendations of the Phase I ESA (Rhea, 2022). The location of soil borings and temporary monitoring wells at the subject property was designed to provide comprehensive coverage of the subject property while also favoring areas of suspected contamination. Soil sample log sheets and groundwater sample log sheets were prepared for each sampling location, documenting characteristics of the respective environmental media sampled. At the time of sampling, a chain-of-custody (COC) document was prepared to record the date and time of the sample in addition to the analytical parameters for the respective sample. A COC document accompanied each sample shipment that was delivered to the analytical laboratory by the laboratory's private courier. COC records provide documentation regarding date of sample collection, time of sample collection, requested analytical parameters in addition to persons involved with the chain of sample possession.

Soil and groundwater samples collected at the subject property were delivered to ALS Global (ALS) in Middletown, PA. All soil samples collected at the subject property were analyzed for the following parameters:

- + VOCs (United States Environmental Protection Agency [USEPA] Methods 8260B and 5035);
- + TAL Metals, plus trivalent chromium (USEPA Method 6020A/7471B);
- and
- + Hexavalent Chromium (USEPA Method 7196A).

Groundwater samples collected at the subject property were analyzed for the following parameters:

- + VOCs (USEPA Methods 8260C);
- + TAL Metals, plus trivalent chromium (USEPA Method 6020A/7470A);
- and
- + Hexavalent Chromium (USEPA Method 7196A)

It should be noted that, per PA Code Chapter 250.10, samples for metals analysis were field filtered in accordance with the PADEP *Groundwater Monitoring Guidance Manual*. Analytical results are discussed in Section 4.2. The soil sample collection reports, water sample field logs, and full laboratory data package, including COC forms, are included in Appendices A, B, and C, respectively.

## **3.2 Field Explorations and Methods**

### **3.2.1 Utility Clearance**

Prior to the subsurface investigation, a utility clearance was completed through the PA One Call system in accordance with PA Act 287. The PA One Call did not identify any utilities within the area of Rhea's drilling locations. In addition to the PA One Call, Rhea conducted a geophysical survey of each boring location to clear each location of any private utility lines or subsurface features associated with the subject property's use as a correctional facility (e.g., steam lines, tunnels). The geophysical survey included electromagnetic and ground-penetrating radar techniques. Based on the results of the geophysical survey, the soil boring locations were re-located as needed.

### **3.2.2 Soil Borings**

The subsurface investigation included the advancement of 12 soil borings (SB-01 to SB-12). Each boring location was marked in the field by Rhea personnel prior to drilling activities. Prior to the abandonment of each bore hole, location coordinates were recorded using a handheld Trimble Geo 7X Global Positioning System (GPS).

The soil borings were advanced to their pre-determined depths or to boring refusal using direct push technology (i.e., Geoprobe) by AllProbe Environmental Inc. (AllProbe) of Wexford, PA. Each boring was continuously sampled at 5-ft intervals using a 2¼-inch outer diameter macro-core soil sampler with an internal disposable polyethylene liner.

Upon retrieval of each five-foot soil interval, Rhea field team members characterized and recorded the lithology (i.e., physical characteristics, soil type, cohesiveness, color, grain size, and relative moisture content) of the soil in the field. While wearing disposable nitrile gloves, Rhea personnel placed discrete two-foot samples into labeled, re-sealable plastic bags. The bags were left to sit for approximately 20 minutes before being field screened for VOCs using a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. The PID was calibrated prior to use with a 100 parts per million (ppm) isobutylene air standard.

Two soil samples were selected for analysis from each soil boring. Samples selected for analysis included the surface (0-2 ft bgs) interval, when soil was present, and the subsurface (2-15 ft bgs) soil with the highest PID reading. Soil samples selected for laboratory analysis were placed into laboratory-supplied Terra-core kits and glass jars and placed in a cooler with ice. The soil samples were hand delivered

under COC to an ALS service center for delivery to the laboratory following each day of sampling. Table 3-1 shows the PID readings within each depth interval for each boring.

**Table 3-1 PID Soil Field Screening Results**

Boring ID/PID Reading (ppm)						
Depth (ft)	SB-01	SB-02	SB-03	SB-04	SB-05	SB-06
0-2	13.5	0.3	0.5	0.5	0.9	6.8
2-4	1.1	0.1	0.1	0.4	1.5	1.2
4-6	1.2	0.1	1.4	0.3	2.6	0.4
6-8	2.1	0.2	0.3	0.4	1.7	0.4
8-10	2.5	0.2	2.4	0.1	1.6	1.5
10-12	3.5	0.4	0.3	0.3	1.4	1.0
12-14	2.8	0.3	0.2	0.3	1.1	0.6
14-16	3.2	0.3	0.3	0.6	1.5	1.0
	EOB	EOB	EOB	EOB	EOB	EOB

Boring ID/PID Reading (ppm)						
Depth (ft)	SB-07	SB-08	SB-09	SB-10	SB-11	SB-12
0-2	0.9	0.1	0.1	0.1	1.8	1.8
2-4	1.3	0.0	0.0	0.2	0.4	2.2
4-6	1.2	0.0	0.2	0.2	0.6	2.1
6-8	1.2	0.1	0.0	0.1	1.4	3.1
8-10	0.8	0.0	0.0	0.2	0.8	2.7
10-12	0.8	0.0	0.0	0.1	0.2	4.4
12-14	0.8	0.0	0.0	0.1	0.3	2.7
14-16	0.7	0.0	0.0	0.1	0.1	2.8
	EOB	EOB	EOB	EOB	EOB	EOB

Notes:  
 EOB – End of Boring  
 Shaded cells indicate sample submitted for laboratory analysis.

Based on visual observations, unconsolidated material within 15 ft of the ground surface consisted primarily of asphalt and fill material from 0-4 ft bgs followed by a mixture of dense silty clay, fine sand, coarse gravel, and damp alluvium deposits, from 4-15 ft bgs. Small coal and sandstone fragments were present in the borings.

### 3.2.3 Temporary Monitoring Well Installation

Twelve temporary monitoring wells (MW-01 to MW-12) were installed at each existing soil boring location across the subject property (Figure 3). Each temporary monitoring well was installed using a Geoprobe with internal disposable liners until groundwater was encountered at depths ranging from 17 ft bgs (MW-04) to 30 ft bgs (MW-01). Upon encountering groundwater, the boring was advanced to a sufficient depth to permit the installation of a 10-foot well screen which bracketed the groundwater interface. The temporary monitoring wells were constructed by inserting 1-inch inner diameter, schedule 40 polyvinyl chloride (PVC), 0.010-inch machine-slotted well screen and solid PVC riser pipe in the open borehole. Temporary monitoring well construction details, including well depth, depth to water, and the height of the top of casing (TOC) above the ground surface, is provided in Table 3-2.

**Table 3-2 Temporary Monitoring Well Construction Details**

Temporary Monitoring Well Construction Details			
Well ID	Well Depth (ft bgs)	Depth to Water (ft TOC)*	TOC Height**
MW-01	30	17.60	0.3
MW-02	24	17.78	0.9
MW-03	19	16.50	0.25
MW-04	17	12.57	0.18
MW-05	20	14.55	0.5
MW-06	20	14.67	0.5
MW-07	20	14.13	0.57
MW-08	25	18.67	0.3
MW-09	20	10.31	0.29
MW-10	25	11.50	0.45
MW-11	20	11.75	0.62
MW-12	20	11.54	0.54

Notes:

\*Depth to water measured in feet below TOC

\*\*TOC height measured in feet above ground surface

Following temporary monitoring well installation, each well was developed using a peristaltic pump and dedicated polyethylene tubing. Each temporary monitoring well was developed until at least three well volumes of groundwater were removed from the well. Following development, each temporary monitoring well was left to

recover overnight before sampling. Well development water was contained in 55-gallon Department of Transportation (DOT) approved drums for subsequent characterization and disposal.

### **3.2.4 Temporary Monitoring Well Abandonment**

Upon completion of groundwater sampling activities, each temporary monitoring well was abandoned. AllProbe performed the well abandonments by pulling the well casing and backfilling the remaining borehole with the excess drill cuttings and bentonite chips to within several inches of the ground surface. Temporary monitoring wells advanced through paved surfaces were patched with asphalt, and temporary monitoring wells advanced through grassy areas were re-established with topsoil.

### **3.2.5 Groundwater Sampling**

Groundwater samples were collected using low-flow groundwater sampling techniques. Temporary monitoring wells were purged and sampled with a peristaltic pump and dedicated polyethylene tubing. The temporary monitoring wells were purged at a rate equal to, or less than, the groundwater recharge rate. Purge rates for the wells ranged from 150 milliliters per minute (ml/min) to 200 ml/min. The temporary monitoring wells were purged for a minimum of 30 minutes or until the groundwater quality field parameters (dissolved oxygen [DO], temperature, pH, conductivity, oxidation reduction potential [ORP], turbidity) and water levels stabilized. Temporary monitoring well MW-08 could not be purged as the well continuously ran dry during pumping. The groundwater sample from MW-08 was collected after the well was purged dry and allowed to recharge. Groundwater quality field parameters, flow rates, and depth-to-water measurements were recorded approximately every five minutes (Appendix B). Parameters were considered stable once they met the following requirements for three consecutive readings:

- + DO ( $\pm$  3 percent);
- + pH ( $\pm$  0.1 standard units);
- + Conductivity ( $\pm$  10 percent)
- + ORP ( $\pm$  10 percent); and
- + Turbidity (less than 10 Nephelometric Turbidity Units [NTUs], or as low as practicable)

Groundwater samples were collected in laboratory-supplied and labeled bottles. Each sample was analyzed for the parameters identified in Section 3.1.2. Groundwater samples, temperature blanks, and trip blanks were packed into a cooler with ice and hand delivered to an ALS service center for delivery to the

laboratory. Each groundwater sample was logged on a COC form prior to shipment each day.

### **3.2.6 PPE and Equipment Decontamination**

Special precautions were taken to prevent potential cross-contamination during groundwater sampling at each temporary monitoring well. Personal protective equipment (PPE) worn by the samplers consisted of disposable, non-powdered nitrile gloves which were worn at all times during purging, sampling, decontamination, and equipment set up and tear down. Gloves were replaced between each soil boring and temporary monitoring well or more often as needed.

Equipment used for sampling activities arrived on site in clean condition. With the exception of certified laboratory-cleaned equipment, all sampling, testing, or measuring equipment that came in contact with potentially contaminated medium was decontaminated prior to use, unless it arrived prepackaged by a manufacturer. Dedicated tubing was used at each temporary monitoring well location and was discarded following sampling. Disposable sampling equipment (e.g., tubing, 45 micron filters) were disposed of properly after a single use and were not used at more than one temporary monitoring well.

### **3.2.7 Investigation Derived Waste**

Investigation-derived waste (IDW) consisted of soil (drill cuttings and excess soil sample material), purge water, disposable sampling materials, and PPE. IDW groundwater was placed in properly labeled DOT steel open-head drums and stored in a secure staging area at the subject property pending the results of groundwater sample analysis. IDW soil was returned to its' respective borehole at the conclusion of sampling activities. PPE and disposable sampling materials, including the PVC used for the temporary monitoring wells, was bagged and properly disposed of as municipal waste.

Rhea is subcontracting with HEPACO, Inc. to properly profile, manifest, ship, and dispose of the IDW groundwater. All waste profiling analytical data, shipping papers, including non-hazardous waste manifests and bills of lading, will be provided under separate cover.

## **4.0 EVALUATION AND PRESENTATION OF RESULTS**

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### **4.1 Subsurface Conditions**

#### **4.1.1 Geologic Setting**

The United States Geological Survey (USGS) Pittsburgh West Quadrangle (Figure 1) indicates that the subject property is situated at an approximate elevation of 720 ft amsl and is underlain by Urban Land soils, which are derived from pavement, buildings, and other artificially covered areas.

The subject property is located in the Appalachian Plateaus Physiographic Province of PA. The topography is characterized by flat hill tops cut by narrow valleys extending 400 to 500 ft below the tops of the hills (Wagner et al., 1970). The present-day valleys were formed through erosion of an ancient peneplain as a result of gradual uplift (Noecker et al., 1954). The subject property is located in the Ohio River Valley, which contains the Ohio River and its floodplain. The geology of the Ohio River floodplain in the area of the subject property is characterized by alluvium underlain by cyclic sequences of sandstone, siltstone, shale, claystone, limestone, and coal of the Glenshaw Formation, which were deposited in shallow inland seas and broad swamps during the Pennsylvanian Period approximately 300 million years ago (Noecker et al., 1954). While not glaciated, the area was influenced by the advancement of glaciers into parts of northern PA during the Pleistocene, as ice damming forced the areas rivers to change course from their original northward flow pattern to a generally southward direction (Wagner et al., 1970).

#### **4.1.2 Regional Hydrogeologic Setting**

The subject property is located along the eastern bank of the Ohio River. The major streams and tributaries in the Ohio River Valley generally follow courses which are independent of the geologic structure of the region (Noecker et. al, 1954). Groundwater in the area of the subject property is derived from local precipitation and infiltration of water from nearby rivers. Groundwater supplies in the upland areas are replenished exclusively by local precipitation while valley aquifers are mainly replenished by infiltration of water from the major rivers (Noecker et al., 1954). In the area of the subject property, along the Ohio River, the most productive groundwater deposits are the coarse-grained outwash sand and gravel, which were deposited by glacial melt water from the north and are highly permeable (Noecker et al., 1954).



Depth to groundwater in the valley aquifers fluctuates throughout the year and is primarily affected by pumping and changes in infiltration caused by fluctuating river levels. During most of the year, the water table slopes towards the river; however, when the river reaches high stage the slope of the water table is reversed and the surface water recharges the adjacent aquifers (Noecker et al., 1954).

### **4.1.3 Site-Specific Groundwater Conditions**

Groundwater at the subject property occurred at depths ranging from 10.31 to 18.67 ft below TOC in the Quaternary alluvium deposits. Based on the proximity of the subject property to the Ohio River, Rhea assumes that groundwater flows west towards the Ohio River.

## **4.2 Analytical Data**

### **4.2.1 Soil Analytical Results**

Tables 1A and 1B provide a summary of analytical detections for the surface and subsurface soil samples collected in comparison to the Act 2 standards, respectively. The analytical data was compared to the Direct Contact Medium Specific Concentration (MSC) and soil-to-groundwater MSCs for a used, non-residential, aquifer with less than or equal to 2,500 ppm Total Dissolved Solids (TDS). The soil-to-groundwater MSC table within Act 2 contains two numeric values: the 100 times groundwater MSC; and a generic value. In accordance with the Act 2 Technical Guidance Manual, dated January 2019, the higher of the 100-times groundwater MSC and the generic value may be selected for use as the soil-to-groundwater value. The lower of the appropriate soil-to-groundwater value and the direct contact value is the applicable non-residential MSC for soil and was used to demonstrate compliance with the Act 2 Standard. Soil samples which contain constituents exceeding their respective Act 2 standard are presented on Figure 4. Complete laboratory reports are provided in Appendix C.

### ***Volatile Organic Compounds***

Laboratory results indicate that none of the soil samples collected during the subsurface investigation contained VOCs at concentrations above their respective Act 2 standards. A review of the analytical data for soil samples at the subject property shows that acetone was detected in 10 of the 24 soil samples collected at the subject property. The acetone detection in the samples is most likely related to the preservation of the samples with sodium bisulfate. In soil samples with a high proportion of organic material, the sodium bisulfate will generate acetone when it reacts with organic material in the soil (California EPA, 2004).

## **Metals**

One soil sample (SB-11-0-2) contained manganese (2,850 milligrams per kilogram [mg/kg]) at a concentration above the applicable Act 2 standard (2,000 mg/kg). The remaining soil samples collected during the subsurface investigation did not contain metals, including trivalent or hexavalent chromium, above their respective Act 2 standards.

### **4.2.2 Groundwater Analytical Results**

Table 2 summarizes the analytical results for groundwater samples collected from the 12 temporary monitoring wells installed at the subject property. The analytical results were compared to the MSC<sub>gw</sub>. The MSCs for a used, non-residential aquifer with less than or equal to 2,500 milligrams per Liter (mg/L) TDS were used to determine compliance with Act 2 standards. Groundwater samples which contain constituents exceeding their respective Act 2 standard are presented on Figure 5. Complete laboratory reports are provided in Appendix C.

### **Volatile Organic Compounds**

Laboratory results indicate five VOCs (cis-1,2-DCE, methyl acetate, PCE, toluene, and TCE) were detected in groundwater. PCE was detected in seven wells (MW-01, -02, -03, -04, -05, -06, and -07), and exceeded the applicable Act 2 standard (5 µg/L) in wells MW-04 (63.7 µg/L), -05 (26.3 µg/L), -06 (21 µg/L) located in the central portion of the subject property and well MW-03 (207 µg/L) located in the north/northeastern portion of the subject property. PCE daughter products cis-1,2-DCE (26.3 µg/L) and TCE (10.9 µg/L) were detected in well MW-03, with TCE exceeding the applicable Act 2 standard (5 µg/L). Methyl acetate, toluene, and TCE were detected at other wells throughout the site, but at concentrations below their respective Act 2 standards.

## **Metals**

Three metals (arsenic, iron, and manganese) were detected in groundwater samples at concentrations above their respective Act 2 standards. Arsenic exceeded the applicable Act 2 standard (10 µg/L) in MW-10 (39 µg/L) and MW-11 (13 µg/L), located in the western portion of the subject property. Iron and manganese concentrations exceeded the applicable Act 2 standard in four and six locations, respectively. Natural sources of arsenic in groundwater include the dissolution and desorption of naturally occurring minerals pyrite and iron oxide, respectively. The presence of arsenic in groundwater may also be related to the historic use of the coal fired power plant at the subject property as arsenic is a by-product of coal ash. Manganese and iron are naturally occurring in groundwater and concentrations may not be indicative of environmental contamination. It is important to note that the Act 2 standards for iron and manganese are based on Secondary Maximum

Contaminant and Lifetime Health Advisory Levels, respectively, which are non-enforceable guidelines.

#### **4.2.3 Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard**

IAQ from the vapor intrusion of contaminants into buildings from groundwater and soil is not specifically detailed in the Act 2, Chapter 250 regulations. However, *Section IV: Vapor Intrusion* of the *PADEP Land Recycling Program Technical Guidance Manual* was developed to assist in assessing the potential for indoor vapor intrusion pathways (PADEP, 2021).

When releases of compounds occur near buildings, volatilization of contaminants from the dissolved or pure phases in the subsurface can result in the intrusion of vapor-phase contaminants into indoor air. For nonresidential receptors, if the levels of regulated substances do not exceed the nonresidential  $MSC_{gw}$  for used aquifers, then there is no potential vapor intrusion source and no further site evaluation is required (PADEP, 2021).

Since PCE exceeded the Act 2 Non-Residential standard of 5 µg/L at MW-03, MW-04, MW-05, and MW-06 and TCE exceeded the Act 2 Non-Residential Standard of 5 µg/L at MW-03, further vapor intrusion evaluation is warranted. Given the unknown future use of the subject property, vapor intrusion has been evaluated conservatively and includes the following assumptions:

- + Any future building/structure foundations constructed in the area of temporary monitoring wells MW-03, MW-04, MW-05, and MW-06 would be within five feet of the groundwater level; and
- + Any future buildings/structures would be non-residential.

When the applicable and appropriate  $MSC_{gw}$  for a compound is exceeded, given the above assumption regarding building foundation levels, a potentially complete pathway exists if an inhabited building or below grade occupied space is:

- + Within 100 feet of a source horizontally, and
- + Not separated vertically from the source by at least 30 feet (of sand) or 15 feet (of soil other than sand).

Based upon the subsurface geologic profile in the vicinity of MW-03, MW-04, MW-05, and MW-06, and the unknown future use of the subject property, there is a potential for vapor intrusion on the subject property. For a potentially complete

pathway, if the groundwater concentrations are less than the appropriate and applicable  $MSC_{gw}$  or the groundwater level is greater than or equal to 5 feet from the receptor and concentrations are below the applicable PADEP Statewide Health Standard screening value (PADEP, 2021 Table IV-1), then no further vapor intrusion or IAQ activity for groundwater is warranted.

The concentration of PCE in groundwater at MW-03, MW-04, MW-05, and MW-06, and TCE in groundwater at MW-03, exceeds the  $MSC_{gw}$  for both constituents of 5  $\mu\text{g/L}$ . Since the groundwater concentration of PCE and TCE is greater than the  $MSC_{gw}$ , further evaluation for vapor intrusion would be warranted in the area of MW-03, MW-04, MW-05, and MW-06 if a building would be constructed over top of, or within 100 feet, of the locations. As an alternative to additional investigation, mitigation plans could be incorporated into building designs if the building fell within guidance document set-backs.

#### **4.2.4 Analytical Data Quality and Data Qualifiers**

Quality assurance and quality control (QA/QC) samples were submitted to the laboratory in order to evaluate the quality of the chemical analysis of the samples. Based on the review of the laboratory analytical data, no major issues were identified. However, it should be noted that methyl acetate was detected in the method blank at a value greater than the reporting limit in the groundwater samples collected at wells MW-01, -07, -09, -10, and -11. Detections of methyl acetate at these wells have been denoted with a “MB” qualifier.

#### **4.2.5 Verification of a Conceptual Site Model**

Based on the results of the Phase II ESA, soil at the subject property was impacted by manganese above Act 2 standards at SB-11 (2,850 mg/kg) (Figure 4). The presence of manganese is likely a result of natural processes as manganese is naturally occurring in rock and soil. Normal exposure pathways would typically be limited to dermal contact in surface soil at 0-2 ft bgs; however, the soil boring location impacted by manganese is covered by pavement; therefore, contact with the soil is not likely as long as the pavement remains in place. In the event that the pavement degrades or is removed, potential sensitive receptors could include site workers, trespassers, and flora/fauna.

Groundwater at the subject property is impacted by PCE and TCE (chlorinated VOCs), and metals above Act 2 standards (Figure 5). PCE was detected above the Act 2 standard and the  $MSC_{gw}$  of 5  $\mu\text{g/L}$  in MW-03 (207  $\mu\text{g/L}$ ), MW-04 (63.7  $\mu\text{g/L}$ ), MW-05 (26.3  $\mu\text{g/L}$ ), and MW-06 (21  $\mu\text{g/L}$ ) while TCE was detected above the Act 2 standard and the  $MSC_{gw}$  of 5  $\mu\text{g/L}$  in MW-03 (10.9  $\mu\text{g/L}$ ). Sources of PCE typically include historic dry cleaners, automotive repair shops, and paint shops where it was

used as a solvent. The source of the PCE detected in MW-04, MW-05, and MW-06 is likely attributed to the historic industrial use of the subject property including, metal shop operations, dry cleaning, welding, printing, and painting (Rhea, 2022).

The source of the PCE detected in MW-03 is not well defined as this detection is an order of magnitude greater than the PCE levels found in temporary monitoring wells MW-04, MW-05, and MW-06 and the location of MW-03 does not appear to be located downgradient of any known historical industrial uses on the subject property that are typically recognized as a PCE source. The TCE detected in this well is likely a result of the reductive dichlorination of the PCE detected in this well as TCE is a daughter product of PCE. Additional investigation would be required to determine if the source of the PCE detected in temporary monitoring well MW-03 is a result of the historic industrial use of the subject property and/or the historic dry cleaners, automotive repair shops, and paint shops located within approximately one-eighth of a mile up-gradient and cross-gradient from the subject property (Rhea, 2022).

Additionally, three metals were detected in groundwater above their respective Act 2 standards including, arsenic in MW-10 and MW-11, iron in MW-08 and MW-10 through MW-12, and manganese in MW-02, MW-03, MW-08, and MW-10 through MW-12. The presence of iron and manganese is likely a result of natural processes as these constituents occur naturally in soils and rock and are easily dissolved by groundwater. Natural sources of arsenic in groundwater include the dissolution and desorption of naturally occurring minerals pyrite and iron oxide, respectively. The presence of arsenic in groundwater may also be related to the historic use of the coal fired power plant at the subject property as arsenic is a by-product of coal ash. Potable water is currently supplied to the subject property by two public water supply lines. Currently the only potential sensitive receptors related to groundwater could include site workers involved with excavation into the subsurface and flora and fauna inhabiting the area.

The CSM and sampling plan developed for the subject property were verified during the Phase II ESA activities. The QA/QC procedures described above were adequate to verify the data acceptability.

## 5.0 CONCLUSIONS

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Based on the subsurface investigation and a review of previous investigations at the subject property, Rhea has made the following conclusions:

- + None of the soil samples collected during the subsurface investigation contained VOCs at concentrations above their respective Act 2 standard.
- + One soil sample (SB-11-0-2) contained manganese (2,850 µg/L) at a concentration above the Act 2 standard (2,000 µg/L). The presence of manganese is likely a result of natural processes as manganese is naturally occurring in rock and soil. The remaining soil samples collected during the subsurface investigation did not contain metals, including trivalent or hexavalent chromium, above their respective Act 2 standards.
- + PCE was detected in groundwater at MW-03 (207 µg/L), MW-04 (63.7 µg/L), MW-05 (26.3 µg/L), and MW-06 (21 µg/L) above the applicable Act 2 standard and the  $MSC_{gw}$  of 5 µg/L. Temporary monitoring wells MW-04, MW-05, and MW-06 are located in the central portion of the subject property within the prison walls. The source of the PCE detected in MW-04, MW-05, and MW-06 is likely attributed to the historic industrial use of the subject property.
- + MW-03 is located in the north/northeastern portion of the subject property in an asphalt-paved area within the prison walls. The source of the PCE detected in MW-03 is not well defined as this detection is an order of magnitude greater than the PCE levels found in temporary monitoring wells MW-04, MW-05, and MW-06 and the location of MW-03 does not appear to be located downgradient of any known historical industrial uses on the subject property that are typically recognized as a PCE source. An additional investigation would be required to determine if the source of the PCE detected in temporary monitoring well MW-03 is a result of historical on-site industrial activities or an off-site source.
- + TCE was detected in groundwater at MW-03 at a concentration of 10.9 µg/L, above the applicable Act 2 standard and the  $MSC_{gw}$  of 5 µg/L. The TCE detected in this well is likely a result of the reductive dichlorination of the PCE detected in this well as TCE is a daughter product of PCE. Cis-1,2-DCE, another daughter product of PCE, was also detected in MW-03 at a concentration below the applicable Act 2 standard. Methyl acetate, PCE, toluene, and TCE were detected at other temporary monitoring well locations at levels below their respective Act 2 standards.

+ Three metals (arsenic, iron, and manganese) were detected in groundwater samples at concentrations above their respective Act 2 standards. Arsenic exceeded the applicable Act 2 standard (10 µg/L) in MW-10 (39 µg/L), MW-11 (13 µg/L), located in the western portion of the subject property. Iron and manganese concentrations exceeded the applicable Act 2 standard in four and six locations, respectively. The presence of arsenic in the groundwater may be related to naturally occurring conditions or may be related to the historic use of the coal fired power plant at the subject property as arsenic is a by-product of coal ash. Manganese and iron are naturally occurring in groundwater and concentrations may not be indicative of environmental contamination.

## 6.0 RECOMMENDATIONS

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The following recommendations regarding the subject property are based on Rhea's observations and interpretations as they relate to the results of the subsurface investigation, observed subject property conditions, available subject property history, and usage information. The results of this evaluation are qualified by the fact that only limited intrusive investigative activities have been conducted.

It is Rhea's professional opinion that the previous industrial activities have not impacted site soils to an extent that would adversely affect future earth-disturbing activities at the subject property. Due to the level of manganese above the Act 2 standard for soil at SB-11, Rhea recommends that a HASP and a SMP be prepared in order to develop procedures to limit potential exposure to impacted soil during future earth-disturbing site preparation and construction activities. No additional actions or investigations are recommended at this time for site soils.

The HASP should include appropriate health and safety procedures for site workers working within potentially impacted areas. The HASP should also provide procedures to avoid exposure to subsurface contamination. If potentially contaminated soils are planned to be transported, disposed of, or otherwise remediated, the site must abide by the provisions set forth in the PADEP Residual Waste Management regulations (25 Pa. Code Chapters 287 to 299).

The purpose of the SMP is to protect human health and the environment during the handling and/or excavation of soil as part of the redevelopment of the subject property. The SMP shall detail procedures to be followed to ensure that manganese in soil is managed at the subject property to limit exposure to workers and other receptors during earth-disturbing activities. The SMP would also address proper handling, stockpiling and disposal of any soils in proposed construction areas, maintenance of subject property grades, site surface water drainage/management and documentation.

Previous industrial activities have likely impacted groundwater on the subject property. Furthermore, screening of VOC groundwater data indicates potential for vapor intrusion in any buildings located on the subject property. To address the groundwater (VOCs and metals) and potential IAQ impacts (VOCs), Rhea recommends:

- + Additional groundwater samples be collected and analyzed from areas surrounding MW-03 to confirm the presence of PCE and TCE, further delineate the contamination plume, and to potentially identify its source.



It should be noted that Rhea has submitted a proposal for recommended supplemental sampling activities to MBI for approval by PADGS;

- + Evaluation of the vapor intrusion pathway may be warranted in the future for any existing buildings that are not planned for demolition. An evaluation of the vapor intrusion pathway was not included in Rhea's proposal for supplemental sampling at this time since the plans for retention or demolition of buildings has not been decided; and

- + Future site development plans will likely need to incorporate both Institutional (deed restrictions on groundwater use) and Engineering controls (i.e., active or passive vapor mitigation systems) to mitigate impacts from groundwater contamination.

## 7.0 ENVIRONMENTAL PROFESSIONALS

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### 7.1 Preparer Qualifications

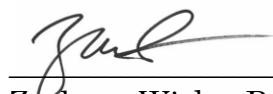
Zachary Wicks, Project Manager and Environmental Scientist III, coordinated and oversaw the Phase II ESA site investigation and reviewed the Phase II ESA report. He holds a Bachelor of Science degree in Geo-Environmental Studies and has 14 years of experience in various environmental investigations including, but not limited to: Phase I and Phase II ESAs, environmental baseline studies, long-term monitoring and sampling of groundwater, wetland delineations, and technical report writing and review.

Michael Stoehr, PG, supervised the Phase II ESA site investigation, reviewed site documentation, and prepared the Phase II ESA report. He holds a Bachelor of Science degree in Geology as well as a Master of Science degree in Geo-Environmental Studies and has six years of experience related to environmental investigations including, but not limited to: Phase I and Phase II ESAs, groundwater sampling, infiltration testing, geophysical investigations, and technical report writing and review.

Erik Hartle, Geologic Specialist I, performed the Phase II ESA site investigation, gathered Site documentation, and prepared the analytical data tables and supporting documentation under the supervision of Zachary Wicks and Michael Stoehr. Erik Hartle holds a Bachelor of Science degree in Geology and has over six years of experience in UST and AST inspections, erosion and sediment control inspections, long-term monitoring and sampling of groundwater, and technical report writing. The resumes of Zach Wicks, Michael Stoehr, and Erik Hartle are included in Appendix F.

### 7.2 Environmental Professional Statement and Signature

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. I have developed and performed the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Zachary Wicks, Project Manager  
Environmental Professional

## 8.0 REFERENCES

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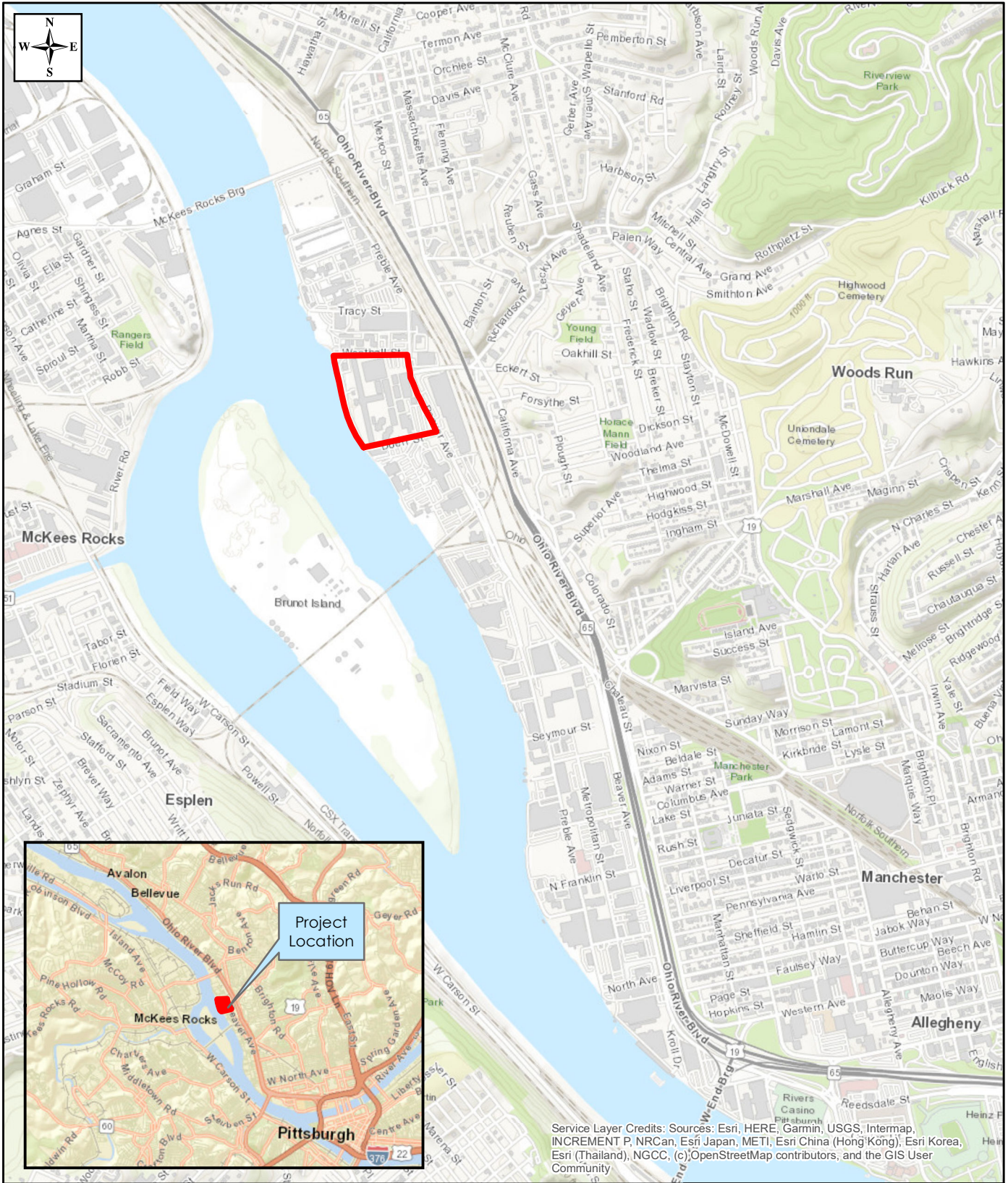
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## **FIGURES**



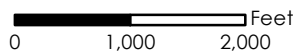
**Legend**

 Subject Property Boundary

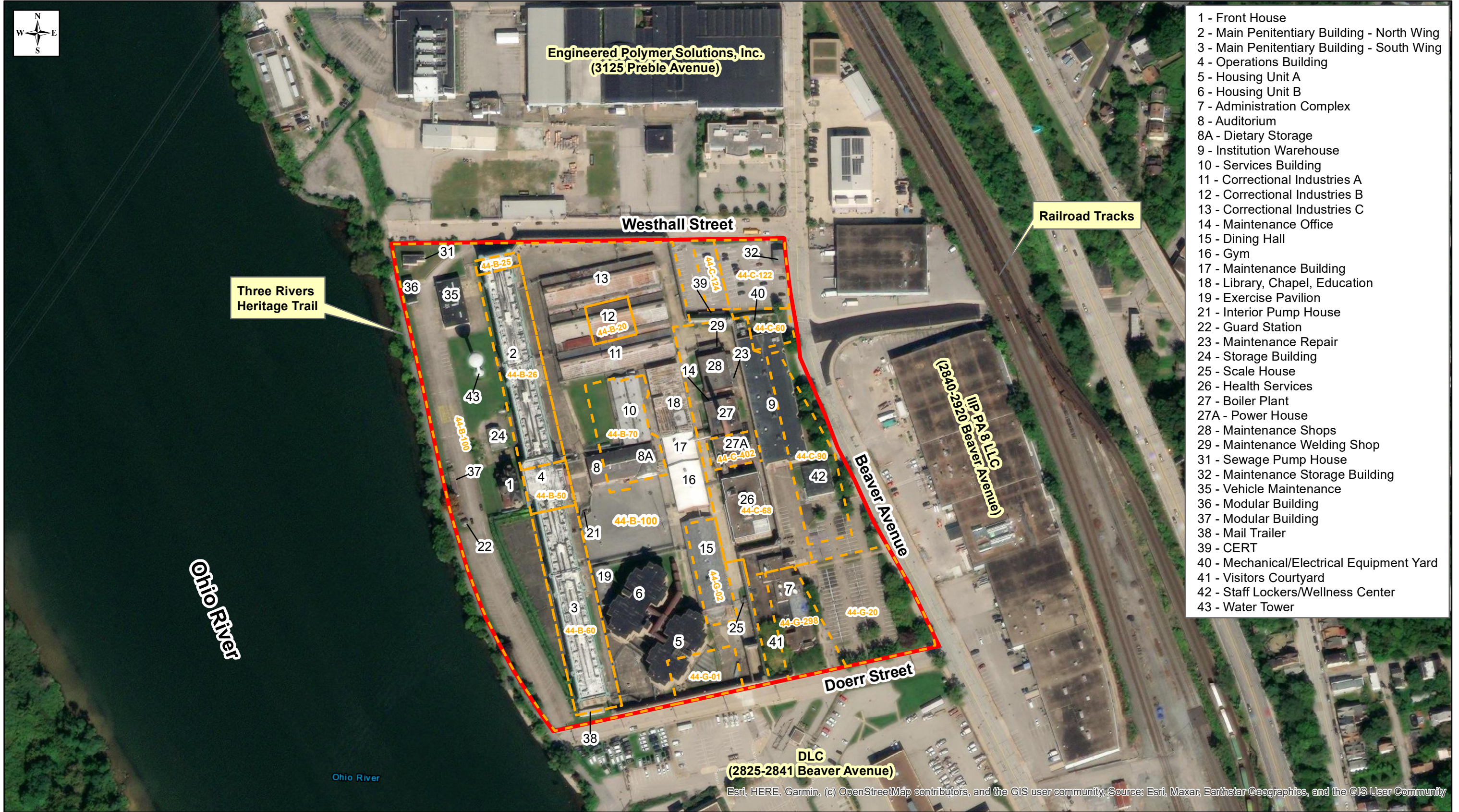


**FIGURE 1**

**USGS Topographic Site Vicinity Map  
SCI Pittsburgh Phase II ESA  
Pittsburgh, Pennsylvania**



Drawn By	Checked By	Date	Project	Sheet No.
MRS	ZDW	1/24/23	2390	1



- 1 - Front House
- 2 - Main Penitentiary Building - North Wing
- 3 - Main Penitentiary Building - South Wing
- 4 - Operations Building
- 5 - Housing Unit A
- 6 - Housing Unit B
- 7 - Administration Complex
- 8 - Auditorium
- 8A - Dietary Storage
- 9 - Institution Warehouse
- 10 - Services Building
- 11 - Correctional Industries A
- 12 - Correctional Industries B
- 13 - Correctional Industries C
- 14 - Maintenance Office
- 15 - Dining Hall
- 16 - Gym
- 17 - Maintenance Building
- 18 - Library, Chapel, Education
- 19 - Exercise Pavilion
- 21 - Interior Pump House
- 22 - Guard Station
- 23 - Maintenance Repair
- 24 - Storage Building
- 25 - Scale House
- 26 - Health Services
- 27 - Boiler Plant
- 27A - Power House
- 28 - Maintenance Shops
- 29 - Maintenance Welding Shop
- 31 - Sewage Pump House
- 32 - Maintenance Storage Building
- 35 - Vehicle Maintenance
- 36 - Modular Building
- 37 - Modular Building
- 38 - Mail Trailer
- 39 - CERT
- 40 - Mechanical/Electrical Equipment Yard
- 41 - Visitors Courtyard
- 42 - Staff Lockers/Wellness Center
- 43 - Water Tower

**Legend**

- Parcel Boundary
- Subject Property Boundary

T:\Clients\Baker\2390\R5



**FIGURE 2**

**Site Layout Map  
SCI Pittsburgh Phase II ESA  
Pittsburgh, Pennsylvania**



Drawn By	Checked By	Date	Project	Sheet No.
MRS	ZDW	1/24/23	2390	2

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



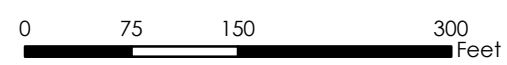
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Legend**

-  Soil Borings/Temporary Monitoring Well Locations
-  Site Boundary

NOTES:  
 SB = Soil Boring  
 MW = Monitoring Well

T/Clients/Baker/2390/R5



**FIGURE 3**

**Soil Boring and Monitoring Well  
 Location Map  
 SCI Pittsburgh Phase II ESA  
 Pittsburgh, Pennsylvania**

Drawn By	Checked By	Date	Project	Sheet No.
ZDW	MRS	1/24/23	2390	3





SB-11-0-2	
Sampled 1/12/2023	
Constituent	Concentration
TAL Metals (mg/kg)	
Manganese	2,850

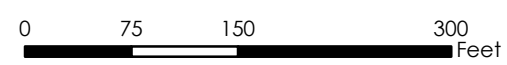
OHIO RIVER

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

-  Soil Boring Location
-  Site Boundary

NOTES:  
 SB = Soil Boring  
 mg/kg = milligram per kilogram



**FIGURE 4**

**Exceedances in Soil  
 SCI Pittsburgh Phase II ESA  
 Pittsburgh, Pennsylvania**

Drawn By	Checked By	Date	Project	Sheet No.
ZDW	MRS	1/24/23	2390	4





MW-08	
Sampled 1/17/2023	
Constituent	Concentration
TAL Metals (ug/L)	
Iron	440
Manganese	3,000

MW-03	
Sampled 1/12/2023	
Constituent	Concentration
Volatile Organic Compounds (ug/L)	
Tetrachloroethene (PCE)	207
Trichloroethene (TCE)	10.9
TAL Metals (ug/L)	
Manganese	3,300

MW-04	
Sampled 1/12/2023	
Constituent	Concentration
Volatile Organic Compounds (ug/L)	
Tetrachloroethene (PCE)	63.7

MW-02	
Sampled 1/12/2023	
Constituent	Concentration
TAL Metals (ug/L)	
Manganese	450

MW-10	
Sampled 1/16/2023	
Constituent	Concentration
TAL Metals (ug/L)	
Arsenic	39
Iron	72,500
Manganese	18,700

MW-06	
Sampled 1/13/2023	
Constituent	Concentration
Volatile Organic Compounds (ug/L)	
Tetrachloroethene (PCE)	21

MW-05	
Sampled 1/13/2023	
Constituent	Concentration
Volatile Organic Compounds (ug/L)	
Tetrachloroethene (PCE)	27.2

MW-11	
Sampled 1/16/2023	
Constituent	Concentration
TAL Metals (ug/L)	
Arsenic	13
Iron	13,200
Manganese	8,200

MW-12	
Sampled 1/13/2023	
Constituent	Concentration
TAL Metals (ug/L)	
Iron	6,200
Manganese	2,800

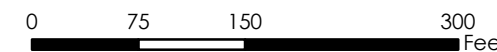
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

- Temporary Monitoring Well Location
- Site Boundary

**NOTES:**

MW = Monitoring Well  
 ug/L = microgram per liter  
 The highest value between the parent sample (MW-05) and duplicate (MW-05D) is presented.



**FIGURE 5**

**Exceedances in Groundwater  
 SCI Pittsburgh Phase II ESA  
 Pittsburgh, Pennsylvania**

Drawn By	Checked By	Date	Project	Sheet No.
ZDW	MRS	2/2/23	2390	5

## **TABLES**



**TABLE 1A**  
**SUMMARY OF ANALYTICAL RESULTS COMPARED TO APPLICABLE**  
**ACT 2 STANDARDS FOR SURFACE SOIL**  
**SCI Pittsburgh Phase II ESA**  
**3001 Beaver Avenue, Pittsburgh, Pennsylvania**

SAMPLE ID	Used Aquifer Non-Residential 100 X GW MSC TDS ≤ 2500*	Used Aquifer Non-Residential Generic Value TDS ≤ 2500*	Non-Residential Direct Contact MSC (0-2 Feet)*	SB-01-0-2	SB-02-0-2	SB-03-0-2	SB-04-0-2	SB-05-0-2	SB-06-0-2	SB-07-0-2	SB-08-0-2	SB-09-0-2	SB-10-0-2	SB-11-0-2	SB-12-0-2
SAMPLE DATE				1/12/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/13/2023	1/13/2023	1/13/2023	1/12/2023	1/12/2023
<b>Volatile Organic Compounds (Method 8260B)</b>															
Acetone	8,800	980	10,000	0.0055 U	0.0056 U	0.0211	0.0400	0.0052 U	0.0050 U	0.0112	0.0072 U	0.0082	0.0060 U	0.0114	0.0078
Carbon Disulfide	620	530	10,000	0.0011 U	0.0011 U	0.0014 U	0.0011 U	0.0010 U	0.0010 U	0.0011 U	0.0014 U	0.0089	0.0012 U	0.0068	0.0030
Methyl Cyclohexane**	NA	NA	NA	0.0011 U	0.0011 U	0.0014 U	0.0012	0.0010 U	0.0010 U	0.0011 U	0.0014 U	0.0013 U	0.0012 U	0.0013 U	0.0012 U
<b>Metals - Target Analyte List (Method 6010B)</b>															
Aluminum, Total	NA	NA	190,000	9,000	7,250	11,100	8,670	9,390	9,400	8,020	9,780	20,900	7,850	12,000	8,960
Antimony, Total	0.6	27	1,300	1 U	1.7	0.97 U	1.1 U	1.1 U	1.1 U	1.7	1.6	1.1 U	2.1	1	1.1 U
Arsenic, Total	1	29	61	9.5	17.2	12.1	10.3	12	10.9	11.8	13.7	3.6	17.1	14.3	15.4
Barium, Total	200	8,200	190,000	74.9	138	132	153	145	232	113	148	444	119	232	126
Beryllium, Total	0.4	320	6,400	0.66	0.79	1.3	0.73	0.73	0.78	0.92	0.95	3.3	1.1	1.40	1.1
Cadmium, Total	0.5	38	1,600	0.5 U	0.65	0.48 U	0.55 U	0.55 U	0.55 U	0.57 U	0.86	0.54 U	1.1	0.51 U	0.67
Calcium, Total	NA	NA	NA	25,600	3,960	36,800	2,080	2,200	1,760	21,700	4,100	120,000	3,250	37,900	9,300
Chromium, Total	NA	NA	NA	11.8	17.9	13.8	12.8	14.6	13.7	9.9	29.9	13	34.7	10	13
Cobalt, Total	2.9	130	960	8.8	9.5	8	11.7	11.6	11.7	6.9	12	2.7 U	10.6	6.7	9.5
Copper, Total	100	43,000	100,000	14.8	44.0	20.3	14.8	19.7	18.3	25.9	38.3	7.2	35.9	18.1	37.6
Hexavalent Chromium (Method 7196A)	10	190	180	2.3 U	2.4 U	2.2 U	2.2 U	2.3 U	2.4 U	2.4 U	2.3 U	2.1 U	2.3 U	2.2 U	2.2 U
Iron, Total	NA	NA	190,000	25,500	27,600	26,400	27,300	29,100	27,200	21,400	29,900	8,710	30,700	24,900	30,000
Lead, Total	0.5	450	1,000	12.1	122	94.7	26.9	54.8	35	157	118	124	108	61	57.2
Magnesium, Total	NA	NA	NA	2,870	1,550	4,830	1,560	1,740	1,630	3,150	1,870	22,000	1,220	7,470	2,530
Manganese, Total	30	2,000	190,000	1,270	731	730	784	829	1,090	718	754	1,660	591	2,850	423
Mercury, Total (Method 7471B)	0.2	10	510	0.049 U	0.12	0.12	0.063	0.1	0.053 U	0.083	0.17	0.051 U	0.29	0.1	0.18
Nickel, Total	10	650	64,000	14.9	19.2	16	19.5	19.3	21.8	14.8	23.6	12	24.3	12.6	18.6
Potassium, Total	NA	NA	NA	1,100	896	1,270	1,150	979	1,210	889	1,040	1,660	705	1,320	982
Selenium, Total	5	26	16,000	2.5 U	2.5 U	2.4 U	2.7 U	2.8 U	2.8 U	2.9 U	2.5 U	2.7 U	2.8 U	2.6 U	2.6 U
Silver, Total	10	84	16,000	1.0 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.1 U	0.98 U	1.1 U	1.1 U	1.0 U	1.1 U
Sodium, Total	NA	NA	NA	235	50.4 U	177	54.8 U	55.5 U	55.1 U	107	49.2 U	642	58.9	250	208
Thallium, Total	0.2	14	32	0.5 U	0.5 U	0.48 U	0.55 U	0.55 U	0.55 U	0.57 U	0.49 U	0.54 U	0.57 U	0.51 U	0.53 U
Trivalent Chromium	10	190,000	190,000	11.8	17.9	13.8	12.8	14.6	13.6	9.9	29.6	13	34.5	10	13
Vanadium, Total	0.68	680	220	22	18.1	18.2	19.3	20.4	18.9	15.4	21.7	17	19.6	17.4	17.7
Zinc, Total	200	12,000	190,000	56.9	152	82.3	68.5	87.5	88.5	71.2	138	49.7	171	78.1	119

Notes:

All concentrations presented in milligrams/kilogram (mg/kg)

\*PADEP Medium Specific Concentrations (MSCs), November 2021

\*\*No Act 2 or MSC standard could be identified for this constituent

**Bold, grey shaded values shall be used to determine compliance with Act 2.**

**Bold values indicate detections.**

**Bold, red shaded values indicate an exceedance of the Act 2 Standard**

U - Not detected

NA - Not applicable.

Refer to Appendix C for a full list of analytical results



**TABLE 1B  
SUMMARY OF ANALYTICAL RESULTS COMPARED TO APPLICABLE  
ACT 2 STANDARDS FOR SUBSURFACE SOIL  
SCI Pittsburgh Phase II ESA  
3001 Beaver Avenue, Pittsburgh, Pennsylvania**

SAMPLE ID	Used Aquifer Non-Residential 100 X GW MSC TDS ≤ 2500*	Used Aquifer Non-Residential Generic Value TDS ≤ 2500*	Non-Residential Direct Contact MSC (2-15 Feet)*	SB-01-10-12	SB-02-10-12	SB-03-8-10	SB-04-14-16	SB-05-4-6	SB-06-8-10	SB-07-2-4	SB-08-6-8	SB-09-4-6	SB-10-4-6	SB-11-6-8	SB-12-10-12
SAMPLE DATE				1/12/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/11/2023	1/13/2023	1/13/2023	1/13/2023	1/12/2023	1/12/2023
<b><i>Volatile Organic Compounds (Method 8260B)</i></b>															
Acetone	8,800	980	10,000	0.0069	0.0055 U	0.0051 U	0.0054 U	0.0055 U	0.0045 U	0.0104	0.0065 U	0.0053 U	0.0077 U	0.0111	0.0128
Methylene Chloride	0.5	0.076	10,000	0.0094 U	0.0011	0.0010 U	0.0011 U	0.0011 U	0.0009 U	0.0015 U	0.0013 U	0.0011 U	0.0015 U	0.0013 U	0.00095 U
Tetrachloroethene	0.5	0.43	3,600	0.0094 U	0.0011 U	0.0010 U	0.0150	0.0011 U	0.0041	0.0015 U	0.0013 U	0.0011 U	0.0015 U	0.0013 U	0.00095 U
<b><i>Metals - Target Analyte List (Method 6010B)</i></b>															
Aluminum, Total	NA	NA	190,000	6,330	4,020 U	4,320	5,890	10,200	7,560	11,100	6,190	9,650	11,500	5,500	7,270
Antimony, Total	0.6	27	190,000	0.99 U	1 U	1 U	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1.3 U	1 U	1.1 U	1.2 U
Arsenic, Total	1	29	190,000	11.2	8.1	11.5	10.6	12	11.8	10.9	7.8	9.8	9.9	12.4	8.4
Barium, Total	200	8,200	190,000	43.5	47.6	51.4	64.7	120	92.1	143	77.5	122	215	72.3	163
Beryllium, Total	0.4	320	190,000	0.49 U	0.51 U	0.59	0.6 U	0.76	0.74	1.5	0.54	0.78	0.9	0.59	0.8
Cadmium, Total	0.5	38	190,000	0.49 U	0.51 U	0.52 U	0.6 U	0.56 U	0.5 U	0.57 U	0.53 U	0.51 U	0.51 U	0.57 U	0.58 U
Calcium, Total	NA	NA	NA	935	566	10,100	904	1,710	1,220	40,600	1,100	2,710	1,990	2,090	2,400
Chromium, Total	NA	NA	NA	13.1	7.8	11.9	10.2	13.9	12.5	10.6	10.5	15.9	15.7	11.3	11.2
Cobalt, Total	2.9	130	190,000	10.6	4.1	6.6	9.5	12.7	9.8	6.4	7.9	9.7	13	7.7	10.3
Copper, Total	100	43,000	190,000	14.2	10.6	12.6	13.1	17	15.5	24.8	10.8	24.2	15.8	13	13.9
Hexavalent Chromium (Method 7196A)	10	190	140,000	2.3 U	2.1 U	2.3 U	2.4 U	2.4 U	2.3 U	2.5 U	2.3 U	2.2 U	2.4 U	2.4 U	2.4 U
Iron, Total	NA	NA	190,000	29,900	24,300	24,800	27,700	30,600	29,400	20,100	24,300	32,700	30,200	27,600	24,900
Lead, Total	0.5	450	190,000	12.8	7.9	15.9	11.8	15.7	13.3	84.7	11.2	33.5	15.5	13.4	17.7
Magnesium, Total	NA	NA	NA	1,340	971	1,540	1,480	2,280	1,540	5,860	1,310	2,000	1,890	1,310	1,410
Manganese, Total	30	2,000	190,000	701	569	500	747	990	674	1,210	541	574	1,120	382	962
Mercury, Total (Method 7471B)	0.2	10	190,000	0.054 U	0.046 U	0.05 U	0.057 U	0.057 U	0.056 U	0.13	1.3	0.25	0.06 U	0.11	0.072
Nickel, Total	10	650	190,000	14.8	10.4	12.8	15.1	22.3	18.2	14.3	14.4	19.3	25.3	13.6	18.8
Potassium, Total	NA	NA	NA	672	314	447	533	867	652	1,120	674	1,580	1,300	737	842
Selenium, Total	5	26	190,000	2.5 U	2.5 U	2.6 U	3.0 U	2.8 U	2.5 U	2.9 U	2.7 U	2.5 U	2.6 U	2.8 U	2.9 U
Silver, Total	10	84	190,000	0.99 U	1 U	1 U	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1.2 U
Sodium, Total	NA	NA	NA	232	50.6 U	52.3 U	59.8 U	56.2 U	50.5 U	150	53 U	57.5	51.2 U	139	214
Thallium, Total	0.2	14	190,000	0.49 U	0.51 U	0.52 U	0.6 U	0.56 U	0.5 U	0.57 U	0.53 U	0.51 U	0.51 U	0.57 U	0.58 U
Trivalent Chromium	10.0	190,000	190,000	12.1	7.8	11.9	10.2	13.9	12.5	10.6	10.5	15.9	15.7	11.3	11.2
Vanadium, Total	0.68	680	190,000	16.6	11	12.2	15.7	21.4	17.6	15.6	15.2	23.2	21.9	15	15.7
Zinc, Total	200	12,000	190,000	55.5	39.9	55	54.9	73.7	63.8	63	50	53.3	88.1	51.3	66.2

Notes:

All concentrations presented in milligrams/kilogram (mg/kg)

\*PADEP Medium Specific Concentrations (MSCs), November 2021

**Bold, grey shaded values shall be used to determine compliance with Act 2.**

**Bold values indicate detections.**

**Bold, red shaded values indicate an exceedance of the Act 2 Standard**

U - Not Detected

NA - Not applicable.

Refer to Appendix C for a full list of analytical results



**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS COMPARED TO APPLICABLE**  
**ACT 2 STANDARDS FOR GROUNDWATER**  
**SCI Pittsburgh Phase II ESA**  
**3001 Beaver Avenue, Pittsburgh, Pennsylvania**

SAMPLE ID	Used Aquifer Non-Residential TDS ≤ 2500*	MW-01	MW-02	MW-03	MW-04	MW-05	MW-05D	MW-06	MW-07	MW-08	MW-09	MW-10	MW-11	MW-12	
SAMPLE DATE		1/16/2023	1/12/2023	1/12/2023	1/12/2023	1/13/2023	1/13/2023	1/13/2023	1/16/2023	1/17/2023	1/16/2023	1/16/2023	1/16/2023	1/13/2023	
<b>Volatile Organic Compounds (Method 8260C)</b>															
cis-1,2-Dichloroethene	70	1 U	1 U	26.3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Methyl acetate	97,000	6.9 MB	2 U	2 U	2 U	2 U	2 U	2 U	8.9 MB	2 U	5.9 MB	7.7 MB	6.1 MB	2 U	
Tetrachloroethene (PCE)	5	3.7	1.7	207	63.7	26.3	27.2	21	4.7	1 U	1 U	1 U	1 U	1 U	
Toluene	1,000	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U	1 U	
Trichloroethene (TCE)	5	1.3	1	10.9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
<b>Dissolved Metals - Target Analyte List (Method 6020A)</b>															
Aluminum <sup>(1)</sup>	200	89 U	89 U	89 U	89 U	89 U	89 U	89 U	89 U	89 U	120	89 U	89 U	89 U	
Arsenic	10	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	8.4	3 U	39	13	8.5
Barium	2,000	61	110	53	54	47	47	63	48	130	77	200	370	140	
Calcium	NA	160,000	161,000	68,300	41,900	117,000	116,000	51,200	75,500	61,100	96,800	115,000	179,000	96,500	
Hexavalent Chromium (Method 7196A) <sup>(3)</sup>	100	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1,000 U	10 U	11	10 U	10 U	
Iron <sup>(1)</sup>	300	78	56 U	56 U	56 U	56 U	56 U	56 U	56 U	56 U	440	56 U	72,500	13,200	6,200
Magnesium	NA	41,700	31,300	13,100	5,600	12,600	12,600	2,800	7,900	11,300	7,500	18,500	23,500	7,100	
Manganese <sup>(2)</sup>	300	180	450	3,300	5.6 U	36	35	6.7	140	3,000	67	18,700	8,200	2,800	
Potassium	NA	16,000	14,300	3,700	8,800	4,800	4,800	3,000	5,100	5,700	7,000	2,400	8,500	9,600	
Sodium	NA	440,000	385,000	25,800	19,000	22,600	22,200	9,700	26,000	61,400	104,000	62,900	71,400	137,000	
Zinc	2,000	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	7.2	16	6.1	8.4	5.6

Notes:

All concentrations presented in micrograms per liter (µg/L)

\*PADEP Medium Specific Concentrations (MSCs), November 2021

**Bold, grey shaded values shall be used to determine compliance with Act 2.**

**Bold values indicate detections**

**Bold, red shaded values indicated an exceedance of the Act 2 Standard**

(1) Indicates the standard is a Secondary Maximum Contaminant Level

(2) Indicates the standard is a Lifetime Health Advisory Level

(3) No standard for Chromium (VI) in groundwater could be identified, therefore the Total Chromium standard was used

NA - Not applicable.

U - Not detected

MB - Constituent detected in associated method blank

Refer to Appendix C for a full list of analytical results

## **APPENDIX A**

### **Soil Sample Collection Reports**



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/12/2023 Collected By: Tyler Newell  
 Boring ID: SB-01

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt to dense clay fill material, dry	13.5
2-4	Brown dense clay, trace sand, damp	1.1
4-6	Brown fine sand, little clay, damp	1.2
6-8	Brown homogenous fine sand, little clay, damp	2.1
8-10	Brown homogenous fine sand, some clay, damp	2.5
10-12	Brown clay and sand, cont. rounded alluvium	3.5
12-14	Brown sand and alluvial gravels, damp	2.8
14-16	Brown sand and fine alluvial gravels, damp	3.2

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-01-0-2/SB-01-10-12  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Cloudy, low 50's

Remarks: 0-5ft = 4ft recovery, 5-10ft = 3.5ft recovery, 10-15ft = 3ft recovery  
Converted to MW-01 at 30ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Tyler Newell  
 Boring ID: SB-02

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Organic matter to clay trace sand, cont. coal frag.	0.3
2-4	Brown silty clay, damp	0.1
4-6	Brown fine sand, little clay, damp	0.1
6-8	Brown fine sand and clay, cont. sandstone frag. moist	0.2
8-10	Brown fine sand, cont. rounded alluvium, damp	0.2
10-12	Brown fine sand, cont. rounded alluvium, damp	0.4
12-14	Brown fine sand, cont. rounded alluvium, damp	0.3
14-16	Brown fine sand, cont. rounded alluvium, damp	0.3

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-02-0-2/SB-02-10-12  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
Volume: _____	Container Type: <u>Terracore kit, one 8 oz glass jar, one 4 oz glass jar</u>	

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 4ft recovery, 5-10ft = 3.0ft recovery, 10-15ft = 4ft recovery  
Converted to MW-02 at 24ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.





# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Tyler Newell  
 Boring ID: SB-03

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt and fill material	0.5
2-4	Brown sandy clay, cont. coal frag., damp	0.1
4-6	Gray sand and gravel, damp	1.4
6-8	Gray course gravel, dry	0.3
8-10	Brown/ orange fine sand, damp	2.4
10-12	Gray course gravel, dry	0.3
12-14	Brown fine sand, damp	0.2
14-16	Brown fine sand, cont. rounded alluvium, damp	0.3

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-03-0-2/SB-03-8-10  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	<u>Y</u> <input checked="" type="checkbox"/> <u>N</u> <input type="checkbox"/>	<u>Y</u> <input type="checkbox"/> <u>N</u> <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 2.5ft recovery, 5-10ft = 4.5ft recovery, 10-15ft = 4.5ft recovery  
Converted to MW-03 at 19ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Tyler Newell  
 Boring ID: SB-04

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt and fill material	0.5
2-4	Brown/ gray fine gravels, cont. coal frag., dry	0.4
4-6	Brown silty clay, damp	0.3
6-8	Brown fine sand and silt, little clay, moist	0.4
8-10	Brown fine sand and silt, wet	0.1
10-12	Brown fine sand and trace gravel, damp	0.3
12-14	Brown fine sand, cont. rounded alluvium, wet	0.3
14-16	Brown fine sand, cont. rounded alluvium, wet	0.6

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-04-0-2/SB-04-14-16  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 4ft recovery, 5-10ft = 4.5ft recovery, 10-15ft = 4.5ft recovery  
Converted to MW-04 at 17ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Tyler Newell  
 Boring ID: SB-05

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Organic matter and clay, cont. coal frag.	0.9
2-4	Brown silty clay, damp	1.5
4-6	Brown sandy silt, cont. sandstone frag., damp	2.6
6-8	Brown fine sand and clay, damp	1.7
8-10	Brown homogenous fine sand, damp	1.6
10-12	Brown homogenous fine sand, damp	1.4
12-14	Brown homogenous fine sand, damp	1.1
14-16	Brown homogenous fine sand, moist	1.5

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-05-0-2/SB-05-4-6  
 Describe Compositing: \_\_\_\_\_

### Sample Types Collected

Type<sup>(2)</sup> VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins Per Sample? Y N Per Composite? Y N  
 Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 5ft recovery, 5-10ft = 5ft recovery, 10-15ft = 4.ft recovery  
Converted to MW-05 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Tyler Newell  
 Boring ID: SB-06

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Organic matter and silty clay	6.8
2-4	Brown silty clay, little sand. damp	1.2
4-6	Brown fine sand, moist	0.4
6-8	Brown clayey sand, wet	0.4
8-10	Brown fine sand, little clay, moist	1.5
10-12	Brown clayey sand, damp	1.0
12-14	Brown homogenous fine sand, damp	0.6
14-16	Brown homogenous fine sand, damp	1.0

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-06-0-2/SB-06-8-10  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 5ft recovery, 5-10ft = 5ft recovery, 10-15ft = 4ft recovery  
Converted to MW-06 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/11/2023 Collected By: Erik Hartle  
 Boring ID: SB-07

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt and fill material	0.9
2-4	Brown silty clay and sand, cont. coal frag.	1.3
4-6	Brown silty clay and trace sand	1.2
6-8	Brown silty clay and trace sand	1.2
8-10	Brown homogenous clay, trace sand, damp	0.8
10-12	Brown dense clay, cont. coal frag.	0.8
12-14	Brown dense clay, damp	0.8
14-16	Brown dense clay to moist sand	0.7

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-07-0-2/SB-0-2-4  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected			
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Type <sup>(2)</sup>	Per Sample?	Per Composite?	
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Sunny, mid 40's

Remarks: 0-5ft = 3ft recovery, 5-10ft = 4.5ft recovery, 10-15ft = 5ft recovery  
Converted to MW-07 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/13/2023 Collected By: Tyler Newell  
 Boring ID: SB-08

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Brown clay and gravel fill material, cont. coal frag.	0.1
2-4	Brown dense clay and sand, damp	0.0
4-6	Brown dense clay and sand, cont. brick frag. damp	0.0
6-8	Brown clay and fine sand, damp	0.1
8-10	Brown fine sand, little clay, damp	0.0
10-12	Brown homogenous clayey sand, wet	0.0
12-14	Brown homogenous clayey sand, wet	0.0
14-16	Brown homogenous clayey sand, wet	0.0

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-08-0-2/SB-08-6-8  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected			
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Type <sup>(2)</sup>	Per Sample?	Per Composite?	
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/13/2023 Laboratory: ALS  
 Weather Conditions: Cloudy, low 30's

Remarks: 0-5ft = 3.5ft recovery, 5-10ft = 3.5ft recovery, 10-15ft = 3ft recovery  
Converted to MW-08 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/13/2023 Collected By: Tyler Newell  
 Boring ID: SB-09

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt to dense clay fill material	0.1
2-4	Brown dense clay and silt, damp	0.0
4-6	Brown clay and gravel, dry	0.2
6-8	Brown clay and gravel, dry	0.0
8-10	Brown clay and fine gravels, cont. brick frag.	0.0
10-12	Brown clay and gravel fill, moist	0.0
12-14	Brown clay and gravel fill, moist	0.0
14-16	Wood fill, wet	0.0

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-09-0-2/SB-09-4-6  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/13/2023 Laboratory: ALS  
 Weather Conditions: Cloudy, low 30's

Remarks: 0-5ft = 3.5ft recovery, 5-10ft = 0.5ft recovery, 10-15ft = 1.5ft recovery  
Converted to MW-09 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/13/2023 Collected By: Tyler Newell  
 Boring ID: SB-10

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt to dense clay fill material	0.1
2-4	Brown dense clay and gravel fill	0.2
4-6	Brown dense clay and sand, damp	0.2
6-8	Brown clay and fine gravel, damp	0.1
8-10	Brown clay and fine gravels, fill, moist	0.2
10-12	Brown clay and fine sand, moist	0.1
12-14	Brown homogenous clay and fine sand, moist	0.1
14-16	Brown homogenous clay and fine sand, moist	0.1

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-10-0-2/SB-10-4-6  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/13/2023 Laboratory: ALS  
 Weather Conditions: Cloudy, low 30's

Remarks: 0-5ft = 5ft recovery, 5-10ft = 1ft recovery, 10-15ft = 2.5ft recovery  
Converted to MW-10 at 25ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.





# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/12/2023 Collected By: Tyler Newell  
 Boring ID: SB-11

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt and fill material	1.8
2-4	Gray clay and fine gravel, damp	0.4
4-6	Brown gravel and sand to clay, damp	0.6
6-8	Brown clayey sand, cont. sandstone frag., damp	1.4
8-10	Brown clay, trace sand, moist	0.8
10-12	Brown clay and coarse gravel, cont. brick frag., wet	0.2
12-14	Brown clay and fine gravel, fill, wet	0.3
14-16	Brown clay and sand, cont. brick frag., wet	0.1

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-11-0-2/SB-11-6-8  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected			
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Type <sup>(2)</sup>	Per Sample?	Per Composite?	
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/13/2023 Laboratory: ALS  
 Weather Conditions: Cloudy, low 30's

Remarks: 0-5ft = 4.5ft recovery, 5-10ft = 2.5ft recovery, 10-15ft = 4ft recovery  
Converted to MW-11 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.



# Soil Sample Field Collection Report

Project Name: SCI Pittsburgh Phase II ESA Project #: 2390  
 Date Collected: 1/12/2023 Collected By: Tyler Newell  
 Boring ID: SB-12

Depth of Sample	Soil Description/Time Collected (Color, Composition, Staining, Odor)	Field Reading <sup>(1)</sup>
0-2	Asphalt and fill material	1.8
2-4	Brown clay and gravel, cont. sandstone frag., damp	2.2
4-6	Brown clay and sand, damp	2.1
6-8	Brown clay, trace sand, damp	3.1
8-10	Brown clay, trace sand, moist	2.7
10-12	Brown clay, little gravel, fill, moist	4.4
12-14	Brown clay, little gravel, fill, moist	2.7
14-16	Brown clay and gravel, cont. brick frag., wet	2.8

Sampling Method: Grab  
 Composite Sample: \_\_\_\_\_ Composite Sample ID #: SB-12-0-2/SB-12-10-12  
 Describe Compositing: \_\_\_\_\_

Sample Types Collected
------------------------

Type <sup>(2)</sup>	Per Sample?	Per Composite?
<u>VOCs/SVOCs/Metals/PCBs/PAHs/Dioxins</u>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Volume: \_\_\_\_\_ Container Type: Terracore kit, one 8 oz glass jar, one 4 oz glass jar

Date Received by Lab: 1/12/2023 Laboratory: ALS  
 Weather Conditions: Rain, low 30's

Remarks: 0-5ft = 4ft recovery, 5-10ft = 3.5ft recovery, 10-15ft = 4.5ft recovery  
Converted to MW-12 at 20ft bgs

<sup>(1)</sup> Organic vapor analysis, pocket penetrometer, etc.  
<sup>(2)</sup> Metals, VOA, organics, etc.

## **APPENDIX B**

### **Water Sample Collection Reports**



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-01
PROJECT NO.	2390	WELL No.	MW-01
SAMPLE DATE	1/16/2023	SAMPLED BY	ETH
SAMPLE TIME	1545	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 17.62			

FIELD MEASUREMENTS		
pH	Standard Units	5.95
Specific Conductance	mS/cm	3.40
Water Temperature	°C	14.53
Dissolved Oxygen	ppm	0.55
Redox Potential	mV	109
Turbidity	NTU	0.00

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/16/2023
WEATHER 46 degrees, clear			
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/16/2023  
**Well I.D.:** MW-01

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 17.60 ft  
**Well Depth:** 30 ft  
**Feet of Water:** 12.40 ft  
**Volume of Water in Well:** 0.51 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1505	17.60	6.04	3.32	14.50	1.52	60.00	71.0
1510	--	6.00	3.36	14.48	1.19	48.76	70.0
1515	--	5.98	3.37	14.44	0.88	28.04	73.0
1520	--	5.98	3.38	14.47	0.68	31.01	86.0
1525	--	5.96	3.39	14.53	0.63	11.36	96.0
1530	--	5.96	3.40	14.53	0.59	0.28	101.0
1535	--	5.95	3.40	14.55	0.55	0.00	107.0
1540	17.62	5.95	3.40	14.53	0.55	0.00	109.0
1545	Sample Time						

**Purge Start Time:** 1505  
**Purge End Time:** 1540  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.51 gal  
**Total Volume Purged:** 1.59 gal  
 Well Volume (gal.) (2" well)= (ft of water)(0.163)

**Weather :** 46 degrees, clear

**Comments:** Unable to obtain water level while purging, well diameter not wide enough for water level meter



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-02
PROJECT NO.	2390	WELL No.	MW-02
SAMPLE DATE	1/12/2023	SAMPLED BY	ETH
SAMPLE TIME	12:25	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 17.80			

FIELD MEASUREMENTS		
pH	Standard Units	5.73
Specific Conductance	mS/cm	3.34
Water Temperature	°C	12.93
Dissolved Oxygen	ppm	0.03
Redox Potential	mV	-146
Turbidity	NTU	42.3

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/12/2023
WEATHER 48 degrees, rain			
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/12/2023  
**Well I.D.:** MW-02

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 17.78 ft  
**Well Depth:** 24 ft  
**Feet of Water:** 6.22 ft  
**Volume of Water in Well:** 0.25 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1135	17.80	5.81	3.37	13.33	2.21	1000	61
1140	17.80	5.71	3.38	13.74	1.08	668	-23
1145	17.80	5.72	3.37	13.89	0.36	164	-59
1150	17.80	5.76	3.35	13.89	0.31	137	-97
1155	17.80	5.79	3.34	13.83	0.23	106	-108
1200	17.80	5.72	3.31	13.92	0.27	57.9	-124
1205	17.80	5.80	3.31	13.90	0.16	44.4	-127
1210	17.80	5.71	3.30	13.82	0.23	40.2	-135
1215	17.80	5.72	3.32	13.6	0.15	39.6	-144
1220	17.80	5.73	3.34	12.93	0.03	42.3	-146
1225	Sample Time						

**Purge Start Time:** 1135  
**Purge End Time:** 1225  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.25 gal  
**Total Volume Purged:** 2 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 48 degrees, rain

**Comments:** TOR = 11 in above ground surface



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-03
PROJECT NO.	2390	WELL No.	MW-03
SAMPLE DATE	1/12/2023	SAMPLED BY	ETH
SAMPLE TIME	14:00	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 16.46			

FIELD MEASUREMENTS		
pH	Standard Units	6.25
Specific Conductance	mS/cm	0.671
Water Temperature	°C	12.95
Dissolved Oxygen	ppm	0.00
Redox Potential	mV	-232
Turbidity	NTU	36.6

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/12/2023
WEATHER 45 degrees, rain			
COMMENTS			





## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/12/2023  
**Well I.D.:** MW-03

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 16.50 ft  
**Well Depth:** 19 ft  
**Feet of Water:** 2.5 ft  
**Volume of Water in Well:** 0.10 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1310	16.53	6.65	0.82	12.49	0.68	1000	-230
1315	16.54	6.52	0.78	12.44	0.43	855	-238
1320	16.50	6.44	0.73	12.55	0.13	601	-244
1325	16.50	6.38	0.70	12.69	0.00	291	-247
1330	16.50	6.36	0.70	12.73	0.00	183	-246
1335	16.48	6.34	0.70	12.78	0.00	121.0	-245
1340	16.48	6.30	0.68	12.81	0.00	80.4	-241
1345	16.48	6.28	0.68	12.81	0.00	67.4	-240
1350	16.46	6.26	0.675	12.88	0.00	49	-234
1355	16.46	6.25	0.671	12.95	0.00	36.6	-232
1400	Sample Time						

**Purge Start Time:** 1310  
**Purge End Time:** 1355  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.10 gal  
**Total Volume Purged:** 2 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 45 degrees, rain

**Comments:** Turbidity meter read 13.76 at 1345, 9.80 at 1350, and 4.89 at 1355.



## WATER SAMPLE COLLECTION REPORT

PROJECT NAME SCI Pittsburgh Phase II ESA	SAMPLE I.D. MW-04
PROJECT NO. 2390	WELL No. MW-04
SAMPLE DATE 1/12/2023	SAMPLED BY ETH
SAMPLE TIME 15:40	SAMPLE SEQUENCE NUMBER
COLLECTION EQUIPMENT Geopump	
DEPTH TO WATER PRIOR TO SAMPLING (FT) 15.88	

FIELD MEASUREMENTS		
pH	Standard Units	6.15
Specific Conductance	mS/cm	0.400
Water Temperature	°C	13.82
Dissolved Oxygen	ppm	5.36
Redox Potential	mV	214
Turbidity	NTU	20.58

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6	
LABORATORY ALS	DELIVERED VIA Hand Delivered	DATE 1/12/2023
WEATHER 48 degrees, rain		
COMMENTS		



**WELL PURGING RECORD  
LOW-FLOW SAMPLING**

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/12/2023  
**Well I.D.:** MW-04

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 12.57 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 7.43 ft  
**Volume of Water in Well:** 0.30 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1435	14.20	6.39	0.397	13.38	4.90	107	157
1440	14.60	6.37	0.387	13.50	4.44	103	146
1445	15.07	6.37	0.396	13.61	4.20	99	138
1450	15.62	6.31	0.394	13.68	4.01	66	144
1455	15.70	6.31	0.401	13.68	3.89	50	150
1500	15.87	6.21	0.398	13.70	4.50	40.8	167
1505	15.87	6.20	0.398	13.70	4.02	38.8	185
1510	15.73	6.17	0.398	13.75	4.37	29.9	193
1515	15.88	6.16	0.398	13.8	4.45	33.86	194
1520	15.88	6.18	0.397	13.91	5.07	27.67	199
1525	15.88	6.15	0.399	13.88	5.36	20.43	205
1530	15.88	6.15	0.400	13.86	5.30	16.5	211
1535	15.88	6.15	0.400	13.82	5.36	20.58	214
1540	Sample Time						

**Purge Start Time:** 1435  
**Purge End Time:** 1535  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.10 gal  
**Total Volume Purged:** 2 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 48 degrees, rain

**Comments:** TOR = 2.25 in above ground surface



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**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-05/MW-05D
PROJECT NO.	2390	WELL No.	MW-05
SAMPLE DATE	1/13/2023	SAMPLED BY	ETH
SAMPLE TIME	12:35/14:40	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 14.94			

FIELD MEASUREMENTS		
pH	Standard Units	6.25
Specific Conductance	mS/cm	0.833
Water Temperature	°C	13.07
Dissolved Oxygen	ppm	2.09
Redox Potential	mV	102
Turbidity	NTU	1.04

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	12		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/13/2023
WEATHER 26 degrees, light snow			
COMMENTS Duplicate sample collected at MW-05 (MW-05D)			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/13/2023  
**Well I.D.:** MW-05

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 14.55 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 5.45 ft  
**Volume of Water in Well:** 0.22 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1155	14.90	6.35	0.917	12.70	4.22	438	176
1200	14.90	6.35	0.860	12.69	3.66	284	103
1205	14.90	6.31	0.839	12.81	2.49	101	79
1210	14.90	6.29	0.839	12.89	2.04	39	79
1215	14.92	6.28	0.840	12.91	2.00	17	84
1220	14.92	6.27	0.836	12.99	1.96	8.1	87
1225	14.92	6.26	0.832	13.00	1.92	2.8	96
1230	19.94	6.25	0.833	13.07	2.09	1.0	102
1235	Sample Time						
1240	Duplicate Sample time						

**Purge Start Time:** 1155  
**Purge End Time:** 1230  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.22 gal  
**Total Volume Purged:** 1.59 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 26 degrees, light snow

**Comments:** Duplicate sample collected at MW-05 (MW-05D). TOR = 6 in above ground surface.



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**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-06
PROJECT NO.	2390	WELL NO.	MW-06
SAMPLE DATE	1/13/2023	SAMPLED BY	ETH
SAMPLE TIME	13:55	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 15.04			

FIELD MEASUREMENTS		
pH	Standard Units	6.18
Specific Conductance	mS/cm	0.367
Water Temperature	°C	11.73
Dissolved Oxygen	ppm	4.33
Redox Potential	mV	134
Turbidity	NTU	2.33

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/13/2023
WEATHER 25 degrees, light snow			
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/13/2023  
**Well I.D.:** MW-06

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 14.67 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 5.33 ft  
**Volume of Water in Well:** 0.22 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1310	15.03	6.32	0.417	11.56	4.89	433	89
1315	15.06	6.26	0.388	11.64	4.34	273	92
1320	15.03	6.24	0.378	11.78	3.59	98	83
1325	15.03	6.21	0.370	11.77	3.69	77	104
1330	15.03	6.20	0.369	11.79	3.83	36	110
1335	15.03	6.18	0.367	11.68	4.07	16.04	118
1340	15.03	6.18	0.366	11.68	4.09	9.04	124
1345	15.03	6.19	0.366	11.74	4.14	3.90	129
1350	15.04	6.18	0.367	11.73	4.33	2.33	134
1355	Sample Time						

**Purge Start Time:** 1310  
**Purge End Time:** 1350  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.22 gal  
**Total Volume Purged:** 1.78 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 25 degrees, light snow

**Comments:** TOR = 6 in above ground surface



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**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-07
PROJECT NO.	2390	WELL No.	MW-07
SAMPLE DATE	1/16/2023	SAMPLED BY	ETH
SAMPLE TIME	10:55	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 18.18			

FIELD MEASUREMENTS		
pH	Standard Units	5.72
Specific Conductance	mS/cm	0.619
Water Temperature	°C	9.35
Dissolved Oxygen	ppm	9.34
Redox Potential	mV	263
Turbidity	NTU	96

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA	Hand Delivered
WEATHER		28 degrees, clear	
COMMENTS			





## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/16/2023  
**Well I.D.:** MW-07

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 14.13 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 5.87 ft  
**Volume of Water in Well:** 0.24 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1020	15.03	6.32	0.417	11.56	4.89	433	89
1025	15.06	6.26	0.388	11.64	4.34	273	92
1030	15.03	6.24	0.378	11.78	3.59	98	83
1035	15.03	6.21	0.370	11.77	3.69	77	104
1040	15.03	6.20	0.369	11.79	3.83	36	110
1045	15.03	6.18	0.367	11.68	4.07	16.04	118
1050	15.03	6.18	0.366	11.68	4.09	9.04	124
1055	Sample Time						

**Purge Start Time:** 1020  
**Purge End Time:** 1050  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.24 gal  
**Total Volume Purged:** 1.4 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 28 degrees, clear

**Comments:** TOR = 6.875 in above ground surface - water level deminished at a fast rate, well purged for



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**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-08
PROJECT NO.	2390	WELL No.	MW-08
SAMPLE DATE	1/17/2023	SAMPLED BY	ETH
SAMPLE TIME	16:15	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 18.67			

FIELD MEASUREMENTS		
pH	Standard Units	NA
Specific Conductance	mS/cm	NA
Water Temperature	°C	NA
Dissolved Oxygen	ppm	NA
Redox Potential	mV	NA
Turbidity	NTU	NA

WATER APPEARANCE OR ODORS Cloudy

SAMPLING FLOW RATE NA

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA	Hand Delivered
WEATHER		41 degrees, overcast	
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/17/2023  
**Well I.D.:** MW-08

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 18.67 ft  
**Well Depth:** 25 ft  
**Feet of Water:** 6.33 ft  
**Volume of Water in Well:** NA

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
	No purge readings were collected at MW-08. Well would purge dry after 10 minutes of purging.						
	Samples were collected after well went dry. Ample time was allowed for the well to recharge before sampling.						
1615	Sample Time						

**Purge Start Time:** NA  
**Purge End Time:** NA  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** NA  
**Approx. Well Volume:** NA  
**Total Volume Purged:** NA  
 Well Volume (gal.) (2" well) = (ft of water)(0.163)

**Weather :** 41 degrees, overcast

**Comments:** TOR = 3.625 in above ground surface



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-09
PROJECT NO.	2390	WELL No.	MW-09
SAMPLE DATE	1/17/2023	SAMPLED BY	ETH
SAMPLE TIME	14:55	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 10.35			

FIELD MEASUREMENTS		
pH	Standard Units	6.55
Specific Conductance	mS/cm	0.990
Water Temperature	°C	15.19
Dissolved Oxygen	ppm	0.49
Redox Potential	mV	77
Turbidity	NTU	34.4

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/16/2023
WEATHER 43 degrees, clear			
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/16/2023  
**Well I.D.:** MW-09

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 10.31 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 9.69 ft  
**Volume of Water in Well:** 0.40 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1350	10.33	6.49	0.995	14.05	1.76	235	19
1355	10.34	6.55	0.990	14.43	1.31	133	38
1400	10.34	6.52	0.991	14.68	0.96	96	48
1405	10.34	6.53	0.994	14.83	0.73	82	54
1410	10.35	6.53	0.993	14.94	0.66	68	59
1415	10.35	6.55	0.992	15.02	0.58	69.2	63
1420	10.34	6.55	0.990	15.10	0.52	49.10	68
1425	10.35	6.55	0.990	15.13	0.52	37.13	71
1430	10.35	6.55	0.989	15.17	0.50	34.85	73
1435	10.35	6.55	0.990	15.2	0.48	34.7	75
1440	10.35	6.55	0.99	15.19	0.49	34.4	77
1445	Sample Time						

**Purge Start Time:** 1350  
**Purge End Time:** 1440  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.40 gal  
**Total Volume Purged:** 2.18 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 43 degrees, clear

**Comments:** TOR = 3.5 in above ground surface



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-10
PROJECT NO.	2390	WELL No.	MW-10
SAMPLE DATE	1/16/2023	SAMPLED BY	TJN
SAMPLE TIME	13:25	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 11.96			

FIELD MEASUREMENTS		
pH	Standard Units	6.38
Specific Conductance	mS/cm	1.24
Water Temperature	°C	13.02
Dissolved Oxygen	ppm	0.52
Redox Potential	mV	-100
Turbidity	NTU	18.31

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA	Hand Delivered
DATE		1/16/2023	
WEATHER 33 degrees, clear			
COMMENTS			



## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/16/2023  
**Well I.D.:** MW-10

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 11.50 ft  
**Well Depth:** 25 ft  
**Feet of Water:** 13.5 ft  
**Volume of Water in Well:** 0.55 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1230	11.50	6.38	1.190	14.39	2.48	144	-41
1235	12.20	6.29	1.220	13.99	1.35	48.91	-66
1240	11.78	6.34	1.230	13.71	0.89	65.00	-80
1245	11.82	6.34	1.220	13.56	0.79	43.37	-87
1250	11.87	6.35	1.210	13.41	0.67	34.44	-92
1255	11.87	6.36	1.210	13.31	0.68	26.16	-94
1300	11.88	6.36	1.220	13.19	0.65	19.76	-96
1305	11.91	6.37	1.220	13.13	0.60	17.50	-97
1310	11.94	6.37	1.230	13.04	0.61	19.80	-99
1315	11.94	6.38	1.240	13.00	0.54	19.56	-98
1320	11.96	6.38	1.240	13.02	0.52	18.31	-100
1325	Sample Time						

**Purge Start Time:** 1230  
**Purge End Time:** 1320  
**Sampler:** Tyler Newell

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.55 gal  
**Total Volume Purged:** 2.18 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 33 degrees, clear

**Comments:** TOR = 5.5 in above ground surface



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-11
PROJECT NO.	2390	WELL NO.	MW-11
SAMPLE DATE	1/16/2023	SAMPLED BY	TJN
SAMPLE TIME	12:15	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT Geopump			
DEPTH TO WATER PRIOR TO SAMPLING (FT) 11.96			

FIELD MEASUREMENTS		
pH	Standard Units	6.65
Specific Conductance	mS/cm	1.45
Water Temperature	°C	14.94
Dissolved Oxygen	ppm	0.75
Redox Potential	mV	-99
Turbidity	NTU	8.05

WATER APPEARANCE OR ODORS None

SAMPLING FLOW RATE 200 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/16/2023
WEATHER 40 degrees, clear			
COMMENTS			





## WELL PURGING RECORD LOW-FLOW SAMPLING

**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/16/2023  
**Well I.D.:** MW-11

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 11.75 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 8.25 ft  
**Volume of Water in Well:** 0.34 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1110	11.75	6.10	1.470	13.38	1.68	1000	50
1115	11.65	6.50	1.360	12.75	1.72	188	47
1120	11.45	6.32	1.460	14.05	1.69	221	-60
1125	11.52	6.36	1.450	14.32	1.27	179	-75
1130	11.48	6.38	1.450	14.69	1.98	106	-73
1135	11.54	6.47	1.450	14.55	1.55	90.9	-80
1140	11.52	6.49	1.450	14.57	1.16	82.60	-85
1150	11.50	6.54	1.450	14.68	0.96	52.90	-89
1155	11.58	6.57	1.450	14.76	0.85	35.40	-92
1200	11.6	6.65	1.460	14.93	0.80	20.56	-95
1205	11.62	6.65	1.450	14.96	0.74	9.41	-96
1210	11.61	6.65	1.450	14.94	0.75	8.05	-99
1215	Sample Time						

**Purge Start Time:** 1110  
**Purge End Time:** 1210  
**Sampler:** Tyler Newell

**Approx. Purge Rate:** 200 ml/min  
**Approx. Well Volume:** 0.34 gal  
**Total Volume Purged:** 3.17 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 40 degrees, sun

**Comments:** TOR = 7.5 in above ground surface



**ENGINEERS & CONSULTANTS, INC.**

**WATER SAMPLE COLLECTION REPORT**

PROJECT NAME	SCI Pittsburgh Phase II ESA	SAMPLE I.D.	MW-12
PROJECT NO.	2390	WELL No.	MW-12
SAMPLE DATE	1/13/2023	SAMPLED BY	ETH
SAMPLE TIME	15:35	SAMPLE SEQUENCE NUMBER	
COLLECTION EQUIPMENT	Geopump		
DEPTH TO WATER PRIOR TO SAMPLING (FT)	11.70		

FIELD MEASUREMENTS		
pH	Standard Units	6.53
Specific Conductance	mS/cm	1.19
Water Temperature	°C	13.22
Dissolved Oxygen	ppm	0.00
Redox Potential	mV	-79
Turbidity	NTU	5.67

WATER APPEARANCE OR ODORS Clear

SAMPLING FLOW RATE 150 ml/min

SAMPLE TYPE INFORMATION						
PARAMETER	VOLUME	NO. CONTAINERS	FIELD FILTERED		PRESERVED	
8260 TCL VOCs	50 ml	3	Y	(N)	(Y)	N
TAL Metals - FF	152 ml	2	(Y)	N	(Y)	N
7196 CR6	500 ml	1	Y	(N)	Y	(N)
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N
			Y	N	Y	N

TOTAL NO. OF CONTAINERS	6		
LABORATORY	ALS	DELIVERED VIA Hand Delivered	DATE 1/13/2023
WEATHER	24 degrees, overcast		
COMMENTS			

**WELL PURGING RECORD  
LOW-FLOW SAMPLING**



**Site:** SCI Pittsburgh Phase II ESA  
**Project No.:** 2390  
**Sampling Device:** Geopump  
**Date:** 1/13/2023  
**Well I.D.:** MW-12

**Tubing Diameter:** 1 in  
**Depth to Groundwater:** 11.54 ft  
**Well Depth:** 20 ft  
**Feet of Water:** 8.46 ft  
**Volume of Water in Well:** 0.35 gal

Time	Depth to Water (ft TOR)	pH (s.u.)	Specific Conductance ( / )	Temp (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)	Redox (mV)
1455	11.68	6.57	1.170	12.10	1.65	241	-36
1500	11.68	6.49	1.170	12.31	0.88	92	-56
1505	11.68	6.46	1.170	12.60	0.00	28.02	-70
1510	11.68	6.45	1.170	12.72	0.00	13.68	-73
1515	11.69	6.47	1.170	12.89	0.00	11.20	-76
1520	11.69	6.48	1.180	13.09	0.00	9.43	-78
1525	11.69	6.51	1.180	13.10	0.00	6.53	-79
1530	11.70	6.53	1.190	13.22	0.00	5.67	-79
1535	Sample Time						

**Purge Start Time:** 1455  
**Purge End Time:** 1530  
**Sampler:** Erik Hartle

**Approx. Purge Rate:** 150 ml/min  
**Approx. Well Volume:** 0.35 gal  
**Total Volume Purged:** 1.59 gal  
**Well Volume (gal.) (2" well)= (ft of water)(0.163)**

**Weather :** 24 degrees, overcast

**Comments:** TOR = 6.5 in above ground surface

## **APPENDIX C**

### **Laboratory Test Results**



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**Rhea Engineers & Consultants, Inc.**

Project 2022FMA SCI Pittsburgh Phase I

Workorder 3282987

Report ID 222597 on 2/3/2023

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jan 13, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Elizabeth Parker (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Zach Wicks - Rhea Engineers & Consultants, Inc.

*Elizabeth Parker*

**Elizabeth Parker**  
Project Coordinator

(ALS Digital Signature)

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3282987001	SB-03-0-2	Solid	01/11/2023 09:25	01/13/2023 09:02	CBC	Collected By Client
3282987002	SB-03-8-10	Solid	01/11/2023 09:30	01/13/2023 09:02	CBC	Collected By Client
3282987003	SB-02-0-2	Solid	01/11/2023 10:40	01/13/2023 09:02	CBC	Collected By Client
3282987004	SB-02-10-12	Solid	01/11/2023 10:45	01/13/2023 09:02	CBC	Collected By Client
3282987005	SB-04-0-2	Solid	01/11/2023 11:40	01/13/2023 09:02	CBC	Collected By Client
3282987006	SB-04-14-16	Solid	01/11/2023 11:45	01/13/2023 09:02	CBC	Collected By Client
3282987007	SB-05-0-2	Solid	01/11/2023 12:55	01/13/2023 09:02	CBC	Collected By Client
3282987008	SB-05-4-6	Solid	01/11/2023 13:00	01/13/2023 09:02	CBC	Collected By Client
3282987009	SB-06-0-2	Solid	01/11/2023 14:30	01/13/2023 09:02	CBC	Collected By Client
3282987010	SB-06-8-10	Solid	01/11/2023 14:35	01/13/2023 09:02	CBC	Collected By Client
3282987011	SB-07-0-2	Solid	01/11/2023 15:25	01/13/2023 09:02	CBC	Collected By Client
3282987012	SB-07-2-4	Solid	01/11/2023 15:30	01/13/2023 09:02	CBC	Collected By Client
3282987013	SB-01-0-2	Solid	01/12/2023 09:50	01/13/2023 09:02	CBC	Collected By Client
3282987014	SB-01-10-12	Solid	01/12/2023 09:55	01/13/2023 09:02	CBC	Collected By Client
3282987015	SB-11-0-2	Solid	01/12/2023 13:15	01/13/2023 09:02	CBC	Collected By Client
3282987016	SB-11-6-8	Solid	01/12/2023 13:20	01/13/2023 09:02	CBC	Collected By Client
3282987017	SB-12-0-2	Solid	01/12/2023 12:20	01/13/2023 09:02	CBC	Collected By Client
3282987018	SB-12-10-12	Solid	01/12/2023 12:25	01/13/2023 09:02	CBC	Collected By Client
3282987019	SB-12-10-12D	Solid	01/12/2023 12:30	01/13/2023 09:02	CBC	Collected By Client
3283084001	SB-10-0-2	Solid	01/13/2023 09:10	01/14/2023 08:42	CBC	Collected By Client
3283084002	SB-10-4-6	Solid	01/13/2023 09:15	01/14/2023 08:42	CBC	Collected By Client
3283084003	SB-09-0-2	Solid	01/13/2023 09:30	01/14/2023 08:42	CBC	Collected By Client
3283084004	SB-09-4-6	Solid	01/13/2023 09:45	01/14/2023 08:42	CBC	Collected By Client
3283084005	SB-08-0-2	Solid	01/13/2023 10:30	01/14/2023 08:42	CBC	Collected By Client
3283084006	SB-08-6-8	Solid	01/13/2023 10:35	01/14/2023 08:42	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

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### Project Notations

**P1** This report was revised to include all samples from ALS#3283084 per the request of Zach Wicks. EXP 2/3/23

### Sample Notations

Lab ID	Sample ID		
3282987005	SB-04-0-2	<b>S1</b>	One or more of the method 8260 internal standards/surrogates were recovered outside of the control limits. The sample was re-analyzed with similar results.
3282987011	SB-07-0-2	<b>S2</b>	One or more of the method 8260 internal standards/surrogates were recovered outside of the control limits. The sample was re-analyzed with similar results.
3282987012	SB-07-2-4	<b>S3</b>	One or more of the method 8260 internal standards/surrogates were recovered outside of the control limits. The sample was re-analyzed with similar results.
3283084003	SB-09-0-2	<b>S4</b>	One or more of the method 8260 internal standards/surrogates were recovered outside of the control limits. The sample was re-analyzed with similar results.
3283084004	SB-09-4-6	<b>S5</b>	One or more of the method 8260 internal standards/surrogates were recovered outside of the control limits. The sample was re-analyzed with similar results.





## Result Notations

Notation Ref.	
1	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 145 and the control limits were 44 to 139.
2	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 140 and the control limits were 44 to 139.
3	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 55.4 and the control limits were 76 to 123.
4	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 60.6 and the control limits were 76 to 123.
5	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 65.6 and the control limits were 77 to 123.
6	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 61.1 and the control limits were 77 to 123.
7	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 132 and the control limits were 40 to 109.
8	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The % Recovery was reported as 143 and the control limits were 70 to 130.
9	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 131 and the control limits were 70 to 118.
10	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.
11	The QC type ICV for method SW846 6020A was outside the control limits for the analyte Sb. The % recovery was reported as 117.9 and the control limits were 90 to 110. The sample was non-detect. RMD 01-19-23
12	One of the two matrix spike analyses performed on this sample failed to meet acceptable recovery limits. The other matrix spike was within acceptable recovery limits. Matrix interferences are the possible cause for the failure.
13	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Ca. The % Recovery was reported as 132.2 and the control limits were 70 to 130. The sample was greater than the CCV concentration. RMD 01-19-23
14	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % Recovery was reported as 136.2 and the control limits were 70 to 130. The sample was non-detect. RMD 01-19-23
15	The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. The sample was post-digestion spiked, and this matrix spike was within acceptable recovery limits.
16	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 152 and the control limits were 43 to 148.
17	The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 116 and the control limits were 40 to 109.
18	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 111 and the control limits were 40 to 109.
19	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 66.9 and the control limits were 68 to 131.



20	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 158 and the control limits were 43 to 148.
21	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chlorodibromomethane. The % Recovery was reported as 74 and the control limits were 75 to 124.
22	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 73.1 and the control limits were 76 to 123.
23	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 67 and the control limits were 68 to 129.
24	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 142 and the control limits were 40 to 130.
25	The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 57.6 and the control limits were 62 to 123. This result was reported at a dilution of 1.
26	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 74.7 and the control limits were 76 to 123.
27	The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 110 and the control limits were 40 to 109.
28	The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 61.6 and the control limits were 62 to 123. This result was reported at a dilution of 1.
29	The QC type CCV for method SW846 6020A was outside the control limits for the analyte Sb. The % recovery was reported as 115 and the control limits were 90 to 110. The sample was non-detect. RBM 01-23-23



### Detected Results Summary

Client Sample ID	SB-03-0-2	Collected	01/11/2023 09:25
Lab Sample ID	3282987001	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	11100	mg/kg	38.7	SW846 6020A	#
Arsenic, Total	12.1	mg/kg	1.4	SW846 6020A	#
Barium, Total	132	mg/kg	2.4	SW846 6020A	#
Beryllium, Total	1.3	mg/kg	0.48	SW846 6020A	#
Calcium, Total	36800	mg/kg	48.3	SW846 6020A	#
Chromium, Total	13.8	mg/kg	0.97	SW846 6020A	#
Cobalt, Total	8.0	mg/kg	2.4	SW846 6020A	#
Copper, Total	20.3	mg/kg	2.4	SW846 6020A	#
Iron, Total	26400	mg/kg	24.2	SW846 6020A	#
Lead, Total	94.7	mg/kg	0.97	SW846 6020A	#
Magnesium, Total	4830	mg/kg	48.3	SW846 6020A	#
Manganese, Total	730	mg/kg	2.4	SW846 6020A	#
Mercury, Total	0.12	mg/kg	0.049	SW846 7471B	#
Nickel, Total	16.0	mg/kg	2.4	SW846 6020A	#
Potassium, Total	1270	mg/kg	48.3	SW846 6020A	#
Sodium, Total	177	mg/kg	48.3	SW846 6020A	#
Trivalent Chromium	13.8	mg/kg	2.2	Calculation	#
Vanadium, Total	18.2	mg/kg	0.97	SW846 6020A	#
Zinc, Total	82.3	mg/kg	2.4	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	21.1	ug/kg	7.2	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	7.8	%	0.1	S2540G-11	#
Total Solids	92.2	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-03-8-10	Collected	01/11/2023 09:30
Lab Sample ID	3282987002	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	4320	mg/kg	41.8	SW846 6020A	#
Arsenic, Total	11.5	mg/kg	1.6	SW846 6020A	#
Barium, Total	51.4	mg/kg	2.6	SW846 6020A	#
Beryllium, Total	0.59	mg/kg	0.52	SW846 6020A	#
Calcium, Total	10100	mg/kg	52.3	SW846 6020A	#
Chromium, Total	11.9	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	6.6	mg/kg	2.6	SW846 6020A	#
Copper, Total	12.6	mg/kg	2.6	SW846 6020A	#
Iron, Total	24800	mg/kg	26.1	SW846 6020A	#
Lead, Total	15.9	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	1540	mg/kg	52.3	SW846 6020A	#
Manganese, Total	500	mg/kg	2.6	SW846 6020A	#
Nickel, Total	12.8	mg/kg	2.6	SW846 6020A	#
Potassium, Total	447	mg/kg	52.3	SW846 6020A	#
Trivalent Chromium	11.9	mg/kg	2.3	Calculation	#
Vanadium, Total	12.2	mg/kg	1.0	SW846 6020A	#
Zinc, Total	55.0	mg/kg	2.6	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	11.6	%	0.1	S2540G-11	#
Total Solids	88.4	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-02-0-2	Collected	01/11/2023 10:40
Lab Sample ID	3282987003	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	7250	mg/kg	40.3	SW846 6020A	#
Antimony, Total	1.7	mg/kg	1.0	SW846 6020A	#
Arsenic, Total	17.2	mg/kg	1.5	SW846 6020A	#
Barium, Total	138	mg/kg	2.5	SW846 6020A	#
Beryllium, Total	0.79	mg/kg	0.50	SW846 6020A	#
Cadmium, Total	0.65	mg/kg	0.50	SW846 6020A	#
Calcium, Total	3960	mg/kg	50.4	SW846 6020A	#
Chromium, Total	17.9	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	9.5	mg/kg	2.5	SW846 6020A	#
Copper, Total	44.0	mg/kg	2.5	SW846 6020A	#
Iron, Total	27600	mg/kg	25.2	SW846 6020A	#
Lead, Total	122	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	1550	mg/kg	50.4	SW846 6020A	#
Manganese, Total	731	mg/kg	2.5	SW846 6020A	#
Mercury, Total	0.12	mg/kg	0.051	SW846 7471B	#
Nickel, Total	19.2	mg/kg	2.5	SW846 6020A	#
Potassium, Total	896	mg/kg	50.4	SW846 6020A	#
Trivalent Chromium	17.9	mg/kg	2.4	Calculation	#
Vanadium, Total	18.1	mg/kg	1.0	SW846 6020A	#
Zinc, Total	152	mg/kg	2.5	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	15.4	%	0.1	S2540G-11	#
Total Solids	84.6	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-02-10-12	Collected	01/11/2023 10:45
Lab Sample ID	3282987004	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	4020	mg/kg	40.5	SW846 6020A	#
Arsenic, Total	8.1	mg/kg	1.5	SW846 6020A	#
Barium, Total	47.6	mg/kg	2.5	SW846 6020A	#
Calcium, Total	566	mg/kg	50.6	SW846 6020A	#
Chromium, Total	7.8	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	4.1	mg/kg	2.5	SW846 6020A	#
Copper, Total	10.6	mg/kg	2.5	SW846 6020A	#
Iron, Total	24300	mg/kg	25.3	SW846 6020A	#
Lead, Total	7.9	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	971	mg/kg	50.6	SW846 6020A	#
Manganese, Total	569	mg/kg	2.5	SW846 6020A	#
Nickel, Total	10.4	mg/kg	2.5	SW846 6020A	#
Potassium, Total	314	mg/kg	50.6	SW846 6020A	#
Trivalent Chromium	7.8	mg/kg	2.1	Calculation	#
Vanadium, Total	11.0	mg/kg	1.0	SW846 6020A	#
Zinc, Total	39.9	mg/kg	2.5	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methylene Chloride	1.1	ug/kg	1.1	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	5.8	%	0.1	S25406-11	#
Total Solids	94.2	%	0.1	S25406-11	#



### Detected Results Summary

Client Sample ID	SB-04-0-2	Collected	01/11/2023 11:40
Lab Sample ID	3282987005	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	8670	mg/kg	43.8	SW846 6020A	#
Arsenic, Total	10.3	mg/kg	1.6	SW846 6020A	#
Barium, Total	153	mg/kg	2.7	SW846 6020A	#
Beryllium, Total	0.73	mg/kg	0.55	SW846 6020A	#
Calcium, Total	2080	mg/kg	54.8	SW846 6020A	#
Chromium, Total	12.8	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	11.7	mg/kg	2.7	SW846 6020A	#
Copper, Total	14.8	mg/kg	2.7	SW846 6020A	#
Iron, Total	27300	mg/kg	27.4	SW846 6020A	#
Lead, Total	26.9	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1560	mg/kg	54.8	SW846 6020A	#
Manganese, Total	784	mg/kg	2.7	SW846 6020A	#
Mercury, Total	0.063	mg/kg	0.053	SW846 7471B	#
Nickel, Total	19.5	mg/kg	2.7	SW846 6020A	#
Potassium, Total	1150	mg/kg	54.8	SW846 6020A	#
Trivalent Chromium	12.8	mg/kg	2.2	Calculation	#
Vanadium, Total	19.3	mg/kg	1.1	SW846 6020A	#
Zinc, Total	68.5	mg/kg	2.7	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	40.0	ug/kg	5.7	SW846 8260B	#
Methyl cyclohexane	1.2	ug/kg	1.1	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	11.1	%	0.1	S2540G-11	#
Total Solids	88.9	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID SB-04-14-16 Collected 01/11/2023 11:45  
 Lab Sample ID 3282987006 Lab Receipt 01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	5890	mg/kg	47.8	SW846 6020A	#
Arsenic, Total	10.6	mg/kg	1.8	SW846 6020A	#
Barium, Total	64.7	mg/kg	3.0	SW846 6020A	#
Calcium, Total	904	mg/kg	59.8	SW846 6020A	#
Chromium, Total	10.2	mg/kg	1.2	SW846 6020A	#
Cobalt, Total	9.5	mg/kg	3.0	SW846 6020A	#
Copper, Total	13.1	mg/kg	3.0	SW846 6020A	#
Iron, Total	27700	mg/kg	29.9	SW846 6020A	#
Lead, Total	11.8	mg/kg	1.2	SW846 6020A	#
Magnesium, Total	1480	mg/kg	59.8	SW846 6020A	#
Manganese, Total	747	mg/kg	3.0	SW846 6020A	#
Nickel, Total	15.1	mg/kg	3.0	SW846 6020A	#
Potassium, Total	533	mg/kg	59.8	SW846 6020A	#
Trivalent Chromium	10.2	mg/kg	2.4	Calculation	#
Vanadium, Total	15.7	mg/kg	1.2	SW846 6020A	#
Zinc, Total	54.9	mg/kg	3.0	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	15.0	ug/kg	1.1	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	18.5	%	0.1	S25406-11	#
Total Solids	81.5	%	0.1	S25406-11	#





**Detected Results Summary**

Client Sample ID	SB-05-0-2	Collected	01/11/2023 12:55
Lab Sample ID	3282987007	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	9390	mg/kg	44.4	SW846 6020A	#
Arsenic, Total	12.0	mg/kg	1.7	SW846 6020A	#
Barium, Total	145	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	0.73	mg/kg	0.55	SW846 6020A	#
Calcium, Total	2200	mg/kg	55.5	SW846 6020A	#
Chromium, Total	14.6	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	11.6	mg/kg	2.8	SW846 6020A	#
Copper, Total	19.7	mg/kg	2.8	SW846 6020A	#
Iron, Total	29100	mg/kg	27.7	SW846 6020A	#
Lead, Total	54.8	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1740	mg/kg	55.5	SW846 6020A	#
Manganese, Total	829	mg/kg	2.8	SW846 6020A	#
Mercury, Total	0.10	mg/kg	0.050	SW846 7471B	#
Nickel, Total	19.3	mg/kg	2.8	SW846 6020A	#
Potassium, Total	979	mg/kg	55.5	SW846 6020A	#
Trivalent Chromium	14.6	mg/kg	2.3	Calculation	#
Vanadium, Total	20.4	mg/kg	1.1	SW846 6020A	#
Zinc, Total	87.5	mg/kg	2.8	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	14.3	%	0.1	S2540G-11	#
Total Solids	85.7	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-05-4-6	Collected	01/11/2023 13:00
Lab Sample ID	3282987008	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	10200	mg/kg	45.0	SW846 6020A	#
Arsenic, Total	12.0	mg/kg	1.7	SW846 6020A	#
Barium, Total	120	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	0.76	mg/kg	0.56	SW846 6020A	#
Calcium, Total	1710	mg/kg	56.2	SW846 6020A	#
Chromium, Total	13.9	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	12.7	mg/kg	2.8	SW846 6020A	#
Copper, Total	17.0	mg/kg	2.8	SW846 6020A	#
Iron, Total	30600	mg/kg	28.1	SW846 6020A	#
Lead, Total	15.7	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	2280	mg/kg	56.2	SW846 6020A	#
Manganese, Total	990	mg/kg	2.8	SW846 6020A	#
Nickel, Total	22.3	mg/kg	2.8	SW846 6020A	#
Potassium, Total	867	mg/kg	56.2	SW846 6020A	#
Trivalent Chromium	13.9	mg/kg	2.4	Calculation	#
Vanadium, Total	21.4	mg/kg	1.1	SW846 6020A	#
Zinc, Total	73.7	mg/kg	2.8	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	18.1	%	0.1	S2540G-11	#
Total Solids	81.9	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-06-0-2	Collected	01/11/2023 14:30
Lab Sample ID	3282987009	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	9400	mg/kg	44.1	SW846 6020A	#
Arsenic, Total	10.9	mg/kg	1.7	SW846 6020A	#
Barium, Total	232	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	0.78	mg/kg	0.55	SW846 6020A	#
Calcium, Total	1760	mg/kg	55.1	SW846 6020A	#
Chromium, Total	13.7	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	11.7	mg/kg	2.8	SW846 6020A	#
Copper, Total	18.3	mg/kg	2.8	SW846 6020A	#
Iron, Total	27200	mg/kg	27.5	SW846 6020A	#
Lead, Total	35.0	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1630	mg/kg	55.1	SW846 6020A	#
Manganese, Total	1090	mg/kg	2.8	SW846 6020A	#
Nickel, Total	21.8	mg/kg	2.8	SW846 6020A	#
Potassium, Total	1210	mg/kg	55.1	SW846 6020A	#
Trivalent Chromium	13.6	mg/kg	2.4	Calculation	#
Vanadium, Total	18.9	mg/kg	1.1	SW846 6020A	#
Zinc, Total	88.5	mg/kg	2.8	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	15.5	%	0.1	S2540G-11	#
Total Solids	84.5	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-06-8-10	Collected	01/11/2023 14:35
Lab Sample ID	3282987010	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	7560	mg/kg	40.4	SW846 6020A	#
Arsenic, Total	11.8	mg/kg	1.5	SW846 6020A	#
Barium, Total	92.1	mg/kg	2.5	SW846 6020A	#
Beryllium, Total	0.74	mg/kg	0.50	SW846 6020A	#
Calcium, Total	1220	mg/kg	50.5	SW846 6020A	#
Chromium, Total	12.5	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	9.8	mg/kg	2.5	SW846 6020A	#
Copper, Total	15.5	mg/kg	2.5	SW846 6020A	#
Iron, Total	29400	mg/kg	25.2	SW846 6020A	#
Lead, Total	13.3	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	1540	mg/kg	50.5	SW846 6020A	#
Manganese, Total	674	mg/kg	2.5	SW846 6020A	#
Nickel, Total	18.2	mg/kg	2.5	SW846 6020A	#
Potassium, Total	652	mg/kg	50.5	SW846 6020A	#
Trivalent Chromium	12.5	mg/kg	2.3	Calculation	#
Vanadium, Total	17.6	mg/kg	1.0	SW846 6020A	#
Zinc, Total	63.8	mg/kg	2.5	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	4.1	ug/kg	0.90	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	16.5	%	0.1	S2540G-11	#
Total Solids	83.5	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID SB-07-0-2 Collected 01/11/2023 15:25  
 Lab Sample ID 3282987011 Lab Receipt 01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	8020	mg/kg	45.7	SW846 6020A	#
Antimony, Total	1.7	mg/kg	1.1	SW846 6020A	#
Arsenic, Total	11.8	mg/kg	1.7	SW846 6020A	#
Barium, Total	113	mg/kg	2.9	SW846 6020A	#
Beryllium, Total	0.92	mg/kg	0.57	SW846 6020A	#
Calcium, Total	21700	mg/kg	57.1	SW846 6020A	#
Chromium, Total	9.9	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	6.9	mg/kg	2.9	SW846 6020A	#
Copper, Total	25.9	mg/kg	2.9	SW846 6020A	#
Iron, Total	21400	mg/kg	28.5	SW846 6020A	#
Lead, Total	157	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	3150	mg/kg	57.1	SW846 6020A	#
Manganese, Total	718	mg/kg	2.9	SW846 6020A	#
Mercury, Total	0.083	mg/kg	0.062	SW846 7471B	#
Nickel, Total	14.8	mg/kg	2.9	SW846 6020A	#
Potassium, Total	889	mg/kg	57.1	SW846 6020A	#
Sodium, Total	107	mg/kg	57.1	SW846 6020A	#
Trivalent Chromium	9.9	mg/kg	2.4	Calculation	#
Vanadium, Total	15.4	mg/kg	1.1	SW846 6020A	#
Zinc, Total	71.2	mg/kg	2.9	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	11.2	ug/kg	5.7	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	20.1	%	0.1	S2540G-11	#
Total Solids	79.9	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-07-2-4	Collected	01/11/2023 15:30
Lab Sample ID	3282987012	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	11100	mg/kg	45.6	SW846 6020A	#
Arsenic, Total	10.9	mg/kg	1.7	SW846 6020A	#
Barium, Total	143	mg/kg	2.9	SW846 6020A	#
Beryllium, Total	1.5	mg/kg	0.57	SW846 6020A	#
Calcium, Total	40600	mg/kg	57.0	SW846 6020A	#
Chromium, Total	10.6	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	6.4	mg/kg	2.9	SW846 6020A	#
Copper, Total	24.8	mg/kg	2.9	SW846 6020A	#
Iron, Total	20100	mg/kg	28.5	SW846 6020A	#
Lead, Total	84.7	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	5860	mg/kg	57.0	SW846 6020A	#
Manganese, Total	1210	mg/kg	2.9	SW846 6020A	#
Mercury, Total	0.13	mg/kg	0.062	SW846 7471B	#
Nickel, Total	14.3	mg/kg	2.9	SW846 6020A	#
Potassium, Total	1120	mg/kg	57.0	SW846 6020A	#
Sodium, Total	150	mg/kg	57.0	SW846 6020A	#
Trivalent Chromium	10.6	mg/kg	2.5	Calculation	#
Vanadium, Total	15.6	mg/kg	1.1	SW846 6020A	#
Zinc, Total	63.0	mg/kg	2.9	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	10.4	ug/kg	7.4	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	19.4	%	0.1	S2540G-11	#
Total Solids	80.6	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-01-0-2	Collected	01/12/2023 09:50
Lab Sample ID	3282987013	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	9000	mg/kg	40.3	SW846 6020A	#
Arsenic, Total	9.5	mg/kg	1.5	SW846 6020A	#
Barium, Total	74.9	mg/kg	2.5	SW846 6020A	#
Beryllium, Total	0.66	mg/kg	0.50	SW846 6020A	#
Calcium, Total	25600	mg/kg	50.3	SW846 6020A	#
Chromium, Total	11.8	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	8.8	mg/kg	2.5	SW846 6020A	#
Copper, Total	14.8	mg/kg	2.5	SW846 6020A	#
Iron, Total	25500	mg/kg	25.2	SW846 6020A	#
Lead, Total	12.1	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	2870	mg/kg	50.3	SW846 6020A	#
Manganese, Total	1270	mg/kg	2.5	SW846 6020A	#
Nickel, Total	14.9	mg/kg	2.5	SW846 6020A	#
Potassium, Total	1100	mg/kg	50.3	SW846 6020A	#
Sodium, Total	235	mg/kg	50.3	SW846 6020A	#
Trivalent Chromium	11.8	mg/kg	2.3	Calculation	#
Vanadium, Total	22.0	mg/kg	1.0	SW846 6020A	#
Zinc, Total	56.9	mg/kg	2.5	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	13.5	%	0.1	S2540G-11	#
Total Solids	86.5	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-01-10-12	Collected	01/12/2023 09:55
Lab Sample ID	3282987014	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	6330	mg/kg	39.6	SW846 6020A	#
Arsenic, Total	11.2	mg/kg	1.5	SW846 6020A	#
Barium, Total	43.5	mg/kg	2.5	SW846 6020A	#
Calcium, Total	935	mg/kg	49.5	SW846 6020A	#
Chromium, Total	13.1	mg/kg	0.99	SW846 6020A	#
Cobalt, Total	10.6	mg/kg	2.5	SW846 6020A	#
Copper, Total	14.2	mg/kg	2.5	SW846 6020A	#
Iron, Total	29900	mg/kg	24.7	SW846 6020A	#
Lead, Total	12.8	mg/kg	0.99	SW846 6020A	#
Magnesium, Total	1340	mg/kg	49.5	SW846 6020A	#
Manganese, Total	701	mg/kg	2.5	SW846 6020A	#
Nickel, Total	14.8	mg/kg	2.5	SW846 6020A	#
Potassium, Total	672	mg/kg	49.5	SW846 6020A	#
Sodium, Total	232	mg/kg	49.5	SW846 6020A	#
Trivalent Chromium	12.1	mg/kg	2.3	Calculation	#
Vanadium, Total	16.6	mg/kg	0.99	SW846 6020A	#
Zinc, Total	55.5	mg/kg	2.5	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	6.9	ug/kg	4.7	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	13.0	%	0.1	S2540G-11	#
Total Solids	87.0	%	0.1	S2540G-11	#





### Detected Results Summary

Client Sample ID	SB-11-0-2	Collected	01/12/2023 13:15
Lab Sample ID	3282987015	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	12000	mg/kg	40.8	SW846 6020A	#
Arsenic, Total	14.3	mg/kg	1.5	SW846 6020A	#
Barium, Total	232	mg/kg	2.6	SW846 6020A	#
Beryllium, Total	1.4	mg/kg	0.51	SW846 6020A	#
Calcium, Total	37900	mg/kg	51.0	SW846 6020A	#
Chromium, Total	10.0	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	6.7	mg/kg	2.6	SW846 6020A	#
Copper, Total	18.1	mg/kg	2.6	SW846 6020A	#
Iron, Total	24900	mg/kg	25.5	SW846 6020A	#
Lead, Total	61.0	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	7470	mg/kg	51.0	SW846 6020A	#
Manganese, Total	2850	mg/kg	2.6	SW846 6020A	#
Mercury, Total	0.10	mg/kg	0.050	SW846 7471B	#
Nickel, Total	12.6	mg/kg	2.6	SW846 6020A	#
Potassium, Total	1320	mg/kg	51.0	SW846 6020A	#
Sodium, Total	250	mg/kg	51.0	SW846 6020A	#
Trivalent Chromium	10.0	mg/kg	2.2	Calculation	#
Vanadium, Total	17.4	mg/kg	1.0	SW846 6020A	#
Zinc, Total	78.1	mg/kg	2.6	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	11.4	ug/kg	6.7	SW846 8260B	#
Carbon Disulfide	6.8	ug/kg	1.3	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	9.1	%	0.1	S2540G-11	#
Total Solids	90.9	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-11-6-8	Collected	01/12/2023 13:20
Lab Sample ID	3282987016	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	5500	mg/kg	45.3	SW846 6020A	#
Arsenic, Total	12.4	mg/kg	1.7	SW846 6020A	#
Barium, Total	72.3	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	0.59	mg/kg	0.57	SW846 6020A	#
Calcium, Total	2090	mg/kg	56.6	SW846 6020A	#
Chromium, Total	11.3	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	7.7	mg/kg	2.8	SW846 6020A	#
Copper, Total	13.0	mg/kg	2.8	SW846 6020A	#
Iron, Total	27600	mg/kg	28.3	SW846 6020A	#
Lead, Total	13.4	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1310	mg/kg	56.6	SW846 6020A	#
Manganese, Total	382	mg/kg	2.8	SW846 6020A	#
Mercury, Total	0.11	mg/kg	0.056	SW846 7471B	#
Nickel, Total	13.6	mg/kg	2.8	SW846 6020A	#
Potassium, Total	737	mg/kg	56.6	SW846 6020A	#
Sodium, Total	139	mg/kg	56.6	SW846 6020A	#
Trivalent Chromium	11.3	mg/kg	2.4	Calculation	#
Vanadium, Total	15.0	mg/kg	1.1	SW846 6020A	#
Zinc, Total	51.3	mg/kg	2.8	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	11.1	ug/kg	6.7	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	15.8	%	0.1	S2540G-11	#
Total Solids	84.2	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-12-0-2	Collected	01/12/2023 12:20
Lab Sample ID	3282987017	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	8960	mg/kg	42.2	SW846 6020A	#
Arsenic, Total	15.4	mg/kg	1.6	SW846 6020A	#
Barium, Total	126	mg/kg	2.6	SW846 6020A	#
Beryllium, Total	1.1	mg/kg	0.53	SW846 6020A	#
Cadmium, Total	0.67	mg/kg	0.53	SW846 6020A	#
Calcium, Total	9300	mg/kg	52.7	SW846 6020A	#
Chromium, Total	13.0	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	9.5	mg/kg	2.6	SW846 6020A	#
Copper, Total	37.6	mg/kg	2.6	SW846 6020A	#
Iron, Total	30000	mg/kg	26.4	SW846 6020A	#
Lead, Total	57.2	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	2530	mg/kg	52.7	SW846 6020A	#
Manganese, Total	423	mg/kg	2.6	SW846 6020A	#
Mercury, Total	0.18	mg/kg	0.052	SW846 7471B	#
Nickel, Total	18.6	mg/kg	2.6	SW846 6020A	#
Potassium, Total	982	mg/kg	52.7	SW846 6020A	#
Sodium, Total	208	mg/kg	52.7	SW846 6020A	#
Trivalent Chromium	13.0	mg/kg	2.2	Calculation	#
Vanadium, Total	17.7	mg/kg	1.1	SW846 6020A	#
Zinc, Total	119	mg/kg	2.6	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	7.8	ug/kg	5.8	SW846 8260B	#
Carbon Disulfide	3.0	ug/kg	1.2	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	12.5	%	0.1	S2540G-11	#
Total Solids	87.5	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-12-10-12	Collected	01/12/2023 12:25
Lab Sample ID	3282987018	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	7270	mg/kg	46.8	SW846 6020A	#
Arsenic, Total	8.4	mg/kg	1.8	SW846 6020A	#
Barium, Total	163	mg/kg	2.9	SW846 6020A	#
Beryllium, Total	0.80	mg/kg	0.58	SW846 6020A	#
Calcium, Total	2400	mg/kg	58.5	SW846 6020A	#
Chromium, Total	11.2	mg/kg	1.2	SW846 6020A	#
Cobalt, Total	10.3	mg/kg	2.9	SW846 6020A	#
Copper, Total	13.9	mg/kg	2.9	SW846 6020A	#
Iron, Total	24900	mg/kg	29.2	SW846 6020A	#
Lead, Total	17.7	mg/kg	1.2	SW846 6020A	#
Magnesium, Total	1410	mg/kg	58.5	SW846 6020A	#
Manganese, Total	962	mg/kg	2.9	SW846 6020A	#
Mercury, Total	0.072	mg/kg	0.055	SW846 7471B	#
Nickel, Total	18.8	mg/kg	2.9	SW846 6020A	#
Potassium, Total	842	mg/kg	58.5	SW846 6020A	#
Sodium, Total	214	mg/kg	58.5	SW846 6020A	#
Trivalent Chromium	11.2	mg/kg	2.4	Calculation	#
Vanadium, Total	15.7	mg/kg	1.2	SW846 6020A	#
Zinc, Total	66.2	mg/kg	2.9	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	12.8	ug/kg	4.8	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	19.2	%	0.1	S2540G-11	#
Total Solids	80.8	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-12-10-12D	Collected	01/12/2023 12:30
Lab Sample ID	3282987019	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	6960	mg/kg	44.3	SW846 6020A	#
Arsenic, Total	9.1	mg/kg	1.7	SW846 6020A	#
Barium, Total	120	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	0.62	mg/kg	0.55	SW846 6020A	#
Calcium, Total	1710	mg/kg	55.3	SW846 6020A	#
Chromium, Total	10.8	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	10.4	mg/kg	2.8	SW846 6020A	#
Copper, Total	10.4	mg/kg	2.8	SW846 6020A	#
Iron, Total	23900	mg/kg	27.7	SW846 6020A	#
Lead, Total	12.0	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1220	mg/kg	55.3	SW846 6020A	#
Manganese, Total	359	mg/kg	2.8	SW846 6020A	#
Mercury, Total	0.072	mg/kg	0.054	SW846 7471B	#
Nickel, Total	15.6	mg/kg	2.8	SW846 6020A	#
Potassium, Total	790	mg/kg	55.3	SW846 6020A	#
Sodium, Total	225	mg/kg	55.3	SW846 6020A	#
Trivalent Chromium	10.8	mg/kg	2.5	Calculation	#
Vanadium, Total	14.3	mg/kg	1.1	SW846 6020A	#
Zinc, Total	53.4	mg/kg	2.8	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	5.7	ug/kg	5.3	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	19.9	%	0.1	S2540G-11	#
Total Solids	80.1	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-10-0-2	Collected	01/13/2023 09:10
Lab Sample ID	3283084001	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	7850	mg/kg	45.5	SW846 6020A	#
Antimony, Total	2.1	mg/kg	1.1	SW846 6020A	#
Arsenic, Total	17.1	mg/kg	1.7	SW846 6020A	#
Barium, Total	119	mg/kg	2.8	SW846 6020A	#
Beryllium, Total	1.1	mg/kg	0.57	SW846 6020A	#
Cadmium, Total	1.1	mg/kg	0.57	SW846 6020A	#
Calcium, Total	3250	mg/kg	56.9	SW846 6020A	#
Chromium, Total	34.7	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	10.6	mg/kg	2.8	SW846 6020A	#
Copper, Total	35.9	mg/kg	2.8	SW846 6020A	#
Iron, Total	30700	mg/kg	28.4	SW846 6020A	#
Lead, Total	108	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1220	mg/kg	56.9	SW846 6020A	#
Manganese, Total	591	mg/kg	2.8	SW846 6020A	#
Mercury, Total	0.29	mg/kg	0.060	SW846 7471B	#
Nickel, Total	24.3	mg/kg	2.8	SW846 6020A	#
Potassium, Total	705	mg/kg	56.9	SW846 6020A	#
Sodium, Total	58.9	mg/kg	56.9	SW846 6020A	#
Trivalent Chromium	34.5	mg/kg	2.3	Calculation	#
Vanadium, Total	19.6	mg/kg	1.1	SW846 6020A	#
Zinc, Total	171	mg/kg	2.8	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	17.1	%	0.1	S2540G-11	#
Total Solids	82.9	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-10-4-6	Collected	01/13/2023 09:15
Lab Sample ID	3283084002	Lab Receipt	01/14/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	11500	mg/kg	41.0	SW846 6020A	#
Arsenic, Total	9.9	mg/kg	1.5	SW846 6020A	#
Barium, Total	215	mg/kg	2.6	SW846 6020A	#
Beryllium, Total	0.90	mg/kg	0.51	SW846 6020A	#
Calcium, Total	1990	mg/kg	51.2	SW846 6020A	#
Chromium, Total	15.7	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	13.0	mg/kg	2.6	SW846 6020A	#
Copper, Total	15.8	mg/kg	2.6	SW846 6020A	#
Iron, Total	30200	mg/kg	25.6	SW846 6020A	#
Lead, Total	15.5	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	1890	mg/kg	51.2	SW846 6020A	#
Manganese, Total	1120	mg/kg	2.6	SW846 6020A	#
Nickel, Total	25.3	mg/kg	2.6	SW846 6020A	#
Potassium, Total	1300	mg/kg	51.2	SW846 6020A	#
Trivalent Chromium	15.7	mg/kg	2.4	Calculation	#
Vanadium, Total	21.9	mg/kg	1.0	SW846 6020A	#
Zinc, Total	88.1	mg/kg	2.6	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	17.4	%	0.1	S2540G-11	#
Total Solids	82.6	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-09-0-2	Collected	01/13/2023 09:30
Lab Sample ID	3283084003	Lab Receipt	01/14/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	20900	mg/kg	43.4	SW846 6020A	#
Arsenic, Total	3.6	mg/kg	1.6	SW846 6020A	#
Barium, Total	444	mg/kg	2.7	SW846 6020A	#
Beryllium, Total	3.3	mg/kg	0.54	SW846 6020A	#
Calcium, Total	120000	mg/kg	54.2	SW846 6020A	#
Chromium, Total	13.0	mg/kg	1.1	SW846 6020A	#
Copper, Total	7.2	mg/kg	2.7	SW846 6020A	#
Iron, Total	8710	mg/kg	27.1	SW846 6020A	#
Lead, Total	124	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	22000	mg/kg	54.2	SW846 6020A	#
Manganese, Total	1660	mg/kg	2.7	SW846 6020A	#
Nickel, Total	12.0	mg/kg	2.7	SW846 6020A	#
Potassium, Total	1660	mg/kg	54.2	SW846 6020A	#
Sodium, Total	642	mg/kg	54.2	SW846 6020A	#
Trivalent Chromium	13.0	mg/kg	2.1	Calculation	#
Vanadium, Total	17.0	mg/kg	1.1	SW846 6020A	#
Zinc, Total	49.7	mg/kg	2.7	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Acetone	8.2	ug/kg	6.6	SW846 8260B	#
Carbon Disulfide	8.9	ug/kg	1.3	SW846 8260B	#
<b>WET CHEMISTRY</b>					
Moisture	8.7	%	0.1	S2540G-11	#
Total Solids	91.3	%	0.1	S2540G-11	#





### Detected Results Summary

Client Sample ID	SB-09-4-6	Collected	01/13/2023 09:45
Lab Sample ID	3283084004	Lab Receipt	01/14/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	9650	mg/kg	40.8	SW846 6020A	#
Antimony, Total	1.3	mg/kg	1.0	SW846 6020A	#
Arsenic, Total	9.8	mg/kg	1.5	SW846 6020A	#
Barium, Total	122	mg/kg	2.5	SW846 6020A	#
Beryllium, Total	0.78	mg/kg	0.51	SW846 6020A	#
Calcium, Total	2710	mg/kg	51.0	SW846 6020A	#
Chromium, Total	15.9	mg/kg	1.0	SW846 6020A	#
Cobalt, Total	9.7	mg/kg	2.5	SW846 6020A	#
Copper, Total	24.2	mg/kg	2.5	SW846 6020A	#
Iron, Total	32700	mg/kg	25.5	SW846 6020A	#
Lead, Total	33.5	mg/kg	1.0	SW846 6020A	#
Magnesium, Total	2000	mg/kg	51.0	SW846 6020A	#
Manganese, Total	574	mg/kg	2.5	SW846 6020A	#
Mercury, Total	0.25	mg/kg	0.048	SW846 7471B	#
Nickel, Total	19.3	mg/kg	2.5	SW846 6020A	#
Potassium, Total	1580	mg/kg	51.0	SW846 6020A	#
Sodium, Total	57.5	mg/kg	51.0	SW846 6020A	#
Trivalent Chromium	15.9	mg/kg	2.2	Calculation	#
Vanadium, Total	23.2	mg/kg	1.0	SW846 6020A	#
Zinc, Total	53.3	mg/kg	2.5	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	10.3	%	0.1	S2540G-11	#
Total Solids	89.7	%	0.1	S2540G-11	#



### Detected Results Summary

Client Sample ID	SB-08-0-2	Collected	01/13/2023 10:30
Lab Sample ID	3283084005	Lab Receipt	01/14/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Total	9780	mg/kg	39.3	SW846 6020A	#
Antimony, Total	1.6	mg/kg	0.98	SW846 6020A	#
Arsenic, Total	13.7	mg/kg	1.5	SW846 6020A	#
Barium, Total	148	mg/kg	2.5	SW846 6020A	#
Beryllium, Total	0.95	mg/kg	0.49	SW846 6020A	#
Cadmium, Total	0.86	mg/kg	0.49	SW846 6020A	#
Calcium, Total	4100	mg/kg	49.2	SW846 6020A	#
Chromium, Total	29.9	mg/kg	0.98	SW846 6020A	#
Cobalt, Total	12.0	mg/kg	2.5	SW846 6020A	#
Copper, Total	38.3	mg/kg	2.5	SW846 6020A	#
Iron, Total	29900	mg/kg	24.6	SW846 6020A	#
Lead, Total	118	mg/kg	0.98	SW846 6020A	#
Magnesium, Total	1870	mg/kg	49.2	SW846 6020A	#
Manganese, Total	754	mg/kg	2.5	SW846 6020A	#
Mercury, Total	0.17	mg/kg	0.050	SW846 7471B	#
Nickel, Total	23.6	mg/kg	2.5	SW846 6020A	#
Potassium, Total	1040	mg/kg	49.2	SW846 6020A	#
Trivalent Chromium	29.6	mg/kg	2.3	Calculation	#
Vanadium, Total	21.7	mg/kg	0.98	SW846 6020A	#
Zinc, Total	138	mg/kg	2.5	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	15.1	%	0.1	S2540G-11	#
Total Solids	84.9	%	0.1	S2540G-11	#



**Detected Results Summary**

Client Sample ID	SB-08-6-8	Collected	01/13/2023 10:35
Lab Sample ID	3283084006	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Aluminum, Total	6190	mg/kg	42.4	SW846 6020A	#
Arsenic, Total	7.8	mg/kg	1.6	SW846 6020A	#
Barium, Total	77.5	mg/kg	2.7	SW846 6020A	#
Beryllium, Total	0.54	mg/kg	0.53	SW846 6020A	#
Calcium, Total	1100	mg/kg	53.0	SW846 6020A	#
Chromium, Total	10.5	mg/kg	1.1	SW846 6020A	#
Cobalt, Total	7.9	mg/kg	2.7	SW846 6020A	#
Copper, Total	10.8	mg/kg	2.7	SW846 6020A	#
Iron, Total	24300	mg/kg	26.5	SW846 6020A	#
Lead, Total	11.2	mg/kg	1.1	SW846 6020A	#
Magnesium, Total	1310	mg/kg	53.0	SW846 6020A	#
Manganese, Total	541	mg/kg	2.7	SW846 6020A	#
Mercury, Total	1.3	mg/kg	0.053	SW846 7471B	#
Nickel, Total	14.4	mg/kg	2.7	SW846 6020A	#
Potassium, Total	674	mg/kg	53.0	SW846 6020A	#
Trivalent Chromium	10.5	mg/kg	2.3	Calculation	#
Vanadium, Total	15.2	mg/kg	1.1	SW846 6020A	#
Zinc, Total	50.0	mg/kg	2.7	SW846 6020A	#
<b>WET CHEMISTRY</b>					
Moisture	13.0	%	0.1	S2540G-11	#
Total Solids	87.0	%	0.1	S2540G-11	#



## Results

Client Sample ID	SB-03-0-2	Collected	01/11/2023 09:25
Lab Sample ID	3282987001	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	11100	10,P1	mg/kg	38.7	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	0.97	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Arsenic, Total	12.1	12,P1	mg/kg	1.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Barium, Total	132	P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Beryllium, Total	1.3	P1	mg/kg	0.48	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.48	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Calcium, Total	36800	10,13,P1	mg/kg	48.3	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Chromium, Total	13.8	P1	mg/kg	0.97	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Cobalt, Total	8.0	P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Copper, Total	20.3	12,P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Iron, Total	26400	10,P1	mg/kg	24.2	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Lead, Total	94.7	10,P1	mg/kg	0.97	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Magnesium, Total	4830	10,P1	mg/kg	48.3	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Manganese, Total	730	10,P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Mercury, Total	0.12	P1	mg/kg	0.049	SW846 7471B	1	01/19/2023 15:14	WDA	A
Nickel, Total	16.0	12,P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Potassium, Total	1270	10,P1	mg/kg	48.3	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	0.97	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Sodium, Total	177	15,P1	mg/kg	48.3	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.48	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Trivalent Chromium	13.8	P1	mg/kg	2.2	Calculation	1	01/24/2023 09:10	CW	A
Vanadium, Total	18.2	12,P1	mg/kg	0.97	SW846 6020A	5	01/19/2023 17:39	RMD	A1
Zinc, Total	82.3	P1	mg/kg	2.4	SW846 6020A	5	01/19/2023 17:39	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
2-Butanone	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/17/2023 16:04	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/17/2023 16:04	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/17/2023 16:04	TMP	C
Acetone	21.1	P1	ug/kg	7.2	SW846 8260B	1	01/17/2023 16:04	TMP	C



## Results

Client Sample ID	SB-03-0-2	Collected	01/11/2023 09:25
Lab Sample ID	3282987001	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Chloroethane	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/17/2023 16:04	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/17/2023 16:04	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Styrene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Toluene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	4.3	SW846 8260B	1	01/17/2023 16:04	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/17/2023 16:04	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89.6%	56 - 124	01/17/2023 16:04	
4-Bromofluorobenzene	460-00-4	90.3%	51 - 128	01/17/2023 16:04	
Dibromofluoromethane	1868-53-7	67%	62 - 123	01/17/2023 16:04	
Toluene-d8	2037-26-5	84.3%	59 - 131	01/17/2023 16:04	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-03-0-2	Collected	01/11/2023 09:25
Lab Sample ID	3282987001	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.2	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	7.8	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	92.2	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-03-8-10	Collected	01/11/2023 09:30
Lab Sample ID	3282987002	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	4320	P1	mg/kg	41.8	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Arsenic, Total	11.5	P1	mg/kg	1.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Barium, Total	51.4	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Beryllium, Total	0.59	P1	mg/kg	0.52	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.52	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Calcium, Total	10100	13,P1	mg/kg	52.3	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Chromium, Total	11.9	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Cobalt, Total	6.6	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Copper, Total	12.6	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Iron, Total	24800	P1	mg/kg	26.1	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Lead, Total	15.9	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Magnesium, Total	1540	P1	mg/kg	52.3	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Manganese, Total	500	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.050	SW846 7471B	1	01/19/2023 15:16	WDA	A
Nickel, Total	12.8	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Potassium, Total	447	P1	mg/kg	52.3	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	52.3	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.52	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Trivalent Chromium	11.9	P1	mg/kg	2.3	Calculation	1	01/24/2023 09:11	CW	A
Vanadium, Total	12.2	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:37	RMD	A1
Zinc, Total	55.0	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 17:37	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,1,1,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
2-Butanone	ND	ND,P1	ug/kg	5.1	SW846 8260B	1	01/18/2023 13:36	TMP	
2-Hexanone	ND	ND,P1	ug/kg	5.1	SW846 8260B	1	01/18/2023 13:36	TMP	
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.1	SW846 8260B	1	01/18/2023 13:36	TMP	
Acetone	ND	ND,P1	ug/kg	5.1	SW846 8260B	1	01/18/2023 13:36	TMP	



## Results

Client Sample ID	SB-03-8-10	Collected	01/11/2023 09:30
Lab Sample ID	3282987002	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Bromochloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Bromodichloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Bromoform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Bromomethane	ND	ND,16,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Carbon Disulfide	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Chlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Chlorodibromomethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Chloroethane	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/18/2023 13:36	TMP	
Chloroform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Chloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
cis-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Ethylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Freon 113	ND	ND,17,18,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Isopropylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Methyl acetate	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Methyl cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Methylene Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
mp-Xylene	ND	ND,P1	ug/kg	2.0	SW846 8260B	1	01/18/2023 13:36	TMP	
o-Xylene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Styrene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Tetrachloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Toluene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Total Xylenes	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/18/2023 13:36	TMP	
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Trichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	
Vinyl Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/18/2023 13:36	TMP	

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92%	56 - 124	01/18/2023 13:36	
4-Bromofluorobenzene	460-00-4	85.1%	51 - 128	01/18/2023 13:36	
Dibromofluoromethane	1868-53-7	69.8%	62 - 123	01/18/2023 13:36	
Toluene-d8	2037-26-5	84%	59 - 131	01/18/2023 13:36	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-03-8-10	Collected	01/11/2023 09:30
Lab Sample ID	3282987002	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	11.6	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	88.4	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-02-0-2	Collected	01/11/2023 10:40
Lab Sample ID	3282987003	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	7250	P1	mg/kg	40.3	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Antimony, Total	1.7	P1	mg/kg	1.0	SW846 6020A	5	01/20/2023 14:54	RMD	A1
Arsenic, Total	17.2	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Barium, Total	138	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Beryllium, Total	0.79	P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Cadmium, Total	0.65	P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Calcium, Total	3960	P1	mg/kg	50.4	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Chromium, Total	17.9	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Cobalt, Total	9.5	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Copper, Total	44.0	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Iron, Total	27600	P1	mg/kg	25.2	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Lead, Total	122	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Magnesium, Total	1550	P1	mg/kg	50.4	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Manganese, Total	731	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Mercury, Total	0.12	P1	mg/kg	0.051	SW846 7471B	1	01/19/2023 15:17	WDA	A
Nickel, Total	19.2	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Potassium, Total	896	P1	mg/kg	50.4	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Selenium, Total	ND	ND,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	50.4	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Trivalent Chromium	17.9	P1	mg/kg	2.4	Calculation	1	01/19/2023 20:27	CW	A
Vanadium, Total	18.1	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:00	RMD	A1
Zinc, Total	152	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:00	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.6	SW846 8260B	1	01/17/2023 18:31	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.6	SW846 8260B	1	01/17/2023 18:31	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.6	SW846 8260B	1	01/17/2023 18:31	TMP	C
Acetone	ND	ND,P1	ug/kg	5.6	SW846 8260B	1	01/17/2023 18:31	TMP	C
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C



## Results

Client Sample ID	SB-02-0-2	Collected	01/11/2023 10:40
Lab Sample ID	3282987003	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:31	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 18:31	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.4	SW846 8260B	1	01/17/2023 18:31	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:31	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.1%	56 - 124	01/17/2023 18:31	
4-Bromofluorobenzene	460-00-4	79.3%	51 - 128	01/17/2023 18:31	
Dibromofluoromethane	1868-53-7	67.7%	62 - 123	01/17/2023 18:31	
Toluene-d8	2037-26-5	83.8%	59 - 131	01/17/2023 18:31	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A



## Results

Client Sample ID	SB-02-0-2	Collected	01/11/2023 10:40
Lab Sample ID	3282987003	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Moisture	15.4	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	84.6	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-02-10-12	Collected	01/11/2023 10:45
Lab Sample ID	3282987004	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	4020	P1	mg/kg	40.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Arsenic, Total	8.1	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Barium, Total	47.6	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Beryllium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Calcium, Total	566	13,P1	mg/kg	50.6	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Chromium, Total	7.8	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Cobalt, Total	4.1	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Copper, Total	10.6	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Iron, Total	24300	P1	mg/kg	25.3	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Lead, Total	7.9	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Magnesium, Total	971	P1	mg/kg	50.6	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Manganese, Total	569	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.046	SW846 7471B	1	01/19/2023 15:18	WDA	A
Nickel, Total	10.4	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Potassium, Total	314	P1	mg/kg	50.6	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	50.6	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Trivalent Chromium	7.8	P1	mg/kg	2.1	Calculation	1	01/24/2023 09:12	CW	A
Vanadium, Total	11.0	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 17:48	RMD	A1
Zinc, Total	39.9	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 17:48	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2,3-Trichlorobenzene	ND	ND,23,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 17:17	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 17:17	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 17:17	TMP	C
Acetone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 17:17	TMP	C



## Results

Client Sample ID	SB-02-10-12	Collected	01/11/2023 10:45
Lab Sample ID	3282987004	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Bromoform	ND	ND,19,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Bromomethane	ND	ND,20,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Chlorodibromomethane	ND	ND,21,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 17:17	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Methylene Chloride	1.1	P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 17:17	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/17/2023 17:17	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Trichlorofluoromethane	ND	ND,24,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 17:17	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	84.9%	56 - 124	01/17/2023 17:17	
4-Bromofluorobenzene	460-00-4	88.3%	51 - 128	01/17/2023 17:17	
Dibromofluoromethane	1868-53-7	65.3%	62 - 123	01/17/2023 17:17	
Toluene-d8	2037-26-5	82.5%	59 - 131	01/17/2023 17:17	

### WET CHEMISTRY



## Results

Client Sample ID	SB-02-10-12	Collected	01/11/2023 10:45
Lab Sample ID	3282987004	Lab Receipt	01/13/2023 09:02

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.1	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	5.8	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	94.2	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-04-0-2	Collected	01/11/2023 11:40
Lab Sample ID	3282987005	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	8670	P1,S1	mg/kg	43.8	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Antimony, Total	ND	ND,11,P 1,S1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Arsenic, Total	10.3	P1,S1	mg/kg	1.6	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Barium, Total	153	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Beryllium, Total	0.73	P1,S1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Cadmium, Total	ND	ND,P1,S 1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Calcium, Total	2080	13,P1,S 1	mg/kg	54.8	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Chromium, Total	12.8	P1,S1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Cobalt, Total	11.7	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Copper, Total	14.8	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Iron, Total	27300	P1,S1	mg/kg	27.4	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Lead, Total	26.9	P1,S1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Magnesium, Total	1560	P1,S1	mg/kg	54.8	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Manganese, Total	784	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Mercury, Total	0.063	P1,S1	mg/kg	0.053	SW846 7471B	1	01/19/2023 15:19	WDA	A
Nickel, Total	19.5	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Potassium, Total	1150	P1,S1	mg/kg	54.8	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Selenium, Total	ND	ND,14,P 1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Silver, Total	ND	ND,P1,S 1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Sodium, Total	ND	ND,P1,S 1	mg/kg	54.8	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Thallium, Total	ND	ND,P1,S 1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Trivalent Chromium	12.8	P1,S1	mg/kg	2.2	Calculation	1	01/24/2023 09:13	CW	A
Vanadium, Total	19.3	P1,S1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:50	RMD	A1
Zinc, Total	68.5	P1,S1	mg/kg	2.7	SW846 6020A	5	01/19/2023 17:50	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,1,2-Trichloroethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,1-Dichloroethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,1-Dichloroethene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1,S 1	ug/kg	2.8	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1,S 1	ug/kg	2.8	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1,S 1	ug/kg	2.8	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2-Dibromoethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2-Dichlorobenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2-Dichloroethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,2-Dichloropropane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
1,3-Dichlorobenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C





## Results

Client Sample ID	SB-04-0-2	Collected	01/11/2023 11:40
Lab Sample ID	3282987005	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dichlorobenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
2-Butanone	ND	ND,P1,S 1	ug/kg	5.7	SW846 8260B	1	01/18/2023 14:00	TMP	C
2-Hexanone	ND	ND,P1,S 1	ug/kg	5.7	SW846 8260B	1	01/18/2023 14:00	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1,S 1	ug/kg	5.7	SW846 8260B	1	01/18/2023 14:00	TMP	C
Acetone	40.0	P1,S1	ug/kg	5.7	SW846 8260B	1	01/18/2023 14:00	TMP	C
Benzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Bromochloromethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Bromodichloromethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Bromoform	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Bromomethane	ND	ND,16,P 1,S1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Carbon Disulfide	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Carbon Tetrachloride	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Chlorobenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Chlorodibromomethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Chloroethane	ND	ND,P1,S 1	ug/kg	2.8	SW846 8260B	1	01/18/2023 14:00	TMP	C
Chloroform	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Chloromethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
cis-1,3-Dichloropropene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Cyclohexane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Dichlorodifluoromethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Ethylbenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Freon 113	ND	ND,17,1 8,P1,S1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Isopropylbenzene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Methyl acetate	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Methyl cyclohexane	1.2	P1,S1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Methyl t-Butyl Ether	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Methylene Chloride	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
mp-Xylene	ND	ND,P1,S 1	ug/kg	2.3	SW846 8260B	1	01/18/2023 14:00	TMP	C
o-Xylene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Styrene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Tetrachloroethene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Toluene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Total Xylenes	ND	ND,P1,S 1	ug/kg	3.4	SW846 8260B	1	01/18/2023 14:00	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C



## Results

Client Sample ID	SB-04-0-2	Collected	01/11/2023 11:40
Lab Sample ID	3282987005	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichloroethene	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Trichlorofluoromethane	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C
Vinyl Chloride	ND	ND,P1,S 1	ug/kg	1.1	SW846 8260B	1	01/18/2023 14:00	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.4%	56 - 124	01/18/2023 14:00	
4-Bromofluorobenzene	460-00-4	120%	51 - 128	01/18/2023 14:00	
Dibromofluoromethane	1868-53-7	57.6*	62 - 123	01/18/2023 14:00	25
Toluene-d8	2037-26-5	97.4%	59 - 131	01/18/2023 14:00	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1,S 1	mg/kg	2.2	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	11.1	P1,S1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	88.9	P1,S1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-04-14-16	Collected	01/11/2023 11:45
Lab Sample ID	3282987006	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	5890	P1	mg/kg	47.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Arsenic, Total	10.6	P1	mg/kg	1.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Barium, Total	64.7	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Beryllium, Total	ND	ND,P1	mg/kg	0.60	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.60	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Calcium, Total	904	13,P1	mg/kg	59.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Chromium, Total	10.2	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Cobalt, Total	9.5	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Copper, Total	13.1	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Iron, Total	27700	P1	mg/kg	29.9	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Lead, Total	11.8	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Magnesium, Total	1480	P1	mg/kg	59.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Manganese, Total	747	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.057	SW846 7471B	1	01/19/2023 15:20	WDA	A
Nickel, Total	15.1	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Potassium, Total	533	P1	mg/kg	59.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	59.8	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.60	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Trivalent Chromium	10.2	P1	mg/kg	2.4	Calculation	1	01/24/2023 09:14	CW	A
Vanadium, Total	15.7	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 17:52	RMD	A1
Zinc, Total	54.9	P1	mg/kg	3.0	SW846 6020A	5	01/19/2023 17:52	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.4	SW846 8260B	1	01/17/2023 20:10	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.4	SW846 8260B	1	01/17/2023 20:10	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.4	SW846 8260B	1	01/17/2023 20:10	TMP	C
Acetone	ND	ND,P1	ug/kg	5.4	SW846 8260B	1	01/17/2023 20:10	TMP	C



## Results

Client Sample ID	SB-04-14-16	Collected	01/11/2023 11:45
Lab Sample ID	3282987006	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 20:10	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Tetrachloroethene	15.0	P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.2	SW846 8260B	1	01/17/2023 20:10	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 20:10	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	85.2%	56 - 124	01/17/2023 20:10	
4-Bromofluorobenzene	460-00-4	80.5%	51 - 128	01/17/2023 20:10	
Dibromofluoromethane	1868-53-7	66.9%	62 - 123	01/17/2023 20:10	
Toluene-d8	2037-26-5	82.7%	59 - 131	01/17/2023 20:10	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-04-14-16	Collected	01/11/2023 11:45
Lab Sample ID	3282987006	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	18.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	81.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-05-0-2	Collected	01/11/2023 12:55
Lab Sample ID	3282987007	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	9390	P1	mg/kg	44.4	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Arsenic, Total	12.0	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Barium, Total	145	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Beryllium, Total	0.73	P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Calcium, Total	2200	13,P1	mg/kg	55.5	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Chromium, Total	14.6	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Cobalt, Total	11.6	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Copper, Total	19.7	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Iron, Total	29100	P1	mg/kg	27.7	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Lead, Total	54.8	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Magnesium, Total	1740	P1	mg/kg	55.5	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Manganese, Total	829	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Mercury, Total	0.10	P1	mg/kg	0.050	SW846 7471B	1	01/19/2023 15:21	WDA	A
Nickel, Total	19.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Potassium, Total	979	P1	mg/kg	55.5	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	55.5	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Trivalent Chromium	14.6	P1	mg/kg	2.3	Calculation	1	01/24/2023 09:15	CW	A
Vanadium, Total	20.4	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 17:54	RMD	A1
Zinc, Total	87.5	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 17:54	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.6	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.6	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.6	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.2	SW846 8260B	1	01/17/2023 19:45	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.2	SW846 8260B	1	01/17/2023 19:45	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.2	SW846 8260B	1	01/17/2023 19:45	TMP	C
Acetone	ND	ND,P1	ug/kg	5.2	SW846 8260B	1	01/17/2023 19:45	TMP	C



## Results

Client Sample ID	SB-05-0-2	Collected	01/11/2023 12:55
Lab Sample ID	3282987007	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.6	SW846 8260B	1	01/17/2023 19:45	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.1	SW846 8260B	1	01/17/2023 19:45	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Styrene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Toluene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.1	SW846 8260B	1	01/17/2023 19:45	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 19:45	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.5%	56 - 124	01/17/2023 19:45	
4-Bromofluorobenzene	460-00-4	84.3%	51 - 128	01/17/2023 19:45	
Dibromofluoromethane	1868-53-7	70.7%	62 - 123	01/17/2023 19:45	
Toluene-d8	2037-26-5	87.1%	59 - 131	01/17/2023 19:45	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-05-0-2	Collected	01/11/2023 12:55
Lab Sample ID	3282987007	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	14.3	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	85.7	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	





## Results

Client Sample ID	SB-05-4-6	Collected	01/11/2023 13:00
Lab Sample ID	3282987008	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	10200	P1	mg/kg	45.0	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Arsenic, Total	12.0	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Barium, Total	120	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Beryllium, Total	0.76	P1	mg/kg	0.56	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.56	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Calcium, Total	1710	13,P1	mg/kg	56.2	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Chromium, Total	13.9	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Cobalt, Total	12.7	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Copper, Total	17.0	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Iron, Total	30600	P1	mg/kg	28.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Lead, Total	15.7	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Magnesium, Total	2280	P1	mg/kg	56.2	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Manganese, Total	990	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.057	SW846 7471B	1	01/19/2023 15:23	WDA	A
Nickel, Total	22.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Potassium, Total	867	P1	mg/kg	56.2	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	56.2	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.56	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Trivalent Chromium	13.9	P1	mg/kg	2.4	Calculation	1	01/24/2023 09:16	CW	A
Vanadium, Total	21.4	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:07	RMD	A1
Zinc, Total	73.7	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:07	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 19:20	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 19:20	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 19:20	TMP	C
Acetone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 19:20	TMP	C



## Results

Client Sample ID	SB-05-4-6	Collected	01/11/2023 13:00
Lab Sample ID	3282987008	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 19:20	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 19:20	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/17/2023 19:20	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 19:20	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89%	56 - 124	01/17/2023 19:20	
4-Bromofluorobenzene	460-00-4	84.4%	51 - 128	01/17/2023 19:20	
Dibromofluoromethane	1868-53-7	68.7%	62 - 123	01/17/2023 19:20	
Toluene-d8	2037-26-5	83.6%	59 - 131	01/17/2023 19:20	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-05-4-6	Collected	01/11/2023 13:00
Lab Sample ID	3282987008	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	18.1	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	81.9	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-06-0-2	Collected	01/11/2023 14:30
Lab Sample ID	3282987009	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	9400	P1	mg/kg	44.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Arsenic, Total	10.9	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Barium, Total	232	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Beryllium, Total	0.78	P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Calcium, Total	1760	13,P1	mg/kg	55.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Chromium, Total	13.7	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Cobalt, Total	11.7	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Copper, Total	18.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Iron, Total	27200	P1	mg/kg	27.5	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Lead, Total	35.0	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Magnesium, Total	1630	P1	mg/kg	55.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Manganese, Total	1090	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.053	SW846 7471B	1	01/19/2023 15:24	WDA	A
Nickel, Total	21.8	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Potassium, Total	1210	P1	mg/kg	55.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	55.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Trivalent Chromium	13.6	P1	mg/kg	2.4	Calculation	1	01/24/2023 09:17	CW	A
Vanadium, Total	18.9	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:09	RMD	A1
Zinc, Total	88.5	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:09	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Acetone	ND	ND,P1	ug/kg	5.0	SW846 8260B	1	01/17/2023 20:34	TMP	C



## Results

Client Sample ID	SB-06-0-2	Collected	01/11/2023 14:30
Lab Sample ID	3282987009	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.5	SW846 8260B	1	01/17/2023 20:34	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Styrene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Toluene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.0	SW846 8260B	1	01/17/2023 20:34	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89%	56 - 124	01/17/2023 20:34	
4-Bromofluorobenzene	460-00-4	81.9%	51 - 128	01/17/2023 20:34	
Dibromofluoromethane	1868-53-7	67.9%	62 - 123	01/17/2023 20:34	
Toluene-d8	2037-26-5	81.9%	59 - 131	01/17/2023 20:34	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-06-0-2	Collected	01/11/2023 14:30
Lab Sample ID	3282987009	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	15.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	84.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-06-8-10	Collected	01/11/2023 14:35
Lab Sample ID	3282987010	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	7560	P1	mg/kg	40.4	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Arsenic, Total	11.8	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Barium, Total	92.1	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Beryllium, Total	0.74	P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Calcium, Total	1220	13,P1	mg/kg	50.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Chromium, Total	12.5	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Cobalt, Total	9.8	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Copper, Total	15.5	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Iron, Total	29400	P1	mg/kg	25.2	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Lead, Total	13.3	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Magnesium, Total	1540	P1	mg/kg	50.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Manganese, Total	674	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.056	SW846 7471B	1	01/19/2023 15:27	WDA	A
Nickel, Total	18.2	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Potassium, Total	652	P1	mg/kg	50.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Sodium, Total	ND	ND,P1	mg/kg	50.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Trivalent Chromium	12.5	P1	mg/kg	2.3	Calculation	1	01/24/2023 09:18	CW	A
Vanadium, Total	17.6	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:11	RMD	A1
Zinc, Total	63.8	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:11	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
2-Butanone	ND	ND,P1	ug/kg	4.5	SW846 8260B	1	01/17/2023 21:24	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	4.5	SW846 8260B	1	01/17/2023 21:24	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	4.5	SW846 8260B	1	01/17/2023 21:24	TMP	C
Acetone	ND	ND,P1	ug/kg	4.5	SW846 8260B	1	01/17/2023 21:24	TMP	C



## Results

Client Sample ID	SB-06-8-10	Collected	01/11/2023 14:35
Lab Sample ID	3282987010	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Bromoform	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Bromomethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 21:24	TMP	C
Chloroform	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	1.8	SW846 8260B	1	01/17/2023 21:24	TMP	C
o-Xylene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Styrene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Tetrachloroethene	4.1	P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Toluene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/17/2023 21:24	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	0.90	SW846 8260B	1	01/17/2023 21:24	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91%	56 - 124	01/17/2023 21:24	
4-Bromofluorobenzene	460-00-4	82.3%	51 - 128	01/17/2023 21:24	
Dibromofluoromethane	1868-53-7	68.8%	62 - 123	01/17/2023 21:24	
Toluene-d8	2037-26-5	83.4%	59 - 131	01/17/2023 21:24	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-06-8-10	Collected	01/11/2023 14:35
Lab Sample ID	3282987010	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	16.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	83.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-07-0-2	Collected	01/11/2023 15:25
Lab Sample ID	3282987011	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	8020	P1,S2	mg/kg	45.7	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Antimony, Total	1.7	P1,S2	mg/kg	1.1	SW846 6020A	5	01/20/2023 14:56	RMD	A1
Arsenic, Total	11.8	P1,S2	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Barium, Total	113	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Beryllium, Total	0.92	P1,S2	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Cadmium, Total	ND	ND,P1,S2	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Calcium, Total	21700	13,P1,S2	mg/kg	57.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Chromium, Total	9.9	P1,S2	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Cobalt, Total	6.9	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Copper, Total	25.9	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Iron, Total	21400	P1,S2	mg/kg	28.5	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Lead, Total	157	P1,S2	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Magnesium, Total	3150	P1,S2	mg/kg	57.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Manganese, Total	718	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Mercury, Total	0.083	P1,S2	mg/kg	0.062	SW846 7471B	1	01/19/2023 15:31	WDA	A
Nickel, Total	14.8	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Potassium, Total	889	P1,S2	mg/kg	57.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Selenium, Total	ND	ND,14,P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Silver, Total	ND	ND,P1,S2	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Sodium, Total	107	P1,S2	mg/kg	57.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Thallium, Total	ND	ND,P1,S2	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Trivalent Chromium	9.9	P1,S2	mg/kg	2.4	Calculation	1	01/19/2023 20:29	CW	A
Vanadium, Total	15.4	P1,S2	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:13	RMD	A1
Zinc, Total	71.2	P1,S2	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:13	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,1,2-Trichloroethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,1-Dichloroethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,1-Dichloroethene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1,S2	ug/kg	2.9	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1,S2	ug/kg	2.9	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1,S2	ug/kg	2.9	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2-Dibromoethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2-Dichlorobenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2-Dichloroethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,2-Dichloropropane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
1,3-Dichlorobenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C



## Results

Client Sample ID	SB-07-0-2	Collected	01/11/2023 15:25
Lab Sample ID	3282987011	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dichlorobenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
2-Butanone	ND	ND,P1,S2	ug/kg	5.7	SW846 8260B	1	01/17/2023 18:56	TMP	C
2-Hexanone	ND	ND,P1,S2	ug/kg	5.7	SW846 8260B	1	01/17/2023 18:56	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1,S2	ug/kg	5.7	SW846 8260B	1	01/17/2023 18:56	TMP	C
Acetone	11.2	P1,S2	ug/kg	5.7	SW846 8260B	1	01/17/2023 18:56	TMP	C
Benzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Bromochloromethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Bromodichloromethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Bromoform	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Bromomethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Carbon Disulfide	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Carbon Tetrachloride	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Chlorobenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Chlorodibromomethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Chloroethane	ND	ND,P1,S2	ug/kg	2.9	SW846 8260B	1	01/17/2023 18:56	TMP	C
Chloroform	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Chloromethane	ND	ND,1,2,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Cyclohexane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Dichlorodifluoromethane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Ethylbenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Freon 113	ND	ND,7,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Isopropylbenzene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Methyl acetate	ND	ND,8,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Methyl cyclohexane	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Methylene Chloride	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
mp-Xylene	ND	ND,P1,S2	ug/kg	2.3	SW846 8260B	1	01/17/2023 18:56	TMP	C
o-Xylene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Styrene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Tetrachloroethene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Toluene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Total Xylenes	ND	ND,P1,S2	ug/kg	3.4	SW846 8260B	1	01/17/2023 18:56	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1,S2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C



## Results

Client Sample ID	SB-07-0-2	Collected	01/11/2023 15:25
Lab Sample ID	3282987011	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichloroethene	ND	ND,P1,S 2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Trichlorofluoromethane	ND	ND,P1,S 2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C
Vinyl Chloride	ND	ND,P1,S 2	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:56	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.6%	56 - 124	01/17/2023 18:56	
4-Bromofluorobenzene	460-00-4	91.9%	51 - 128	01/17/2023 18:56	
Dibromofluoromethane	1868-53-7	68%	62 - 123	01/17/2023 18:56	
Toluene-d8	2037-26-5	88.2%	59 - 131	01/17/2023 18:56	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1,S 2	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	20.1	P1,S2	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	79.9	P1,S2	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-07-2-4	Collected	01/11/2023 15:30
Lab Sample ID	3282987012	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	11100	P1,S3	mg/kg	45.6	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Antimony, Total	ND	ND,11,P 1,S3	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Arsenic, Total	10.9	P1,S3	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Barium, Total	143	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Beryllium, Total	1.5	P1,S3	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Cadmium, Total	ND	ND,P1,S 3	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Calcium, Total	40600	13,P1,S 3	mg/kg	57.0	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Chromium, Total	10.6	P1,S3	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Cobalt, Total	6.4	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Copper, Total	24.8	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Iron, Total	20100	P1,S3	mg/kg	28.5	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Lead, Total	84.7	P1,S3	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Magnesium, Total	5860	P1,S3	mg/kg	57.0	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Manganese, Total	1210	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Mercury, Total	0.13	P1,S3	mg/kg	0.062	SW846 7471B	1	01/19/2023 15:32	WDA	A
Nickel, Total	14.3	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Potassium, Total	1120	P1,S3	mg/kg	57.0	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Selenium, Total	ND	ND,14,P 1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Silver, Total	ND	ND,P1,S 3	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Sodium, Total	150	P1,S3	mg/kg	57.0	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Thallium, Total	ND	ND,P1,S 3	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Trivalent Chromium	10.6	P1,S3	mg/kg	2.5	Calculation	1	01/24/2023 09:19	CW	A
Vanadium, Total	15.6	P1,S3	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:15	RMD	A1
Zinc, Total	63.0	P1,S3	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:15	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,1,2-Trichloroethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,1-Dichloroethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,1-Dichloroethene	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1,S 3	ug/kg	3.7	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1,S 3	ug/kg	3.7	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1,S 3	ug/kg	3.7	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2-Dibromoethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2-Dichlorobenzene	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2-Dichloroethane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,2-Dichloropropane	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
1,3-Dichlorobenzene	ND	ND,P1,S 3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C



## Results

Client Sample ID	SB-07-2-4	Collected	01/11/2023 15:30
Lab Sample ID	3282987012	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dichlorobenzene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
2-Butanone	ND	ND,P1,S3	ug/kg	7.4	SW846 8260B	1	01/17/2023 16:53	TMP	C
2-Hexanone	ND	ND,P1,S3	ug/kg	7.4	SW846 8260B	1	01/17/2023 16:53	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1,S3	ug/kg	7.4	SW846 8260B	1	01/17/2023 16:53	TMP	C
Acetone	10.4	P1,S3	ug/kg	7.4	SW846 8260B	1	01/17/2023 16:53	TMP	C
Benzene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Bromochloromethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Bromodichloromethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Bromoform	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Bromomethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Carbon Disulfide	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Carbon Tetrachloride	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Chlorobenzene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Chlorodibromomethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Chloroethane	ND	ND,P1,S3	ug/kg	3.7	SW846 8260B	1	01/17/2023 16:53	TMP	C
Chloroform	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Chloromethane	ND	ND,1,2,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Cyclohexane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Dichlorodifluoromethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Ethylbenzene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Freon 113	ND	ND,7,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Isopropylbenzene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Methyl acetate	ND	ND,8,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Methyl cyclohexane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Methylene Chloride	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
mp-Xylene	ND	ND,P1,S3	ug/kg	2.9	SW846 8260B	1	01/17/2023 16:53	TMP	C
o-Xylene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Styrene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Tetrachloroethene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Toluene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Total Xylenes	ND	ND,P1,S3	ug/kg	4.4	SW846 8260B	1	01/17/2023 16:53	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C



## Results

Client Sample ID	SB-07-2-4	Collected	01/11/2023 15:30
Lab Sample ID	3282987012	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichloroethene	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Trichlorofluoromethane	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C
Vinyl Chloride	ND	ND,P1,S3	ug/kg	1.5	SW846 8260B	1	01/17/2023 16:53	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.3%	56 – 124	01/17/2023 16:53	
4-Bromofluorobenzene	460-00-4	90.6%	51 – 128	01/17/2023 16:53	
Dibromofluoromethane	1868-53-7	68.3%	62 – 123	01/17/2023 16:53	
Toluene-d8	2037-26-5	89.6%	59 – 131	01/17/2023 16:53	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1,S3	mg/kg	2.5	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	19.4	P1,S3	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	80.6	P1,S3	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-01-0-2	Collected	01/12/2023 09:50
Lab Sample ID	3282987013	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	9000	P1	mg/kg	40.3	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Arsenic, Total	9.5	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Barium, Total	74.9	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Beryllium, Total	0.66	P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Calcium, Total	25600	13,P1	mg/kg	50.3	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Chromium, Total	11.8	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Cobalt, Total	8.8	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Copper, Total	14.8	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Iron, Total	25500	P1	mg/kg	25.2	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Lead, Total	12.1	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Magnesium, Total	2870	P1	mg/kg	50.3	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Manganese, Total	1270	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.049	SW846 7471B	1	01/19/2023 15:33	WDA	A
Nickel, Total	14.9	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Potassium, Total	1100	P1	mg/kg	50.3	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Sodium, Total	235	P1	mg/kg	50.3	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.50	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Trivalent Chromium	11.8	P1	mg/kg	2.3	Calculation	1	01/24/2023 09:20	CW	A
Vanadium, Total	22.0	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:17	RMD	A1
Zinc, Total	56.9	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:17	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 18:07	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 18:07	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 18:07	TMP	C
Acetone	ND	ND,P1	ug/kg	5.5	SW846 8260B	1	01/17/2023 18:07	TMP	C





## Results

Client Sample ID	SB-01-0-2	Collected	01/12/2023 09:50
Lab Sample ID	3282987013	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 18:07	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.2	SW846 8260B	1	01/17/2023 18:07	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/17/2023 18:07	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/17/2023 18:07	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.5%	56 - 124	01/17/2023 18:07	
4-Bromofluorobenzene	460-00-4	80%	51 - 128	01/17/2023 18:07	
Dibromofluoromethane	1868-53-7	68.3%	62 - 123	01/17/2023 18:07	
Toluene-d8	2037-26-5	81.8%	59 - 131	01/17/2023 18:07	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-01-0-2	Collected	01/12/2023 09:50
Lab Sample ID	3282987013	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	13.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	86.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-01-10-12	Collected	01/12/2023 09:55
Lab Sample ID	3282987014	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	6330	P1	mg/kg	39.6	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	0.99	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Arsenic, Total	11.2	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Barium, Total	43.5	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Beryllium, Total	ND	ND,P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Calcium, Total	935	13,P1	mg/kg	49.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Chromium, Total	13.1	P1	mg/kg	0.99	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Cobalt, Total	10.6	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Copper, Total	14.2	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Iron, Total	29900	P1	mg/kg	24.7	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Lead, Total	12.8	P1	mg/kg	0.99	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Magnesium, Total	1340	P1	mg/kg	49.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Manganese, Total	701	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Mercury, Total	ND	ND,P1	mg/kg	0.054	SW846 7471B	1	01/19/2023 15:39	WDA	A
Nickel, Total	14.8	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Potassium, Total	672	P1	mg/kg	49.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	0.99	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Sodium, Total	232	P1	mg/kg	49.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Trivalent Chromium	12.1	P1	mg/kg	2.3	Calculation	1	01/24/2023 09:21	CW	A
Vanadium, Total	16.6	P1	mg/kg	0.99	SW846 6020A	5	01/19/2023 18:19	RMD	A1
Zinc, Total	55.5	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 18:19	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.3	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.3	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.3	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
2-Butanone	ND	ND,P1	ug/kg	4.7	SW846 8260B	1	01/17/2023 20:59	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	4.7	SW846 8260B	1	01/17/2023 20:59	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	4.7	SW846 8260B	1	01/17/2023 20:59	TMP	C
Acetone	6.9	P1	ug/kg	4.7	SW846 8260B	1	01/17/2023 20:59	TMP	C



## Results

Client Sample ID	SB-01-10-12	Collected	01/12/2023 09:55
Lab Sample ID	3282987014	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Bromoform	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Bromomethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.3	SW846 8260B	1	01/17/2023 20:59	TMP	C
Chloroform	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Chloromethane	ND	ND,1,2,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
cis-1,3-Dichloropropene	ND	ND,3,4,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Freon 113	ND	ND,7,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Methyl acetate	ND	ND,8,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Methyl t-Butyl Ether	ND	ND,9,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	1.9	SW846 8260B	1	01/17/2023 20:59	TMP	C
o-Xylene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Styrene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Toluene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	2.8	SW846 8260B	1	01/17/2023 20:59	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
trans-1,3-Dichloropropene	ND	ND,5,6,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	0.94	SW846 8260B	1	01/17/2023 20:59	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89.7%	56 - 124	01/17/2023 20:59	
4-Bromofluorobenzene	460-00-4	87.5%	51 - 128	01/17/2023 20:59	
Dibromofluoromethane	1868-53-7	70.9%	62 - 123	01/17/2023 20:59	
Toluene-d8	2037-26-5	87.8%	59 - 131	01/17/2023 20:59	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-01-10-12	Collected	01/12/2023 09:55
Lab Sample ID	3282987014	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	13.0	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	87.0	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-11-0-2	Collected	01/12/2023 13:15
Lab Sample ID	3282987015	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	12000	P1	mg/kg	40.8	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Arsenic, Total	14.3	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Barium, Total	232	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Beryllium, Total	1.4	P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Calcium, Total	37900	13,P1	mg/kg	51.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Chromium, Total	10.0	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Cobalt, Total	6.7	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Copper, Total	18.1	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Iron, Total	24900	P1	mg/kg	25.5	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Lead, Total	61.0	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Magnesium, Total	7470	P1	mg/kg	51.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Manganese, Total	2850	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Mercury, Total	0.10	P1	mg/kg	0.050	SW846 7471B	1	01/19/2023 15:43	WDA	A
Nickel, Total	12.6	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Potassium, Total	1320	P1	mg/kg	51.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Sodium, Total	250	P1	mg/kg	51.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Trivalent Chromium	10.0	P1	mg/kg	2.2	Calculation	1	01/24/2023 09:22	CW	A
Vanadium, Total	17.4	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 18:21	RMD	A1
Zinc, Total	78.1	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:21	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
2-Butanone	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/18/2023 15:14	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/18/2023 15:14	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/18/2023 15:14	TMP	C
Acetone	11.4	P1	ug/kg	6.7	SW846 8260B	1	01/18/2023 15:14	TMP	C



## Results

Client Sample ID	SB-11-0-2	Collected	01/12/2023 13:15
Lab Sample ID	3282987015	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Bromomethane	ND	ND,16,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Carbon Disulfide	6.8	P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Chloroethane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Chloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
cis-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Freon 113	ND	ND,17,18,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Methyl acetate	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/18/2023 15:14	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Styrene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Toluene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	4.0	SW846 8260B	1	01/18/2023 15:14	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 15:14	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.3%	56 - 124	01/18/2023 15:14	
4-Bromofluorobenzene	460-00-4	81.3%	51 - 128	01/18/2023 15:14	
Dibromofluoromethane	1868-53-7	67.5%	62 - 123	01/18/2023 15:14	
Toluene-d8	2037-26-5	79.5%	59 - 131	01/18/2023 15:14	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-11-0-2	Collected	01/12/2023 13:15
Lab Sample ID	3282987015	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.2	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	9.1	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	90.9	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	





## Results

Client Sample ID	SB-11-6-8	Collected	01/12/2023 13:20
Lab Sample ID	3282987016	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	5500	P1	mg/kg	45.3	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Arsenic, Total	12.4	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Barium, Total	72.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Beryllium, Total	0.59	P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Calcium, Total	2090	13,P1	mg/kg	56.6	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Chromium, Total	11.3	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Cobalt, Total	7.7	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Copper, Total	13.0	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Iron, Total	27600	P1	mg/kg	28.3	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Lead, Total	13.4	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Magnesium, Total	1310	P1	mg/kg	56.6	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Manganese, Total	382	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Mercury, Total	0.11	P1	mg/kg	0.056	SW846 7471B	1	01/19/2023 15:44	WDA	A
Nickel, Total	13.6	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Potassium, Total	737	P1	mg/kg	56.6	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Sodium, Total	139	P1	mg/kg	56.6	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Trivalent Chromium	11.3	P1	mg/kg	2.4	Calculation	1	01/24/2023 09:23	CW	A
Vanadium, Total	15.0	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:39	RMD	A1
Zinc, Total	51.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:39	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
2-Butanone	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/19/2023 13:13	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/19/2023 13:13	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	6.7	SW846 8260B	1	01/19/2023 13:13	TMP	C
Acetone	11.1	P1	ug/kg	6.7	SW846 8260B	1	01/19/2023 13:13	TMP	C



## Results

Client Sample ID	SB-11-6-8	Collected	01/12/2023 13:20
Lab Sample ID	3282987016	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Chloroethane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Chloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
cis-1,3-Dichloropropene	ND	ND,26,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Freon 113	ND	ND,27,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Methyl acetate	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/19/2023 13:13	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Styrene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Toluene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	4.0	SW846 8260B	1	01/19/2023 13:13	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/19/2023 13:13	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.3%	56 - 124	01/19/2023 13:13	
4-Bromofluorobenzene	460-00-4	85.6%	51 - 128	01/19/2023 13:13	
Dibromofluoromethane	1868-53-7	69.2%	62 - 123	01/19/2023 13:13	
Toluene-d8	2037-26-5	85.3%	59 - 131	01/19/2023 13:13	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-11-6-8	Collected	01/12/2023 13:20
Lab Sample ID	3282987016	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	15.8	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	84.2	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-12-0-2	Collected	01/12/2023 12:20
Lab Sample ID	3282987017	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	8960	P1	mg/kg	42.2	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Arsenic, Total	15.4	P1	mg/kg	1.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Barium, Total	126	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Beryllium, Total	1.1	P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Cadmium, Total	0.67	P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Calcium, Total	9300	13,P1	mg/kg	52.7	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Chromium, Total	13.0	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Cobalt, Total	9.5	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Copper, Total	37.6	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Iron, Total	30000	P1	mg/kg	26.4	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Lead, Total	57.2	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Magnesium, Total	2530	P1	mg/kg	52.7	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Manganese, Total	423	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Mercury, Total	0.18	P1	mg/kg	0.052	SW846 7471B	1	01/19/2023 15:45	WDA	A
Nickel, Total	18.6	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Potassium, Total	982	P1	mg/kg	52.7	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Sodium, Total	208	P1	mg/kg	52.7	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Trivalent Chromium	13.0	P1	mg/kg	2.2	Calculation	1	01/24/2023 09:24	CW	A
Vanadium, Total	17.7	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:41	RMD	A1
Zinc, Total	119	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 18:41	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.8	SW846 8260B	1	01/19/2023 13:37	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.8	SW846 8260B	1	01/19/2023 13:37	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.8	SW846 8260B	1	01/19/2023 13:37	TMP	C
Acetone	7.8	P1	ug/kg	5.8	SW846 8260B	1	01/19/2023 13:37	TMP	C



## Results

Client Sample ID	SB-12-0-2	Collected	01/12/2023 12:20
Lab Sample ID	3282987017	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Carbon Disulfide	3.0	P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/19/2023 13:37	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Chloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
cis-1,3-Dichloropropene	ND	ND,26,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Freon 113	ND	ND,27,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Methyl acetate	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.3	SW846 8260B	1	01/19/2023 13:37	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Styrene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Toluene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.5	SW846 8260B	1	01/19/2023 13:37	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 13:37	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89.4%	56 - 124	01/19/2023 13:37	
4-Bromofluorobenzene	460-00-4	101%	51 - 128	01/19/2023 13:37	
Dibromofluoromethane	1868-53-7	61.6*	62 - 123	01/19/2023 13:37	28
Toluene-d8	2037-26-5	86.9%	59 - 131	01/19/2023 13:37	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-12-0-2	Collected	01/12/2023 12:20
Lab Sample ID	3282987017	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.2	SW846 7196A	1	01/19/2023 08:44	AKH	A
Moisture	12.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	87.5	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-12-10-12	Collected	01/12/2023 12:25
Lab Sample ID	3282987018	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	7270	P1	mg/kg	46.8	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Arsenic, Total	8.4	P1	mg/kg	1.8	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Barium, Total	163	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Beryllium, Total	0.80	P1	mg/kg	0.58	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.58	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Calcium, Total	2400	13,P1	mg/kg	58.5	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Chromium, Total	11.2	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Cobalt, Total	10.3	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Copper, Total	13.9	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Iron, Total	24900	P1	mg/kg	29.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Lead, Total	17.7	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Magnesium, Total	1410	P1	mg/kg	58.5	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Manganese, Total	962	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Mercury, Total	0.072	P1	mg/kg	0.055	SW846 7471B	1	01/19/2023 15:46	WDA	A
Nickel, Total	18.8	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Potassium, Total	842	P1	mg/kg	58.5	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Sodium, Total	214	P1	mg/kg	58.5	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.58	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Trivalent Chromium	11.2	P1	mg/kg	2.4	Calculation	1	01/24/2023 09:25	CW	A
Vanadium, Total	15.7	P1	mg/kg	1.2	SW846 6020A	5	01/19/2023 18:44	RMD	A1
Zinc, Total	66.2	P1	mg/kg	2.9	SW846 6020A	5	01/19/2023 18:44	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.4	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.4	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.4	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
2-Butanone	ND	ND,P1	ug/kg	4.8	SW846 8260B	1	01/18/2023 16:27	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	4.8	SW846 8260B	1	01/18/2023 16:27	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	4.8	SW846 8260B	1	01/18/2023 16:27	TMP	C
Acetone	12.8	P1	ug/kg	4.8	SW846 8260B	1	01/18/2023 16:27	TMP	C



## Results

Client Sample ID	SB-12-10-12	Collected	01/12/2023 12:25
Lab Sample ID	3282987018	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Bromoform	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Bromomethane	ND	ND,16,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.4	SW846 8260B	1	01/18/2023 16:27	TMP	C
Chloroform	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Chloromethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
cis-1,3-Dichloropropene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Freon 113	ND	ND,17,18,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Methyl acetate	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	1.9	SW846 8260B	1	01/18/2023 16:27	TMP	C
o-Xylene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Styrene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Toluene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/18/2023 16:27	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	0.95	SW846 8260B	1	01/18/2023 16:27	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.9%	56 - 124	01/18/2023 16:27	
4-Bromofluorobenzene	460-00-4	81.9%	51 - 128	01/18/2023 16:27	
Dibromofluoromethane	1868-53-7	67.1%	62 - 123	01/18/2023 16:27	
Toluene-d8	2037-26-5	80.4%	59 - 131	01/18/2023 16:27	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-12-10-12	Collected	01/12/2023 12:25
Lab Sample ID	3282987018	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 11:40	AKH	A
Moisture	19.2	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	80.8	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-12-10-12D	Collected	01/12/2023 12:30
Lab Sample ID	3282987019	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	6960	P1	mg/kg	44.3	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Antimony, Total	ND	ND,11,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Arsenic, Total	9.1	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Barium, Total	120	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Beryllium, Total	0.62	P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Cadmium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Calcium, Total	1710	13,P1	mg/kg	55.3	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Chromium, Total	10.8	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Cobalt, Total	10.4	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Copper, Total	10.4	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Iron, Total	23900	P1	mg/kg	27.7	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Lead, Total	12.0	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Magnesium, Total	1220	P1	mg/kg	55.3	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Manganese, Total	359	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Mercury, Total	0.072	P1	mg/kg	0.054	SW846 7471B	1	01/19/2023 15:47	WDA	A
Nickel, Total	15.6	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Potassium, Total	790	P1	mg/kg	55.3	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Selenium, Total	ND	ND,14,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Sodium, Total	225	P1	mg/kg	55.3	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Thallium, Total	ND	ND,P1	mg/kg	0.55	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Trivalent Chromium	10.8	P1	mg/kg	2.5	Calculation	1	01/24/2023 09:26	CW	A
Vanadium, Total	14.3	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 18:46	RMD	A1
Zinc, Total	53.4	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 18:46	RMD	A1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
2-Butanone	ND	ND,P1	ug/kg	5.3	SW846 8260B	1	01/19/2023 14:02	TMP	C
2-Hexanone	ND	ND,P1	ug/kg	5.3	SW846 8260B	1	01/19/2023 14:02	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	5.3	SW846 8260B	1	01/19/2023 14:02	TMP	C
Acetone	5.7	P1	ug/kg	5.3	SW846 8260B	1	01/19/2023 14:02	TMP	C



## Results

Client Sample ID	SB-12-10-12D	Collected	01/12/2023 12:30
Lab Sample ID	3282987019	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Bromochloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Bromodichloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Bromoform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Bromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Carbon Disulfide	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Chlorobenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Chlorodibromomethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Chloroethane	ND	ND,P1	ug/kg	2.7	SW846 8260B	1	01/19/2023 14:02	TMP	C
Chloroform	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Chloromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
cis-1,3-Dichloropropene	ND	ND,26,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Ethylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Freon 113	ND	ND,27,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Isopropylbenzene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Methyl acetate	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Methyl cyclohexane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Methylene Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
mp-Xylene	ND	ND,P1	ug/kg	2.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
o-Xylene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Styrene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Tetrachloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Toluene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Total Xylenes	ND	ND,P1	ug/kg	3.2	SW846 8260B	1	01/19/2023 14:02	TMP	C
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Trichloroethene	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C
Vinyl Chloride	ND	ND,P1	ug/kg	1.1	SW846 8260B	1	01/19/2023 14:02	TMP	C

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	86.9%	56 - 124	01/19/2023 14:02	
4-Bromofluorobenzene	460-00-4	86.6%	51 - 128	01/19/2023 14:02	
Dibromofluoromethane	1868-53-7	66.3%	62 - 123	01/19/2023 14:02	
Toluene-d8	2037-26-5	79.9%	59 - 131	01/19/2023 14:02	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-12-10-12D	Collected	01/12/2023 12:30
Lab Sample ID	3282987019	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.5	SW846 7196A	1	01/19/2023 11:40	AKH	A
Moisture	19.9	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	
Total Solids	80.1	P1	%	0.1	S2540G-11	1	01/17/2023 14:20	NXL	



## Results

Client Sample ID	SB-10-0-2	Collected	01/13/2023 09:10
Lab Sample ID	3283084001	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	7850	P1	mg/kg	45.5	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Antimony, Total	2.1	P1	mg/kg	1.1	SW846 6020A	5	01/20/2023 14:58	RMD	E1
Arsenic, Total	17.1	P1	mg/kg	1.7	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Barium, Total	119	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Beryllium, Total	1.1	P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Cadmium, Total	1.1	P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Calcium, Total	3250	P1	mg/kg	56.9	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Chromium, Total	34.7	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Cobalt, Total	10.6	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Copper, Total	35.9	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Iron, Total	30700	P1	mg/kg	28.4	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Lead, Total	108	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Magnesium, Total	1220	P1	mg/kg	56.9	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Manganese, Total	591	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Mercury, Total	0.29	P1	mg/kg	0.060	SW846 7471B	1	01/19/2023 15:54	WDA	E
Nickel, Total	24.3	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Potassium, Total	705	P1	mg/kg	56.9	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Selenium, Total	ND	ND,P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Sodium, Total	58.9	P1	mg/kg	56.9	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Thallium, Total	ND	ND,P1	mg/kg	0.57	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Trivalent Chromium	34.5	P1	mg/kg	2.3	Calculation	1	01/23/2023 11:46	CW	E
Vanadium, Total	19.6	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:40	RMD	E1
Zinc, Total	171	P1	mg/kg	2.8	SW846 6020A	5	01/19/2023 19:40	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
2-Butanone	ND	ND,P1	ug/kg	6.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
2-Hexanone	ND	ND,P1	ug/kg	6.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	6.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
Acetone	ND	ND,P1	ug/kg	6.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
Benzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B



## Results

Client Sample ID	SB-10-0-2	Collected	01/13/2023 09:10
Lab Sample ID	3283084001	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Bromodichloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Bromoform	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Bromomethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Carbon Disulfide	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Chlorobenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Chlorodibromomethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Chloroethane	ND	ND,P1	ug/kg	3.0	SW846 8260B	1	01/19/2023 14:27	TMP	B
Chloroform	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Chloromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
cis-1,3-Dichloropropene	ND	ND,26,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Cyclohexane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Ethylbenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Freon 113	ND	ND,27,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Isopropylbenzene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Methyl acetate	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Methyl cyclohexane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Methylene Chloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
mp-Xylene	ND	ND,P1	ug/kg	2.4	SW846 8260B	1	01/19/2023 14:27	TMP	B
o-Xylene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Styrene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Tetrachloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Toluene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Total Xylenes	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/19/2023 14:27	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Trichloroethene	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B
Vinyl Chloride	ND	ND,P1	ug/kg	1.2	SW846 8260B	1	01/19/2023 14:27	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.3%	56 - 124	01/19/2023 14:27	
4-Bromofluorobenzene	460-00-4	84.9%	51 - 128	01/19/2023 14:27	
Dibromofluoromethane	1868-53-7	69.7%	62 - 123	01/19/2023 14:27	
Toluene-d8	2037-26-5	83.3%	59 - 131	01/19/2023 14:27	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 11:40	AKH	E



## Results

Client Sample ID	SB-10-0-2	Collected	01/13/2023 09:10
Lab Sample ID	3283084001	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	17.1	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	82.9	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D



## Results

Client Sample ID	SB-10-4-6	Collected	01/13/2023 09:15
Lab Sample ID	3283084002	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	11500	P1	mg/kg	41.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Antimony, Total	ND	ND,11,2 9,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Arsenic, Total	9.9	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Barium, Total	215	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Beryllium, Total	0.90	P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Cadmium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Calcium, Total	1990	P1	mg/kg	51.2	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Chromium, Total	15.7	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Cobalt, Total	13.0	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Copper, Total	15.8	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Iron, Total	30200	P1	mg/kg	25.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Lead, Total	15.5	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Magnesium, Total	1890	P1	mg/kg	51.2	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Manganese, Total	1120	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Mercury, Total	ND	ND,P1	mg/kg	0.060	SW846 7471B	1	01/19/2023 15:56	WDA	E
Nickel, Total	25.3	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Potassium, Total	1300	P1	mg/kg	51.2	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Selenium, Total	ND	ND,P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Silver, Total	ND	ND,P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Sodium, Total	ND	ND,P1	mg/kg	51.2	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Thallium, Total	ND	ND,P1	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Trivalent Chromium	15.7	P1	mg/kg	2.4	Calculation	1	01/23/2023 11:55	CW	E
Vanadium, Total	21.9	P1	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:42	RMD	E1
Zinc, Total	88.1	P1	mg/kg	2.6	SW846 6020A	5	01/19/2023 19:42	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.8	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.8	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.8	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
2-Butanone	ND	ND,P1	ug/kg	7.7	SW846 8260B	1	01/18/2023 17:41	TMP	B
2-Hexanone	ND	ND,P1	ug/kg	7.7	SW846 8260B	1	01/18/2023 17:41	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	7.7	SW846 8260B	1	01/18/2023 17:41	TMP	B
Acetone	ND	ND,P1	ug/kg	7.7	SW846 8260B	1	01/18/2023 17:41	TMP	B





## Results

Client Sample ID	SB-10-4-6	Collected	01/13/2023 09:15
Lab Sample ID	3283084002	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Bromochloromethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Bromodichloromethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Bromoform	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Bromomethane	ND	ND,16,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Carbon Disulfide	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Chlorobenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Chlorodibromomethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Chloroethane	ND	ND,P1	ug/kg	3.8	SW846 8260B	1	01/18/2023 17:41	TMP	B
Chloroform	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Chloromethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
cis-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Cyclohexane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Ethylbenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Freon 113	ND	ND,17,18,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Isopropylbenzene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Methyl acetate	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Methyl cyclohexane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Methylene Chloride	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
mp-Xylene	ND	ND,P1	ug/kg	3.1	SW846 8260B	1	01/18/2023 17:41	TMP	B
o-Xylene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Styrene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Tetrachloroethene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Toluene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Total Xylenes	ND	ND,P1	ug/kg	4.6	SW846 8260B	1	01/18/2023 17:41	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Trichloroethene	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B
Vinyl Chloride	ND	ND,P1	ug/kg	1.5	SW846 8260B	1	01/18/2023 17:41	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.8%	56 - 124	01/18/2023 17:41	
4-Bromofluorobenzene	460-00-4	81.6%	51 - 128	01/18/2023 17:41	
Dibromofluoromethane	1868-53-7	68%	62 - 123	01/18/2023 17:41	
Toluene-d8	2037-26-5	81.1%	59 - 131	01/18/2023 17:41	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-10-4-6	Collected	01/13/2023 09:15
Lab Sample ID	3283084002	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.4	SW846 7196A	1	01/19/2023 11:40	AKH	E
Moisture	17.4	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	82.6	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D



## Results

Client Sample ID	SB-09-0-2	Collected	01/13/2023 09:30
Lab Sample ID	3283084003	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	20900	P1,S4	mg/kg	43.4	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Antimony, Total	ND	ND,11,2 9,P1,S4	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Arsenic, Total	3.6	P1,S4	mg/kg	1.6	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Barium, Total	444	P1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Beryllium, Total	3.3	P1,S4	mg/kg	0.54	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Cadmium, Total	ND	ND,P1,S 4	mg/kg	0.54	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Calcium, Total	120000	P1,S4	mg/kg	54.2	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Chromium, Total	13.0	P1,S4	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Cobalt, Total	ND	ND,P1,S 4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Copper, Total	7.2	P1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Iron, Total	8710	P1,S4	mg/kg	27.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Lead, Total	124	P1,S4	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Magnesium, Total	22000	P1,S4	mg/kg	54.2	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Manganese, Total	1660	P1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Mercury, Total	ND	ND,P1,S 4	mg/kg	0.051	SW846 7471B	1	01/19/2023 15:59	WDA	E
Nickel, Total	12.0	P1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Potassium, Total	1660	P1,S4	mg/kg	54.2	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Selenium, Total	ND	ND,14,P 1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Silver, Total	ND	ND,P1,S 4	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Sodium, Total	642	P1,S4	mg/kg	54.2	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Thallium, Total	ND	ND,P1,S 4	mg/kg	0.54	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Trivalent Chromium	13.0	P1,S4	mg/kg	2.1	Calculation	1	01/23/2023 11:56	CW	E
Vanadium, Total	17.0	P1,S4	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:44	RMD	E1
Zinc, Total	49.7	P1,S4	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:44	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,1,2-Trichloroethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,1-Dichloroethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,1-Dichloroethene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1,S 4	ug/kg	3.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1,S 4	ug/kg	3.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1,S 4	ug/kg	3.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2-Dibromoethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2-Dichlorobenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2-Dichloroethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,2-Dichloropropane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
1,3-Dichlorobenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B



**Results**

Client Sample ID SB-09-0-2 Collected 01/13/2023 09:30  
 Lab Sample ID 3283084003 Lab Receipt 01/14/2023 08:42

**VOLATILE ORGANICS (cont.)**

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dichlorobenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
2-Butanone	ND	ND,P1,S 4	ug/kg	6.6	SW846 8260B	1	01/19/2023 14:51	TMP	B
2-Hexanone	ND	ND,P1,S 4	ug/kg	6.6	SW846 8260B	1	01/19/2023 14:51	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1,S 4	ug/kg	6.6	SW846 8260B	1	01/19/2023 14:51	TMP	B
Acetone	8.2	P1,S4	ug/kg	6.6	SW846 8260B	1	01/19/2023 14:51	TMP	B
Benzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Bromochloromethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Bromodichloromethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Bromoform	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Bromomethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Carbon Disulfide	8.9	P1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Carbon Tetrachloride	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Chlorobenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Chlorodibromomethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Chloroethane	ND	ND,P1,S 4	ug/kg	3.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Chloroform	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Chloromethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
cis-1,3-Dichloropropene	ND	ND,26,P 1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Cyclohexane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Dichlorodifluoromethane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Ethylbenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Freon 113	ND	ND,27,P 1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Isopropylbenzene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Methyl acetate	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Methyl cyclohexane	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Methyl t-Butyl Ether	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Methylene Chloride	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
mp-Xylene	ND	ND,P1,S 4	ug/kg	2.6	SW846 8260B	1	01/19/2023 14:51	TMP	B
o-Xylene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Styrene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Tetrachloroethene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Toluene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Total Xylenes	ND	ND,P1,S 4	ug/kg	3.9	SW846 8260B	1	01/19/2023 14:51	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1,S 4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B



## Results

Client Sample ID	SB-09-0-2	Collected	01/13/2023 09:30
Lab Sample ID	3283084003	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichloroethene	ND	ND,P1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Trichlorofluoromethane	ND	ND,P1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B
Vinyl Chloride	ND	ND,P1,S4	ug/kg	1.3	SW846 8260B	1	01/19/2023 14:51	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.8%	56 - 124	01/19/2023 14:51	
4-Bromofluorobenzene	460-00-4	119%	51 - 128	01/19/2023 14:51	
Dibromofluoromethane	1868-53-7	73.2%	62 - 123	01/19/2023 14:51	
Toluene-d8	2037-26-5	102%	59 - 131	01/19/2023 14:51	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1,S4	mg/kg	2.1	SW846 7196A	1	01/19/2023 11:40	AKH	E
Moisture	8.7	P1,S4	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	91.3	P1,S4	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D



## Results

Client Sample ID	SB-09-4-6	Collected	01/13/2023 09:45
Lab Sample ID	3283084004	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	9650	P1,S5	mg/kg	40.8	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Antimony, Total	1.3	P1,S5	mg/kg	1.0	SW846 6020A	5	01/20/2023 15:00	RMD	E1
Arsenic, Total	9.8	P1,S5	mg/kg	1.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Barium, Total	122	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Beryllium, Total	0.78	P1,S5	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Cadmium, Total	ND	ND,P1,S5	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Calcium, Total	2710	P1,S5	mg/kg	51.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Chromium, Total	15.9	P1,S5	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Cobalt, Total	9.7	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Copper, Total	24.2	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Iron, Total	32700	P1,S5	mg/kg	25.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Lead, Total	33.5	P1,S5	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Magnesium, Total	2000	P1,S5	mg/kg	51.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Manganese, Total	574	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Mercury, Total	0.25	P1,S5	mg/kg	0.048	SW846 7471B	1	01/19/2023 16:00	WDA	E
Nickel, Total	19.3	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Potassium, Total	1580	P1,S5	mg/kg	51.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Selenium, Total	ND	ND,14,P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Silver, Total	ND	ND,P1,S5	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Sodium, Total	57.5	P1,S5	mg/kg	51.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Thallium, Total	ND	ND,P1,S5	mg/kg	0.51	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Trivalent Chromium	15.9	P1,S5	mg/kg	2.2	Calculation	1	01/23/2023 11:52	CW	E
Vanadium, Total	23.2	P1,S5	mg/kg	1.0	SW846 6020A	5	01/19/2023 19:46	RMD	E1
Zinc, Total	53.3	P1,S5	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:46	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,1,2-Trichloroethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,1-Dichloroethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,1-Dichloroethene	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1,S5	ug/kg	2.7	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1,S5	ug/kg	2.7	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1,S5	ug/kg	2.7	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2-Dibromoethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2-Dichlorobenzene	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2-Dichloroethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,2-Dichloropropane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
1,3-Dichlorobenzene	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B



## Results

Client Sample ID	SB-09-4-6	Collected	01/13/2023 09:45
Lab Sample ID	3283084004	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dichlorobenzene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
2-Butanone	ND	ND,P1,S 5	ug/kg	5.3	SW846 8260B	1	01/19/2023 15:16	TMP	B
2-Hexanone	ND	ND,P1,S 5	ug/kg	5.3	SW846 8260B	1	01/19/2023 15:16	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1,S 5	ug/kg	5.3	SW846 8260B	1	01/19/2023 15:16	TMP	B
Acetone	ND	ND,P1,S 5	ug/kg	5.3	SW846 8260B	1	01/19/2023 15:16	TMP	B
Benzene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Bromochloromethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Bromodichloromethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Bromoform	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Bromomethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Carbon Disulfide	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Carbon Tetrachloride	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Chlorobenzene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Chlorodibromomethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Chloroethane	ND	ND,P1,S 5	ug/kg	2.7	SW846 8260B	1	01/19/2023 15:16	TMP	B
Chloroform	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Chloromethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
cis-1,3-Dichloropropene	ND	ND,26,P 1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Cyclohexane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Dichlorodifluoromethane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Ethylbenzene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Freon 113	ND	ND,27,P 1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Isopropylbenzene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Methyl acetate	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Methyl cyclohexane	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Methyl t-Butyl Ether	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Methylene Chloride	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
mp-Xylene	ND	ND,P1,S 5	ug/kg	2.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
o-Xylene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Styrene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Tetrachloroethene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Toluene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Total Xylenes	ND	ND,P1,S 5	ug/kg	3.2	SW846 8260B	1	01/19/2023 15:16	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1,S 5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B



## Results

Client Sample ID	SB-09-4-6	Collected	01/13/2023 09:45
Lab Sample ID	3283084004	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichloroethene	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Trichlorofluoromethane	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B
Vinyl Chloride	ND	ND,P1,S5	ug/kg	1.1	SW846 8260B	1	01/19/2023 15:16	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	84.7%	56 - 124	01/19/2023 15:16	
4-Bromofluorobenzene	460-00-4	103%	51 - 128	01/19/2023 15:16	
Dibromofluoromethane	1868-53-7	66.5%	62 - 123	01/19/2023 15:16	
Toluene-d8	2037-26-5	99.8%	59 - 131	01/19/2023 15:16	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1,S5	mg/kg	2.2	SW846 7196A	1	01/19/2023 11:40	AKH	E
Moisture	10.3	P1,S5	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	89.7	P1,S5	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D





## Results

Client Sample ID	SB-08-0-2	Collected	01/13/2023 10:30
Lab Sample ID	3283084005	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	9780	P1	mg/kg	39.3	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Antimony, Total	1.6	P1	mg/kg	0.98	SW846 6020A	5	01/20/2023 15:20	RMD	E1
Arsenic, Total	13.7	P1	mg/kg	1.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Barium, Total	148	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Beryllium, Total	0.95	P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Cadmium, Total	0.86	P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Calcium, Total	4100	P1	mg/kg	49.2	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Chromium, Total	29.9	P1	mg/kg	0.98	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Cobalt, Total	12.0	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Copper, Total	38.3	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Iron, Total	29900	P1	mg/kg	24.6	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Lead, Total	118	P1	mg/kg	0.98	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Magnesium, Total	1870	P1	mg/kg	49.2	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Manganese, Total	754	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Mercury, Total	0.17	P1	mg/kg	0.050	SW846 7471B	1	01/19/2023 16:01	WDA	E
Nickel, Total	23.6	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Potassium, Total	1040	P1	mg/kg	49.2	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Selenium, Total	ND	ND,14,P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Silver, Total	ND	ND,P1	mg/kg	0.98	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Sodium, Total	ND	ND,P1	mg/kg	49.2	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Thallium, Total	ND	ND,P1	mg/kg	0.49	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Trivalent Chromium	29.6	P1	mg/kg	2.3	Calculation	1	01/23/2023 11:53	CW	E
Vanadium, Total	21.7	P1	mg/kg	0.98	SW846 6020A	5	01/19/2023 19:48	RMD	E1
Zinc, Total	138	P1	mg/kg	2.5	SW846 6020A	5	01/19/2023 19:48	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
2-Butanone	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/19/2023 15:41	TMP	B
2-Hexanone	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/19/2023 15:41	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/19/2023 15:41	TMP	B
Acetone	ND	ND,P1	ug/kg	7.2	SW846 8260B	1	01/19/2023 15:41	TMP	B



## Results

Client Sample ID	SB-08-0-2	Collected	01/13/2023 10:30
Lab Sample ID	3283084005	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Bromochloromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Bromodichloromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Bromoform	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Bromomethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Carbon Disulfide	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Chlorobenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Chlorodibromomethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Chloroethane	ND	ND,P1	ug/kg	3.6	SW846 8260B	1	01/19/2023 15:41	TMP	B
Chloroform	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Chloromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
cis-1,3-Dichloropropene	ND	ND,26,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Cyclohexane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Ethylbenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Freon 113	ND	ND,27,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Isopropylbenzene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Methyl acetate	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Methyl cyclohexane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Methylene Chloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
mp-Xylene	ND	ND,P1	ug/kg	2.9	SW846 8260B	1	01/19/2023 15:41	TMP	B
o-Xylene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Styrene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Tetrachloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Toluene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Total Xylenes	ND	ND,P1	ug/kg	4.3	SW846 8260B	1	01/19/2023 15:41	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Trichloroethene	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B
Vinyl Chloride	ND	ND,P1	ug/kg	1.4	SW846 8260B	1	01/19/2023 15:41	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.2%	56 - 124	01/19/2023 15:41	
4-Bromofluorobenzene	460-00-4	85.1%	51 - 128	01/19/2023 15:41	
Dibromofluoromethane	1868-53-7	70.1%	62 - 123	01/19/2023 15:41	
Toluene-d8	2037-26-5	82.7%	59 - 131	01/19/2023 15:41	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-08-0-2	Collected	01/13/2023 10:30
Lab Sample ID	3283084005	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 11:40	AKH	E
Moisture	15.1	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	84.9	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D



## Results

Client Sample ID	SB-08-6-8	Collected	01/13/2023 10:35
Lab Sample ID	3283084006	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Total	6190	P1	mg/kg	42.4	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Antimony, Total	ND	ND,11,2 9,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Arsenic, Total	7.8	P1	mg/kg	1.6	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Barium, Total	77.5	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Beryllium, Total	0.54	P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Cadmium, Total	ND	ND,P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Calcium, Total	1100	P1	mg/kg	53.0	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Chromium, Total	10.5	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Cobalt, Total	7.9	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Copper, Total	10.8	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Iron, Total	24300	P1	mg/kg	26.5	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Lead, Total	11.2	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Magnesium, Total	1310	P1	mg/kg	53.0	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Manganese, Total	541	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Mercury, Total	1.3	P1	mg/kg	0.053	SW846 7471B	1	01/19/2023 16:14	WDA	E
Nickel, Total	14.4	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Potassium, Total	674	P1	mg/kg	53.0	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Selenium, Total	ND	ND,14,P 1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Silver, Total	ND	ND,P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Sodium, Total	ND	ND,P1	mg/kg	53.0	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Thallium, Total	ND	ND,P1	mg/kg	0.53	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Trivalent Chromium	10.5	P1	mg/kg	2.3	Calculation	1	01/23/2023 11:57	CW	E
Vanadium, Total	15.2	P1	mg/kg	1.1	SW846 6020A	5	01/19/2023 19:51	RMD	E1
Zinc, Total	50.0	P1	mg/kg	2.7	SW846 6020A	5	01/19/2023 19:51	RMD	E1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,1,2-Trichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,1-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,1-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2,3-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2,4-Trichlorobenzene	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2-Dibromoethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2-Dichloroethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,2-Dichloropropane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,3-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
1,4-Dichlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
2-Butanone	ND	ND,P1	ug/kg	6.5	SW846 8260B	1	01/18/2023 19:20	TMP	B
2-Hexanone	ND	ND,P1	ug/kg	6.5	SW846 8260B	1	01/18/2023 19:20	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/kg	6.5	SW846 8260B	1	01/18/2023 19:20	TMP	B
Acetone	ND	ND,P1	ug/kg	6.5	SW846 8260B	1	01/18/2023 19:20	TMP	B



## Results

Client Sample ID	SB-08-6-8	Collected	01/13/2023 10:35
Lab Sample ID	3283084006	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Bromochloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Bromodichloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Bromoform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Bromomethane	ND	ND,16,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Carbon Disulfide	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Carbon Tetrachloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Chlorobenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Chlorodibromomethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Chloroethane	ND	ND,P1	ug/kg	3.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Chloroform	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Chloromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
cis-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
cis-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Dichlorodifluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Ethylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Freon 113	ND	ND,17,18,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Isopropylbenzene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Methyl acetate	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Methyl cyclohexane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Methyl t-Butyl Ether	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Methylene Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
mp-Xylene	ND	ND,P1	ug/kg	2.6	SW846 8260B	1	01/18/2023 19:20	TMP	B
o-Xylene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Styrene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Tetrachloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Toluene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Total Xylenes	ND	ND,P1	ug/kg	3.9	SW846 8260B	1	01/18/2023 19:20	TMP	B
trans-1,2-Dichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
trans-1,3-Dichloropropene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Trichloroethene	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Trichlorofluoromethane	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B
Vinyl Chloride	ND	ND,P1	ug/kg	1.3	SW846 8260B	1	01/18/2023 19:20	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89%	56 - 124	01/18/2023 19:20	
4-Bromofluorobenzene	460-00-4	75.4%	51 - 128	01/18/2023 19:20	
Dibromofluoromethane	1868-53-7	67.6%	62 - 123	01/18/2023 19:20	
Toluene-d8	2037-26-5	79.1%	59 - 131	01/18/2023 19:20	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
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## Results

Client Sample ID	SB-08-6-8	Collected	01/13/2023 10:35
Lab Sample ID	3283084006	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Ctr
Hexavalent Chromium	ND	ND,P1	mg/kg	2.3	SW846 7196A	1	01/19/2023 11:40	AKH	E
Moisture	13.0	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D
Total Solids	87.0	P1	%	0.1	S2540G-11	1	01/18/2023 13:20	NXL	D



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3282987001	SB-03-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987002	SB-03-8-10	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987003	SB-02-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987004	SB-02-10-12	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987005	SB-04-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987006	SB-04-14-16	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987007	SB-05-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987008	SB-05-4-6	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987009	SB-06-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	



**Project** 2022FMA SCI Pittsburgh Phase I  
**Workorder** 3282987

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3282987010	SB-06-8-10	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987011	SB-07-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987012	SB-07-2-4	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987013	SB-01-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987014	SB-01-10-12	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987015	SB-11-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987016	SB-11-6-8	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987017	SB-12-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3282987018	SB-12-10-12	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	





**Project** 2022FMA SCI Pittsburgh Phase I  
**Workorder** 3282987

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3282987019	SB-12-10-12D	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084001	SB-10-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084002	SB-10-4-6	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084003	SB-09-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084004	SB-09-4-6	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084005	SB-08-0-2	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	
3283084006	SB-08-6-8	SW846 6020A	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8260B	SW846 5035A	
		Calculation	N/A	
		S2540G-11	N/A	
		SW846 7196A	SW846 3060A	



**QUALITY CONTROL SAMPLES**

**METALS**

QC Batch			
QC Batch	936329	Prep Method	SW846 3051A
Date	01/18/2023 11:10	Analysis Method	SW846 6020A
Tech.	JSE		

Associated Samples			
3282987001	3282987002	3282987003	3282987004
3282987005	3282987006	3282987007	3282987008
3282987009	3282987010	3282987011	3282987012
3282987013	3282987014	3282987015	3282987016
3282987017	3282987018	3282987019	

**Method Blank** 3612065 (MB) Created on 01/17/2023 12:11 For QC Batch 936329

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
Aluminum, Total	7429-90-5	BLK	ND	mg/kg	40.0	ND
Antimony, Total	7440-36-0	BLK	ND	mg/kg	1.0	ND
Arsenic, Total	7440-38-2	BLK	ND	mg/kg	1.5	ND
Barium, Total	7440-39-3	BLK	ND	mg/kg	2.5	ND
Beryllium, Total	7440-41-7	BLK	ND	mg/kg	0.50	ND
Cadmium, Total	7440-43-9	BLK	ND	mg/kg	0.50	ND
Calcium, Total	7440-70-2	BLK	ND	mg/kg	50.0	ND
Chromium, Total	7440-47-3	BLK	ND	mg/kg	1.0	ND
Cobalt, Total	7440-48-4	BLK	ND	mg/kg	2.5	ND
Copper, Total	7440-50-8	BLK	ND	mg/kg	2.5	ND
Iron, Total	7439-89-6	BLK	ND	mg/kg	25.0	ND
Lead, Total	7439-92-1	BLK	ND	mg/kg	1.0	ND
Magnesium, Total	7439-95-4	BLK	ND	mg/kg	50.0	ND
Manganese, Total	7439-96-5	BLK	ND	mg/kg	2.5	ND
Nickel, Total	7440-02-0	BLK	ND	mg/kg	2.5	ND
Potassium, Total	7440-09-7	BLK	ND	mg/kg	50.0	ND
Selenium, Total	7782-49-2	BLK	ND	mg/kg	2.5	ND
Silver, Total	7440-22-4	BLK	ND	mg/kg	1.0	ND
Sodium, Total	7440-23-5	BLK	ND	mg/kg	50.0	ND
Thallium, Total	7440-28-0	BLK	ND	mg/kg	0.50	ND
Vanadium, Total	7440-62-2	BLK	ND	mg/kg	1.0	ND
Zinc, Total	7440-66-6	BLK	ND	mg/kg	2.5	ND

**Lab Control Standard** 3612066 (LCS2) Created on 01/17/2023 12:11 For QC Batch 936329

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Aluminum, Total	7429-90-5	LCS	208		200	104	80 - 120		
Antimony, Total	7440-36-0	LCS	23.50		20	118	80 - 120		
Arsenic, Total	7440-38-2	LCS	21.70		20	109	80 - 120		
Barium, Total	7440-39-3	LCS	204		200	102	80 - 120		
Beryllium, Total	7440-41-7	LCS	21		20	105	80 - 120		
Cadmium, Total	7440-43-9	LCS	20.20		20	101	80 - 120		
Calcium, Total	7440-70-2	LCS	214		200	107	80 - 120		
Chromium, Total	7440-47-3	LCS	21.20		20	106	80 - 120		



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Cobalt, Total	7440-48-4	LCS	20.50		20	102	80 - 120		
Copper, Total	7440-50-8	LCS	21		20	105	80 - 120		
Iron, Total	7439-89-6	LCS	230		200	115	80 - 120		
Lead, Total	7439-92-1	LCS	21		20	105	80 - 120		
Magnesium, Total	7439-95-4	LCS	211		200	106	80 - 120		
Manganese, Total	7439-96-5	LCS	21.20		20	106	80 - 120		
Nickel, Total	7440-02-0	LCS	21.10		20	106	80 - 120		
Potassium, Total	7440-09-7	LCS	209		200	105	80 - 120		
Selenium, Total	7782-49-2	LCS	21.90		20	109	80 - 120		
Silver, Total	7440-22-4	LCS	10.30		10	103	80 - 120		
Sodium, Total	7440-23-5	LCS	214		200	107	80 - 120		
Thallium, Total	7440-28-0	LCS	21		20	105	80 - 120		
Vanadium, Total	7440-62-2	LCS	21.10		20	106	80 - 120		
Zinc, Total	7440-66-6	LCS	207		200	104	80 - 120		

**Matrix Spike** 3612067 (MS2) 3282987001 For QC Batch 936329

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612068 (MSD2) 3282987001 For QC Batch 936329

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Aluminum, Total	7429-90-5	MS	11200	10300	181	NC	75 - 125		
Aluminum, Total	7429-90-5	MSD	10100	10300	195	NC	75 - 125	RPD <u>10.20</u> (Max-20)	
Antimony, Total	7440-36-0	MS	21	0.66	18.10	112	75 - 125		
Antimony, Total	7440-36-0	MSD	22.60	0.66	19.50	113	75 - 125	RPD <u>7.57</u> (Max-20)	
Arsenic, Total	7440-38-2	MS	23.90	11.10	18.10	70.5*	75 - 125		
Arsenic, Total	7440-38-2	MSD	28	11.10	19.50	86.6	75 - 125	RPD <u>15.90</u> (Max-20)	
Barium, Total	7440-39-3	MS	340	122	181	120	75 - 125		
Barium, Total	7440-39-3	MSD	336	122	195	110	75 - 125	RPD <u>1.14</u> (Max-20)	
Beryllium, Total	7440-41-7	MS	19.60	1.20	18.10	102	75 - 125		
Beryllium, Total	7440-41-7	MSD	20.70	1.20	19.50	100	75 - 125	RPD <u>5.58</u> (Max-20)	
Cadmium, Total	7440-43-9	MS	18.40	0.27	18.10	100	75 - 125		
Cadmium, Total	7440-43-9	MSD	19.90	0.27	19.50	101	75 - 125	RPD <u>7.75</u> (Max-20)	
Calcium, Total	7440-70-2	MS	57400	33900	181	NC	75 - 125		
Calcium, Total	7440-70-2	MSD	63900	33900	195	NC	75 - 125	RPD <u>10.80</u> (Max-20)	
Chromium, Total	7440-47-3	MS	27.20	12.70	18.10	80.2	75 - 125		
Chromium, Total	7440-47-3	MSD	31.80	12.70	19.50	98	75 - 125	RPD <u>15.60</u> (Max-20)	
Cobalt, Total	7440-48-4	MS	22	7.30	18.10	81.2	75 - 125		
Cobalt, Total	7440-48-4	MSD	24	7.30	19.50	85.6	75 - 125	RPD <u>8.75</u> (Max-20)	
Copper, Total	7440-50-8	MS	31.10	18.70	18.10	68.3*	75 - 125		
Copper, Total	7440-50-8	MSD	39	18.70	19.50	104	75 - 125	RPD <u>22.80*</u> (Max-20)	
Iron, Total	7439-89-6	MS	17800	24400	181	NC	75 - 125		
Iron, Total	7439-89-6	MSD	21800	24400	195	NC	75 - 125	RPD <u>20.30*</u> (Max-20)	



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Lead, Total	7439-92-1	MS	103	87.30	18.10	NC	75 - 125		
Lead, Total	7439-92-1	MSD	102	87.30	19.50	NC	75 - 125	RPD <u>0.82</u> (Max-20)	
Magnesium, Total	7439-95-4	MS	6380	4450	181	NC	75 - 125		
Magnesium, Total	7439-95-4	MSD	9290	4450	195	NC	75 - 125	RPD <u>37.10*</u> (Max-20)	
Manganese, Total	7439-96-5	MS	848	673	18.10	NC	75 - 125		
Manganese, Total	7439-96-5	MSD	810	673	19.50	NC	75 - 125	RPD <u>4.55</u> (Max-20)	
Nickel, Total	7440-02-0	MS	27.60	14.80	18.10	71.1*	75 - 125		
Nickel, Total	7440-02-0	MSD	34.30	14.80	19.50	100	75 - 125	RPD <u>21.40*</u> (Max-20)	
Potassium, Total	7440-09-7	MS	1200	1170	181	NC	75 - 125		
Potassium, Total	7440-09-7	MSD	1280	1170	195	NC	75 - 125	RPD <u>5.86</u> (Max-20)	
Selenium, Total	7782-49-2	MS	18.90	0.91	18.10	99.7	75 - 125		
Selenium, Total	7782-49-2	MSD	20.30	0.91	19.50	99.7	75 - 125	RPD <u>7.16</u> (Max-20)	
Silver, Total	7440-22-4	MS	9	0.0460	9	99.2	75 - 125		
Silver, Total	7440-22-4	MSD	9.90	0.0460	9.70	101	75 - 125	RPD <u>9.25</u> (Max-20)	
Sodium, Total	7440-23-5	MS	451	163	181	159*	75 - 125		
Sodium, Total	7440-23-5	MSD	420	163	195	132*	75 - 125	RPD <u>7.21</u> (Max-20)	
Thallium, Total	7440-28-0	MS	18.30	0.0370	18.10	101	75 - 125		
Thallium, Total	7440-28-0	MSD	19.90	0.0370	19.50	102	75 - 125	RPD <u>8.53</u> (Max-20)	
Vanadium, Total	7440-62-2	MS	29.60	16.80	18.10	70.7*	75 - 125		
Vanadium, Total	7440-62-2	MSD	33.60	16.80	19.50	86.6	75 - 125	RPD <u>12.90</u> (Max-20)	
Zinc, Total	7440-66-6	MS	271	75.90	181	108	75 - 125		
Zinc, Total	7440-66-6	MSD	256	75.90	195	92.6	75 - 125	RPD <u>5.66</u> (Max-20)	

**QC Batch**

**Associated Samples**

<u>QC Batch</u>	936330	<u>Prep Method</u>	SW846 3051A
<u>Date</u>	01/18/2023 11:10	<u>Analysis Method</u>	SW846 6020A
<u>Tech.</u>	JSE		

3283084001	3283084002	3283084003	3283084004
3283084005	3283084006		

**Matrix Spike** 3612073 (MS2) 3282717001 (non-Project Sample) For QC Batch 936330

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612074 (MSD2) 3282717001 (non-Project Sample) For QC Batch 936330

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Arsenic, Total	7440-38-2	MS	20.20	1.30	16.80	112	75 - 125		
Arsenic, Total	7440-38-2	MSD	19.40	1.30	17.80	102	75 - 125	RPD <u>4.08</u> (Max-20)	
Barium, Total	7440-39-3	MS	228	43	168	110	75 - 125		
Barium, Total	7440-39-3	MSD	257	43	178	120	75 - 125	RPD <u>11.70</u> (Max-20)	
Cadmium, Total	7440-43-9	MS	16.90	0.0660	16.80	100	75 - 125		
Cadmium, Total	7440-43-9	MSD	17.80	0.0660	17.80	99.7	75 - 125	RPD <u>5.41</u> (Max-20)	
Chromium, Total	7440-47-3	MS	22.70	4.70	16.80	107	75 - 125		



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Chromium, Total	7440-47-3	MSD	22.20	4.70	17.80	98.2	75 - 125	RPD <u>2.09</u> (Max-20)	
Lead, Total	7439-92-1	MS	29.50	10.70	16.80	112	75 - 125		
Lead, Total	7439-92-1	MSD	26.20	10.70	17.80	86.8	75 - 125	RPD <u>11.90</u> (Max-20)	
Selenium, Total	7782-49-2	MS	18	0.35	16.80	105	75 - 125		
Selenium, Total	7782-49-2	MSD	18.80	0.35	17.80	104	75 - 125	RPD <u>4.21</u> (Max-20)	
Silver, Total	7440-22-4	MS	8.50	0.0240	8.40	100	75 - 125		
Silver, Total	7440-22-4	MSD	9.10	0.0240	8.90	102	75 - 125	RPD <u>7.45</u> (Max-20)	

**Method Blank** 3612070 (MB) Created on 01/17/2023 12:14 For QC Batch 936330

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Aluminum, Total	7429-90-5	BLK	ND	mg/kg	40.0	ND
Antimony, Total	7440-36-0	BLK	ND	mg/kg	1.0	ND
Arsenic, Total	7440-38-2	BLK	ND	mg/kg	1.5	ND
Barium, Total	7440-39-3	BLK	ND	mg/kg	2.5	ND
Beryllium, Total	7440-41-7	BLK	ND	mg/kg	0.50	ND
Cadmium, Total	7440-43-9	BLK	ND	mg/kg	0.50	ND
Calcium, Total	7440-70-2	BLK	ND	mg/kg	50.0	ND
Chromium, Total	7440-47-3	BLK	ND	mg/kg	1.0	ND
Cobalt, Total	7440-48-4	BLK	ND	mg/kg	2.5	ND
Copper, Total	7440-50-8	BLK	ND	mg/kg	2.5	ND
Iron, Total	7439-89-6	BLK	ND	mg/kg	25.0	ND
Lead, Total	7439-92-1	BLK	ND	mg/kg	1.0	ND
Magnesium, Total	7439-95-4	BLK	ND	mg/kg	50.0	ND
Manganese, Total	7439-96-5	BLK	ND	mg/kg	2.5	ND
Nickel, Total	7440-02-0	BLK	ND	mg/kg	2.5	ND
Potassium, Total	7440-09-7	BLK	ND	mg/kg	50.0	ND
Selenium, Total	7782-49-2	BLK	ND	mg/kg	2.5	ND
Silver, Total	7440-22-4	BLK	ND	mg/kg	1.0	ND
Sodium, Total	7440-23-5	BLK	ND	mg/kg	50.0	ND
Thallium, Total	7440-28-0	BLK	ND	mg/kg	0.50	ND
Vanadium, Total	7440-62-2	BLK	ND	mg/kg	1.0	ND
Zinc, Total	7440-66-6	BLK	ND	mg/kg	2.5	ND

**Lab Control Standard** 3612072 (LCS2) Created on 01/17/2023 12:14 For QC Batch 936330

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Aluminum, Total	7429-90-5	LCS	198		200	99	80 - 120		
Antimony, Total	7440-36-0	LCS	23		20	115	80 - 120		
Arsenic, Total	7440-38-2	LCS	21.20		20	106	80 - 120		
Barium, Total	7440-39-3	LCS	196		200	98.1	80 - 120		
Beryllium, Total	7440-41-7	LCS	19.60		20	97.9	80 - 120		



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Cadmium, Total	7440-43-9	LCS	19.70		20	98.6	80 - 120		
Calcium, Total	7440-70-2	LCS	188		200	93.8	80 - 120		
Chromium, Total	7440-47-3	LCS	19.70		20	98.7	80 - 120		
Cobalt, Total	7440-48-4	LCS	19.20		20	95.8	80 - 120		
Copper, Total	7440-50-8	LCS	19.60		20	98	80 - 120		
Iron, Total	7439-89-6	LCS	215		200	107	80 - 120		
Lead, Total	7439-92-1	LCS	19.90		20	99.5	80 - 120		
Magnesium, Total	7439-95-4	LCS	203		200	102	80 - 120		
Manganese, Total	7439-96-5	LCS	19.80		20	98.8	80 - 120		
Nickel, Total	7440-02-0	LCS	19.60		20	97.8	80 - 120		
Potassium, Total	7440-09-7	LCS	185		200	92.4	80 - 120		
Selenium, Total	7782-49-2	LCS	20.90		20	105	80 - 120		
Silver, Total	7440-22-4	LCS	10.10		10	101	80 - 120		
Sodium, Total	7440-23-5	LCS	192		200	95.8	80 - 120		
Thallium, Total	7440-28-0	LCS	19.80		20	99.1	80 - 120		
Vanadium, Total	7440-62-2	LCS	19.90		20	99.5	80 - 120		
Zinc, Total	7440-66-6	LCS	191		200	95.5	80 - 120		

**QC Batch**

<u>QC Batch</u>	936955	<u>Prep Method</u>	SW846 7471B
<u>Date</u>	01/19/2023 10:45	<u>Analysis Method</u>	SW846 7471B
<u>Tech.</u>	WDA		

**Associated Samples**

3282987001	3282987002	3282987003	3282987004
3282987005	3282987006	3282987007	3282987008
3282987009	3282987010	3282987011	3282987012
3282987013			

**Matrix Spike** 3612962 (MS) 3278089001 (non-Project Sample) For QC Batch 936955

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612963 (MSD) 3278089001 (non-Project Sample) For QC Batch 936955

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	0.26	0.000540	0.24	107	80 - 120		
Mercury, Total	7439-97-6	MSD	0.29	0.000540	0.25	116	80 - 120	RPD <u>9.85</u> (Max-20)	

**Method Blank** 3612960 (MB) Created on 01/19/2023 06:26 For QC Batch 936955

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Mercury, Total	7439-97-6	BLK	ND	mg/kg	0.050	ND



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

**Lab Control Standard** 3612961 (LCS) Created on 01/19/2023 06:26 For QC Batch 936955

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	LCS	0.48		0.40	120	80 - 120		

**Matrix Spike** 3612964 (MS) 3282987010 For QC Batch 936955

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612965 (MSD) 3282987010 For QC Batch 936955

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	1.10	0.0210	0.96	113	80 - 120		
Mercury, Total	7439-97-6	MSD	1.10	0.0210	0.91	113	80 - 120	RPD <u>4.91</u> (Max-20)	

**QC Batch**

<u>QC Batch</u>	936956	<u>Prep Method</u>	SW846 7471B
<u>Date</u>	01/19/2023 10:45	<u>Analysis Method</u>	SW846 7471B
<u>Tech.</u>	WDA		

**Associated Samples**

3282987014	3282987015	3282987016	3282987017
3282987018	3282987019	3283084001	3283084002
3283084003	3283084004	3283084005	3283084006

**Method Blank** 3612966 (MB) Created on 01/19/2023 06:29 For QC Batch 936956

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
Mercury, Total	7439-97-6	BLK	ND	mg/kg	0.050	ND

**Lab Control Standard** 3612967 (LCS) Created on 01/19/2023 06:29 For QC Batch 936956

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	LCS	0.47		0.40	118	80 - 120		

**Matrix Spike** 3612968 (MS) 3282987014 For QC Batch 936956

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612969 (MSD) 3282987014 For QC Batch 936956



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	0.98	0.0190	0.94	102	80 - 120		
Mercury, Total	7439-97-6	MSD	0.97	0.0190	0.91	104	80 - 120	RPD <u>1.07</u> (Max-20)	

**Matrix Spike** 3612970 (MS) 3283084002 For QC Batch 936956

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612971 (MSD) 3283084002 For QC Batch 936956

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	1.20	0.0240	0.98	115	80 - 120		
Mercury, Total	7439-97-6	MSD	1	0.0240	0.98	103	80 - 120	RPD <u>10.80</u> (Max-20)	





**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS**

QC Batch			
QC Batch	936310	Prep Method	SW846 5035A
Date	01/17/2023 10:22	Analysis Method	SW846 8260B
Tech.	JTH		

Associated Samples			
3282987001	3282987003	3282987004	3282987006
3282987007	3282987008	3282987009	3282987010
3282987011	3282987012	3282987013	3282987014

**Method Blank** 3611991 (MB) Created on 01/17/2023 10:21 For QC Batch 936310

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND	ug/kg	2.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND	ug/kg	2.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND	ug/kg	2.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND	ug/kg	2.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND	ug/kg	2.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND	ug/kg	5.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND	ug/kg	5.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND	ug/kg	5.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND	ug/kg	2.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND	ug/kg	2.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND	ug/kg	2.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND	ug/kg	2.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND	ug/kg	2.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND	ug/kg	2.0	ND
2-Butanone	78-93-3	BLK	ND	ug/kg	10.0	ND
2-Hexanone	591-78-6	BLK	ND	ug/kg	10.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND	ug/kg	10.0	ND
Acetone	67-64-1	BLK	ND	ug/kg	10.0	ND
Benzene	71-43-2	BLK	ND	ug/kg	2.0	ND
Bromochloromethane	74-97-5	BLK	ND	ug/kg	2.0	ND
Bromodichloromethane	75-27-4	BLK	ND	ug/kg	2.0	ND
Bromoform	75-25-2	BLK	ND	ug/kg	2.0	ND
Bromomethane	74-83-9	BLK	ND	ug/kg	2.0	ND
Carbon Disulfide	75-15-0	BLK	ND	ug/kg	2.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND	ug/kg	2.0	ND
Chlorobenzene	108-90-7	BLK	ND	ug/kg	2.0	ND
Chlorodibromomethane	124-48-1	BLK	ND	ug/kg	2.0	ND
Chloroethane	75-00-3	BLK	ND	ug/kg	5.0	ND
Chloroform	67-66-3	BLK	ND	ug/kg	2.0	ND
Chloromethane	74-87-3	BLK	ND	ug/kg	2.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND	ug/kg	2.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND	ug/kg	2.0	ND
Cyclohexane	110-82-7	BLK	ND	ug/kg	2.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND	ug/kg	2.0	ND
Ethylbenzene	100-41-4	BLK	ND	ug/kg	2.0	ND
Freon 113	76-13-1	BLK	ND	ug/kg	2.0	ND
Isopropylbenzene	98-82-8	BLK	ND	ug/kg	2.0	ND
Methyl acetate	79-20-9	BLK	ND	ug/kg	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND	ug/kg	2.0	ND



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/kg	2.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/kg	2.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/kg	4.0	ND
o-Xylene	95-47-6	BLK	ND	ug/kg	2.0	ND
Styrene	100-42-5	BLK	ND	ug/kg	2.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/kg	2.0	ND
Toluene	108-88-3	BLK	ND	ug/kg	2.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/kg	6.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/kg	2.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/kg	2.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/kg	2.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/kg	2.0	ND
Vinyl Chloride	75-01-4	BLK	ND	ug/kg	2.0	ND

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	25.80	30	86.1	56 - 124	
4-Bromofluorobenzene	460-00-4	BLK	23.40	30	78	51 - 128	
Dibromofluoromethane	1868-53-7	BLK	19.50	30	65.1	62 - 123	
Toluene-d8	2037-26-5	BLK	24.20	30	80.5	59 - 131	

<b>Lab Control Standard</b>	3611992 (LCS)	Created on 01/17/2023 10:21	For QC Batch 936310
<b>Lab Control Std Duplicate</b>	3611993 (LCSD)	Created on 01/17/2023 10:21	For QC Batch 936310

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	19.50		20	97.4	68 - 131		
1,1,1-Trichloroethane	71-55-6	LCSD	21		20	105	68 - 131	RPD 7.42 (Max-40)	
1,1,2,2-Tetrachloroethane	79-34-5	LCS	23.70		20	118	72 - 134		
1,1,2,2-Tetrachloroethane	79-34-5	LCSD	25.10		20	126	72 - 134	RPD 5.81 (Max-40)	
1,1,2-Trichloroethane	79-00-5	LCS	22		20	110	79 - 123		
1,1,2-Trichloroethane	79-00-5	LCSD	22.90		20	114	79 - 123	RPD 3.74 (Max-40)	
1,1-Dichloroethane	75-34-3	LCS	23.10		20	116	74 - 131		
1,1-Dichloroethane	75-34-3	LCSD	25		20	125	74 - 131	RPD 7.63 (Max-40)	
1,1-Dichloroethene	75-35-4	LCS	20.20		20	101	59 - 139		
1,1-Dichloroethene	75-35-4	LCSD	21.80		20	109	59 - 139	RPD 7.63 (Max-40)	
1,2,3-Trichlorobenzene	87-61-6	LCS	18.40		20	92.1	68 - 129		
1,2,3-Trichlorobenzene	87-61-6	LCSD	21.20		20	106	68 - 129	RPD 14.20 (Max-40)	
1,2,4-Trichlorobenzene	120-82-1	LCS	14.20		20	70.8	63 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCSD	17.80		20	88.8	63 - 132	RPD 22.70 (Max-40)	
1,2-Dibromo-3-chloropropane	96-12-8	LCS	16.90		20	84.6	52 - 151		
1,2-Dibromo-3-chloropropane	96-12-8	LCSD	19		20	95.2	52 - 151	RPD 11.80 (Max-40)	
1,2-Dibromoethane	106-93-4	LCS	18		20	90.2	76 - 127		
1,2-Dibromoethane	106-93-4	LCSD	19.30		20	96.7	76 - 127	RPD 6.96 (Max-40)	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2-Dichlorobenzene	95-50-1	LCS	16.40		20	82.2	75 - 126		
1,2-Dichlorobenzene	95-50-1	LCS	18.70		20	93.5	75 - 126	RPD	12.90 (Max-40)
1,2-Dichloroethane	107-06-2	LCS	23.30		20	117	69 - 132		
1,2-Dichloroethane	107-06-2	LCS	24.50		20	122	69 - 132	RPD	4.90 (Max-40)
1,2-Dichloropropane	78-87-5	LCS	23.20		20	116	78 - 131		
1,2-Dichloropropane	78-87-5	LCS	24.70		20	124	78 - 131	RPD	6.19 (Max-40)
1,3-Dichlorobenzene	541-73-1	LCS	18.90		20	94.7	72 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	21.50		20	108	72 - 127	RPD	12.70 (Max-40)
1,4-Dichlorobenzene	106-46-7	LCS	18.10		20	90.5	72 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	20.70		20	103	72 - 126	RPD	13.30 (Max-40)
2-Butanone	78-93-3	LCS	121		100	121	64 - 148		
2-Butanone	78-93-3	LCS	129		100	129	64 - 148	RPD	5.73 (Max-40)
2-Hexanone	591-78-6	LCS	118		100	118	62 - 147		
2-Hexanone	591-78-6	LCS	125		100	125	62 - 147	RPD	5.53 (Max-40)
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	103		100	103	64 - 143		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	109		100	109	64 - 143	RPD	5.97 (Max-40)
Acetone	67-64-1	LCS	126		100	126	58 - 146		
Acetone	67-64-1	LCS	143		100	143	58 - 146	RPD	12.10 (Max-40)
Benzene	71-43-2	LCS	23		20	115	75 - 132		
Benzene	71-43-2	LCS	24.70		20	123	75 - 132	RPD	6.77 (Max-40)
Bromochloromethane	74-97-5	LCS	18.70		20	93.4	71 - 120		
Bromochloromethane	74-97-5	LCS	20.10		20	101	71 - 120	RPD	7.40 (Max-40)
Bromodichloromethane	75-27-4	LCS	17.10		20	85.3	74 - 127		
Bromodichloromethane	75-27-4	LCS	18.30		20	91.5	74 - 127	RPD	6.93 (Max-40)
Bromoform	75-25-2	LCS	15.30		20	76.3	68 - 131		
Bromoform	75-25-2	LCS	16.50		20	82.5	68 - 131	RPD	7.82 (Max-40)
Bromomethane	74-83-9	LCS	27.10		20	135	43 - 148		
Bromomethane	74-83-9	LCS	27.50		20	138	43 - 148	RPD	1.63 (Max-40)
Carbon Disulfide	75-15-0	LCS	17		20	85.2	47 - 144		
Carbon Disulfide	75-15-0	LCS	18.40		20	91.8	47 - 144	RPD	7.38 (Max-40)
Carbon Tetrachloride	56-23-5	LCS	20.30		20	102	64 - 136		
Carbon Tetrachloride	56-23-5	LCS	22.40		20	112	64 - 136	RPD	9.78 (Max-40)
Chlorobenzene	108-90-7	LCS	18.90		20	94.3	76 - 125		
Chlorobenzene	108-90-7	LCS	20.30		20	102	76 - 125	RPD	7.41 (Max-40)
Chlorodibromomethane	124-48-1	LCS	16		20	80	75 - 124		
Chlorodibromomethane	124-48-1	LCS	17.30		20	86.4	75 - 124	RPD	7.73 (Max-40)
Chloroethane	75-00-3	LCS	14.40		20	72.1	1 - 141		
Chloroethane	75-00-3	LCS	12.40		20	62	1 - 141	RPD	15.10 (Max-40)
Chloroform	67-66-3	LCS	21.80		20	109	73 - 126		
Chloroform	67-66-3	LCS	22.80		20	114	73 - 126	RPD	4.59 (Max-40)
Chloromethane	74-87-3	LCS	27.90		20	140*	44 - 139		
Chloromethane	74-87-3	LCS	29		20	145*	44 - 139	RPD	3.93 (Max-40)
cis-1,2-Dichloroethene	156-59-2	LCS	23		20	115	75 - 128		
cis-1,2-Dichloroethene	156-59-2	LCS	24.30		20	122	75 - 128	RPD	5.56 (Max-40)
cis-1,3-Dichloropropene	10061-01-5	LCS	11.10		20	55.4*	76 - 123		
cis-1,3-Dichloropropene	10061-01-5	LCS	12.10		20	60.6*	76 - 123	RPD	8.96 (Max-40)
Cyclohexane	110-82-7	LCS	22.20		20	111	62 - 143		
Cyclohexane	110-82-7	LCS	25.40		20	127	62 - 143	RPD	13.60 (Max-40)
Dichlorodifluoromethane	75-71-8	LCS	23		20	115	16 - 152		



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Dichlorodifluoromethane	75-71-8	LCS	26.80		20	134	16 - 152	RPD <u>15.40</u> (Max-40)	
Ethylbenzene	100-41-4	LCS	19.90		20	99.7	73 - 133		
Ethylbenzene	100-41-4	LCS	22.10		20	111	73 - 133	RPD <u>10.50</u> (Max-40)	
Freon 113	76-13-1	LCS	20.80		20	104	40 - 109		
Freon 113	76-13-1	LCS	26.40		20	132*	40 - 109	RPD <u>23.80</u> (Max-40)	
Isopropylbenzene	98-82-8	LCS	19.80		20	99.2	71 - 137		
Isopropylbenzene	98-82-8	LCS	22.50		20	113	71 - 137	RPD <u>12.70</u> (Max-40)	
Methyl acetate	79-20-9	LCS	25.60		20	128	70 - 130		
Methyl acetate	79-20-9	LCS	28.50		20	143*	70 - 130	RPD <u>11</u> (Max-40)	
Methyl cyclohexane	108-87-2	LCS	15.30		20	76.6	70 - 130		
Methyl cyclohexane	108-87-2	LCS	20.20		20	101	70 - 130	RPD <u>27.30</u> (Max-40)	
Methyl t-Butyl Ether	1634-04-4	LCS	22.40		20	112	70 - 118		
Methyl t-Butyl Ether	1634-04-4	LCS	26.20		20	131*	70 - 118	RPD <u>15.40</u> (Max-40)	
Methylene Chloride	75-09-2	LCS	20.90		20	105	68 - 133		
Methylene Chloride	75-09-2	LCS	23.30		20	116	68 - 133	RPD <u>10.80</u> (Max-40)	
mp-Xylene	108383/106423	LCS	33.30		40	83.3	72 - 130		
mp-Xylene	108383/106423	LCS	36.90		40	92.1	72 - 130	RPD <u>10.10</u> (Max-40)	
o-Xylene	95-47-6	LCS	15.70		20	78.7	75 - 129		
o-Xylene	95-47-6	LCS	17.40		20	86.9	75 - 129	RPD <u>9.88</u> (Max-40)	
Styrene	100-42-5	LCS	18.10		20	90.7	77 - 130		
Styrene	100-42-5	LCS	19.90		20	99.7	77 - 130	RPD <u>9.48</u> (Max-40)	
Tetrachloroethene	127-18-4	LCS	19.40		20	97.2	58 - 137		
Tetrachloroethene	127-18-4	LCS	22.70		20	113	58 - 137	RPD <u>15.30</u> (Max-40)	
Toluene	108-88-3	LCS	18.30		20	91.5	73 - 129		
Toluene	108-88-3	LCS	19.60		20	97.9	73 - 129	RPD <u>6.75</u> (Max-40)	
Total Xylenes	1330-20-7	LCS	49		60	81.7	73 - 130		
Total Xylenes	1330-20-7	LCS	54.20		60	90.4	73 - 130	RPD <u>10.10</u> (Max-40)	
trans-1,2-Dichloroethene	156-60-5	LCS	20		20	99.9	66 - 133		
trans-1,2-Dichloroethene	156-60-5	LCS	23		20	115	66 - 133	RPD <u>14.10</u> (Max-40)	
trans-1,3-Dichloropropene	10061-02-6	LCS	12.20		20	61.1*	77 - 123		
trans-1,3-Dichloropropene	10061-02-6	LCS	13.10		20	65.6*	77 - 123	RPD <u>7.19</u> (Max-40)	
Trichloroethene	79-01-6	LCS	19.90		20	99.6	72 - 129		
Trichloroethene	79-01-6	LCS	22		20	110	72 - 129	RPD <u>10.10</u> (Max-40)	
Trichlorofluoromethane	75-69-4	LCS	24.60		20	123	40 - 130		
Trichlorofluoromethane	75-69-4	LCS	26.10		20	130	40 - 130	RPD <u>6.01</u> (Max-40)	
Vinyl Chloride	75-01-4	LCS	26.10		20	130	53 - 141		
Vinyl Chloride	75-01-4	LCS	27.20		20	136	53 - 141	RPD <u>4.18</u> (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	26.20	30	87.3	56 - 124	
1,2-Dichloroethane-d4	17060-07-0	LCS	27.20	30	90.7	56 - 124	
4-Bromofluorobenzene	460-00-4	LCS	23.80	30	79.4	51 - 128	
4-Bromofluorobenzene	460-00-4	LCS	24.90	30	82.9	51 - 128	
Dibromofluoromethane	1868-53-7	LCS	20.60	30	68.7	62 - 123	
Dibromofluoromethane	1868-53-7	LCS	21.60	30	72	62 - 123	
Toluene-d8	2037-26-5	LCS	23.10	30	77	59 - 131	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*SURROGATES*

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
Toluene-d8	2037-26-5	LCS	23.90	30	79.7	59 - 131	

**Matrix Spike** 3612249 (MS) 3282987004 For QC Batch 936310

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

*RESULTS*

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	MS	8.60	0	9.70	88.8	68 - 131		
1,1,2,2-Tetrachloroethane	79-34-5	MS	11	0	9.70	114	72 - 134		
1,1,2-Trichloroethane	79-00-5	MS	10.10	0	9.70	105	79 - 123		
1,1-Dichloroethane	75-34-3	MS	10.30	0	9.70	106	74 - 131		
1,1-Dichloroethene	75-35-4	MS	8.40	0	9.70	86.9	59 - 139		
1,2,3-Trichlorobenzene	87-61-6	MS	6.50	0	9.70	67*	68 - 129		
1,2,4-Trichlorobenzene	120-82-1	MS	6.70	0	9.70	69.1	63 - 132		
1,2-Dibromo-3-chloropropane	96-12-8	MS	7.10	0	9.70	73.2	52 - 151		
1,2-Dibromoethane	106-93-4	MS	8	0	9.70	82.9	76 - 127		
1,2-Dichlorobenzene	95-50-1	MS	7.80	0	9.70	81	75 - 126		
1,2-Dichloroethane	107-06-2	MS	10	0	9.70	103	69 - 132		
1,2-Dichloropropane	78-87-5	MS	10.60	0	9.70	109	78 - 131		
1,3-Dichlorobenzene	541-73-1	MS	9.50	0	9.70	98.5	72 - 127		
1,4-Dichlorobenzene	106-46-7	MS	9.20	0	9.70	94.7	72 - 126		
2-Butanone	78-93-3	MS	51.70	0	48.40	107	64 - 148		
2-Hexanone	591-78-6	MS	51.70	0	48.40	107	62 - 147		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	44.60	0	48.40	92.2	64 - 143		
Acetone	67-64-1	MS	61.30	2.80	48.40	121	58 - 146		
Benzene	71-43-2	MS	10.30	0	9.70	107	75 - 132		
Bromochloromethane	74-97-5	MS	8.60	0	9.70	89.1	71 - 120		
Bromodichloromethane	75-27-4	MS	7.50	0	9.70	77.3	74 - 127		
Bromoform	75-25-2	MS	6.50	0	9.70	66.9*	68 - 131		
Bromomethane	74-83-9	MS	15.30	0	9.70	158*	43 - 148		
Carbon Disulfide	75-15-0	MS	7.50	0	9.70	77.6	47 - 144		
Carbon Tetrachloride	56-23-5	MS	9.30	0	9.70	96.1	64 - 136		
Chlorobenzene	108-90-7	MS	8.90	0	9.70	92.4	76 - 125		
Chlorodibromomethane	124-48-1	MS	7.20	0	9.70	74*	75 - 124		
Chloroethane	75-00-3	MS	7.70	0	9.70	79.9	1 - 141		
Chloroform	67-66-3	MS	9.50	0.38	9.70	94	73 - 126		
Chloromethane	74-87-3	MS	11.70	0	9.70	121	44 - 139		
cis-1,2-Dichloroethene	156-59-2	MS	10.50	0	9.70	109	75 - 128		
cis-1,3-Dichloropropene	10061-01-5	MS	7.10	0	9.70	73.1*	76 - 123		
Cyclohexane	110-82-7	MS	10.70	0	9.70	110	62 - 143		
Dichlorodifluoromethane	75-71-8	MS	12.90	0	9.70	133	16 - 152		
Ethylbenzene	100-41-4	MS	9.70	0	9.70	100	73 - 133		
Freon 113	76-13-1	MS	10.60	0	9.70	109	40 - 109		
Isopropylbenzene	98-82-8	MS	10.50	0	9.70	108	71 - 137		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Methyl acetate	79-20-9	MS	9.40	0	9.70	97.5	70 - 130		
Methyl cyclohexane	108-87-2	MS	9.30	0	9.70	96.2	70 - 130		
Methyl t-Butyl Ether	1634-04-4	MS	9.80	0	9.70	101	70 - 118		
Methylene Chloride	75-09-2	MS	10	1.10	9.70	91.7	68 - 133		
mp-Xylene	108383/106423	MS	16.60	0	19.40	85.7	72 - 130		
o-Xylene	95-47-6	MS	7.80	0	9.70	80.9	75 - 129		
Styrene	100-42-5	MS	9.20	0	9.70	95.3	77 - 130		
Tetrachloroethene	127-18-4	MS	8	0	9.70	83.1	58 - 137		
Toluene	108-88-3	MS	8.10	0	9.70	84.2	73 - 129		
Total Xylenes	1330-20-7	MS	24.40	0	29	84.1	73 - 130		
trans-1,2-Dichloroethene	156-60-5	MS	9.90	0	9.70	102	66 - 133		
trans-1,3-Dichloropropene	10061-02-6	MS	7.60	0	9.70	78.9	77 - 123		
Trichloroethene	79-01-6	MS	9.70	0	9.70	101	72 - 129		
Trichlorofluoromethane	75-69-4	MS	13.70	0	9.70	142*	40 - 130		
Vinyl Chloride	75-01-4	MS	12.60	0	9.70	130	53 - 141		

*SURROGATES*

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	12.10	14.50	83.5	56 - 124	
4-Bromofluorobenzene	460-00-4	MS	12.40	14.50	85.5	51 - 128	
Dibromofluoromethane	1868-53-7	MS	10.10	14.50	69.8	62 - 123	
Toluene-d8	2037-26-5	MS	11.50	14.50	79.4	59 - 131	

**QC Batch**

**Associated Samples**

<u>QC Batch</u>	936471	<u>Prep Method</u>	SW846 5035A
<u>Date</u>	01/18/2023 08:14	<u>Analysis Method</u>	SW846 8260B
<u>Tech.</u>	JTH		

3282987002	3282987005	3282987015	3282987018
3283084002	3283084006		

**Method Blank**

3612380 (MB)

Created on 01/18/2023 08:14

For QC Batch 936471

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND	ug/kg	2.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND	ug/kg	2.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND	ug/kg	2.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND	ug/kg	2.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND	ug/kg	2.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND	ug/kg	5.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND	ug/kg	5.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND	ug/kg	5.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND	ug/kg	2.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND	ug/kg	2.0	ND



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No	Result	Units	RDL	Qualifiers
1,2-Dichloroethane	107-06-2	BLK	ND ug/kg	2.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND ug/kg	2.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND ug/kg	2.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND ug/kg	2.0	ND
2-Butanone	78-93-3	BLK	ND ug/kg	10.0	ND
2-Hexanone	591-78-6	BLK	ND ug/kg	10.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND ug/kg	10.0	ND
Acetone	67-64-1	BLK	ND ug/kg	10.0	ND
Benzene	71-43-2	BLK	ND ug/kg	2.0	ND
Bromochloromethane	74-97-5	BLK	ND ug/kg	2.0	ND
Bromodichloromethane	75-27-4	BLK	ND ug/kg	2.0	ND
Bromoform	75-25-2	BLK	ND ug/kg	2.0	ND
Bromomethane	74-83-9	BLK	ND ug/kg	2.0	ND
Carbon Disulfide	75-15-0	BLK	ND ug/kg	2.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND ug/kg	2.0	ND
Chlorobenzene	108-90-7	BLK	ND ug/kg	2.0	ND
Chlorodibromomethane	124-48-1	BLK	ND ug/kg	2.0	ND
Chloroethane	75-00-3	BLK	ND ug/kg	5.0	ND
Chloroform	67-66-3	BLK	ND ug/kg	2.0	ND
Chloromethane	74-87-3	BLK	ND ug/kg	2.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND ug/kg	2.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND ug/kg	2.0	ND
Cyclohexane	110-82-7	BLK	ND ug/kg	2.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND ug/kg	2.0	ND
Ethylbenzene	100-41-4	BLK	ND ug/kg	2.0	ND
Freon 113	76-13-1	BLK	ND ug/kg	2.0	ND
Isopropylbenzene	98-82-8	BLK	ND ug/kg	2.0	ND
Methyl acetate	79-20-9	BLK	ND ug/kg	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND ug/kg	2.0	ND
Methyl t-Butyl Ether	1634-04-4	BLK	ND ug/kg	2.0	ND
Methylene Chloride	75-09-2	BLK	ND ug/kg	2.0	ND
mp-Xylene	108383/106423	BLK	ND ug/kg	4.0	ND
o-Xylene	95-47-6	BLK	ND ug/kg	2.0	ND
Styrene	100-42-5	BLK	ND ug/kg	2.0	ND
Tetrachloroethene	127-18-4	BLK	ND ug/kg	2.0	ND
Toluene	108-88-3	BLK	ND ug/kg	2.0	ND
Total Xylenes	1330-20-7	BLK	ND ug/kg	6.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND ug/kg	2.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND ug/kg	2.0	ND
Trichloroethene	79-01-6	BLK	ND ug/kg	2.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND ug/kg	2.0	ND
Vinyl Chloride	75-01-4	BLK	ND ug/kg	2.0	ND

SURROGATES

Compound	CAS No	Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	25.20	30	84	56 - 124



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*SURROGATES*

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
4-Bromofluorobenzene	460-00-4	BLK	23.50	30	78.2	51 - 128	
Dibromofluoromethane	1868-53-7	BLK	19.40	30	64.6	62 - 123	
Toluene-d8	2037-26-5	BLK	24.60	30	81.9	59 - 131	

<b>Lab Control Standard</b>	3612381	(LCS)		Created on 01/18/2023 08:14	For QC Batch 936471
<b>Lab Control Std Duplicate</b>	3612382	(LCSD)		Created on 01/18/2023 08:14	For QC Batch 936471

*RESULTS*

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	18.30		20	91.7	68 - 131		
1,1,1-Trichloroethane	71-55-6	LCSD	19.30		20	96.6	68 - 131	RPD 5.27 (Max-40)	
1,1,2,2-Tetrachloroethane	79-34-5	LCS	22.80		20	114	72 - 134		
1,1,2,2-Tetrachloroethane	79-34-5	LCSD	23.30		20	117	72 - 134	RPD 2.15 (Max-40)	
1,1,2-Trichloroethane	79-00-5	LCS	21.40		20	107	79 - 123		
1,1,2-Trichloroethane	79-00-5	LCSD	21.70		20	109	79 - 123	RPD 1.72 (Max-40)	
1,1-Dichloroethane	75-34-3	LCS	21.70		20	108	74 - 131		
1,1-Dichloroethane	75-34-3	LCSD	22.70		20	113	74 - 131	RPD 4.58 (Max-40)	
1,1-Dichloroethene	75-35-4	LCS	18.70		20	93.7	59 - 139		
1,1-Dichloroethene	75-35-4	LCSD	19.80		20	98.8	59 - 139	RPD 5.33 (Max-40)	
1,2,3-Trichlorobenzene	87-61-6	LCS	16.60		20	82.8	68 - 129		
1,2,3-Trichlorobenzene	87-61-6	LCSD	17.30		20	86.6	68 - 129	RPD 4.57 (Max-40)	
1,2,4-Trichlorobenzene	120-82-1	LCS	15.90		20	79.3	63 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCSD	16.20		20	80.8	63 - 132	RPD 1.92 (Max-40)	
1,2-Dibromo-3-chloropropane	96-12-8	LCS	16.60		20	82.8	52 - 151		
1,2-Dibromo-3-chloropropane	96-12-8	LCSD	17.40		20	86.9	52 - 151	RPD 4.86 (Max-40)	
1,2-Dibromoethane	106-93-4	LCS	17.80		20	89.1	76 - 127		
1,2-Dibromoethane	106-93-4	LCSD	18.30		20	91.6	76 - 127	RPD 2.78 (Max-40)	
1,2-Dichlorobenzene	95-50-1	LCS	16.60		20	82.8	75 - 126		
1,2-Dichlorobenzene	95-50-1	LCSD	17.10		20	85.4	75 - 126	RPD 3.10 (Max-40)	
1,2-Dichloroethane	107-06-2	LCS	21.70		20	109	69 - 132		
1,2-Dichloroethane	107-06-2	LCSD	22.60		20	113	69 - 132	RPD 3.81 (Max-40)	
1,2-Dichloropropane	78-87-5	LCS	22.20		20	111	78 - 131		
1,2-Dichloropropane	78-87-5	LCSD	22.80		20	114	78 - 131	RPD 2.84 (Max-40)	
1,3-Dichlorobenzene	541-73-1	LCS	19.80		20	98.9	72 - 127		
1,3-Dichlorobenzene	541-73-1	LCSD	20.30		20	102	72 - 127	RPD 2.75 (Max-40)	
1,4-Dichlorobenzene	106-46-7	LCS	19.40		20	96.9	72 - 126		
1,4-Dichlorobenzene	106-46-7	LCSD	19.70		20	98.5	72 - 126	RPD 1.67 (Max-40)	
2-Butanone	78-93-3	LCS	120		100	120	64 - 148		
2-Butanone	78-93-3	LCSD	123		100	123	64 - 148	RPD 2.31 (Max-40)	
2-Hexanone	591-78-6	LCS	115		100	115	62 - 147		
2-Hexanone	591-78-6	LCSD	119		100	119	62 - 147	RPD 3.12 (Max-40)	
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	101		100	101	64 - 143		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCSD	103		100	103	64 - 143	RPD 2.61 (Max-40)	
Acetone	67-64-1	LCS	126		100	126	58 - 146		
Acetone	67-64-1	LCSD	129		100	129	58 - 146	RPD 2.21 (Max-40)	
Benzene	71-43-2	LCS	21.90		20	110	75 - 132		





QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Benzene	71-43-2	LCS	22.80		20	114	75 - 132	RPD <u>3.92</u> (Max-40)	
Bromochloromethane	74-97-5	LCS	18.40		20	92.2	71 - 120		
Bromochloromethane	74-97-5	LCS	19.20		20	96	71 - 120	RPD <u>3.99</u> (Max-40)	
Bromodichloromethane	75-27-4	LCS	16.20		20	81	74 - 127		
Bromodichloromethane	75-27-4	LCS	17		20	84.8	74 - 127	RPD <u>4.61</u> (Max-40)	
Bromoform	75-25-2	LCS	15		20	75.2	68 - 131		
Bromoform	75-25-2	LCS	15.30		20	76.7	68 - 131	RPD <u>1.96</u> (Max-40)	
Bromomethane	74-83-9	LCS	28.70		20	143	43 - 148		
Bromomethane	74-83-9	LCS	30.40		20	152*	43 - 148	RPD <u>5.84</u> (Max-40)	
Carbon Disulfide	75-15-0	LCS	18.60		20	93	47 - 144		
Carbon Disulfide	75-15-0	LCS	20.10		20	101	47 - 144	RPD <u>7.79</u> (Max-40)	
Carbon Tetrachloride	56-23-5	LCS	20		20	100	64 - 136		
Carbon Tetrachloride	56-23-5	LCS	21		20	105	64 - 136	RPD <u>5.03</u> (Max-40)	
Chlorobenzene	108-90-7	LCS	19		20	95	76 - 125		
Chlorobenzene	108-90-7	LCS	19.70		20	98.5	76 - 125	RPD <u>3.62</u> (Max-40)	
Chlorodibromomethane	124-48-1	LCS	16		20	79.9	75 - 124		
Chlorodibromomethane	124-48-1	LCS	16.70		20	83.3	75 - 124	RPD <u>4.24</u> (Max-40)	
Chloroethane	75-00-3	LCS	13.50		20	67.5	1 - 141		
Chloroethane	75-00-3	LCS	14.90		20	74.7	1 - 141	RPD <u>10.30</u> (Max-40)	
Chloroform	67-66-3	LCS	19.60		20	97.8	73 - 126		
Chloroform	67-66-3	LCS	20.50		20	102	73 - 126	RPD <u>4.65</u> (Max-40)	
Chloromethane	74-87-3	LCS	24.20		20	121	44 - 139		
Chloromethane	74-87-3	LCS	26.30		20	131	44 - 139	RPD <u>8.09</u> (Max-40)	
cis-1,2-Dichloroethene	156-59-2	LCS	22.10		20	111	75 - 128		
cis-1,2-Dichloroethene	156-59-2	LCS	23.40		20	117	75 - 128	RPD <u>5.70</u> (Max-40)	
cis-1,3-Dichloropropene	10061-01-5	LCS	15.40		20	76.8	76 - 123		
cis-1,3-Dichloropropene	10061-01-5	LCS	16.10		20	80.6	76 - 123	RPD <u>4.93</u> (Max-40)	
Cyclohexane	110-82-7	LCS	22.50		20	113	62 - 143		
Cyclohexane	110-82-7	LCS	23.20		20	116	62 - 143	RPD <u>2.96</u> (Max-40)	
Dichlorodifluoromethane	75-71-8	LCS	25		20	125	16 - 152		
Dichlorodifluoromethane	75-71-8	LCS	26.40		20	132	16 - 152	RPD <u>5.20</u> (Max-40)	
Ethylbenzene	100-41-4	LCS	19.90		20	99.4	73 - 133		
Ethylbenzene	100-41-4	LCS	20.70		20	104	73 - 133	RPD <u>4.10</u> (Max-40)	
Freon 113	76-13-1	LCS	22.20		20	111*	40 - 109		
Freon 113	76-13-1	LCS	23.20		20	116*	40 - 109	RPD <u>4.79</u> (Max-40)	
Isopropylbenzene	98-82-8	LCS	19.50		20	97.5	71 - 137		
Isopropylbenzene	98-82-8	LCS	20		20	100	71 - 137	RPD <u>2.64</u> (Max-40)	
Methyl acetate	79-20-9	LCS	23.70		20	118	70 - 130		
Methyl acetate	79-20-9	LCS	24.50		20	123	70 - 130	RPD <u>3.45</u> (Max-40)	
Methyl cyclohexane	108-87-2	LCS	18.20		20	91.2	70 - 130		
Methyl cyclohexane	108-87-2	LCS	18.90		20	94.5	70 - 130	RPD <u>3.52</u> (Max-40)	
Methyl t-Butyl Ether	1634-04-4	LCS	21.80		20	109	70 - 118		
Methyl t-Butyl Ether	1634-04-4	LCS	22.70		20	113	70 - 118	RPD <u>3.69</u> (Max-40)	
Methylene Chloride	75-09-2	LCS	19.90		20	99.5	68 - 133		
Methylene Chloride	75-09-2	LCS	20.90		20	104	68 - 133	RPD <u>4.90</u> (Max-40)	
mp-Xylene	108383/106423	LCS	34		40	84.9	72 - 130		
mp-Xylene	108383/106423	LCS	35.40		40	88.4	72 - 130	RPD <u>4.02</u> (Max-40)	
o-Xylene	95-47-6	LCS	15.40		20	77.2	75 - 129		
o-Xylene	95-47-6	LCS	16.20		20	81.1	75 - 129	RPD <u>4.92</u> (Max-40)	



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Styrene	100-42-5	LCS	17.90		20	89.6	77 - 130		
Styrene	100-42-5	LCS	18.30		20	91.4	77 - 130	RPD 1.96 (Max-40)	
Tetrachloroethene	127-18-4	LCS	17		20	85	58 - 137		
Tetrachloroethene	127-18-4	LCS	17.70		20	88.3	58 - 137	RPD 3.76 (Max-40)	
Toluene	108-88-3	LCS	18.50		20	92.4	73 - 129		
Toluene	108-88-3	LCS	19.30		20	96.6	73 - 129	RPD 4.44 (Max-40)	
Total Xylenes	1330-20-7	LCS	49.40		60	82.4	73 - 130		
Total Xylenes	1330-20-7	LCS	51.60		60	86	73 - 130	RPD 4.30 (Max-40)	
trans-1,2-Dichloroethene	156-60-5	LCS	21.60		20	108	66 - 133		
trans-1,2-Dichloroethene	156-60-5	LCS	22.30		20	112	66 - 133	RPD 3.22 (Max-40)	
trans-1,3-Dichloropropene	10061-02-6	LCS	17		20	85	77 - 123		
trans-1,3-Dichloropropene	10061-02-6	LCS	17.50		20	87.4	77 - 123	RPD 2.83 (Max-40)	
Trichloroethene	79-01-6	LCS	20.40		20	102	72 - 129		
Trichloroethene	79-01-6	LCS	21.30		20	107	72 - 129	RPD 4.49 (Max-40)	
Trichlorofluoromethane	75-69-4	LCS	25		20	125	40 - 130		
Trichlorofluoromethane	75-69-4	LCS	25.70		20	129	40 - 130	RPD 2.87 (Max-40)	
Vinyl Chloride	75-01-4	LCS	24.80		20	124	53 - 141		
Vinyl Chloride	75-01-4	LCS	26.10		20	130	53 - 141	RPD 5.10 (Max-40)	

*SURROGATES*

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	24.90	30	82.9	56 - 124	
1,2-Dichloroethane-d4	17060-07-0	LCS	25.20	30	83.9	56 - 124	
4-Bromofluorobenzene	460-00-4	LCS	24.10	30	80.2	51 - 128	
4-Bromofluorobenzene	460-00-4	LCS	24.10	30	80.3	51 - 128	
Dibromofluoromethane	1868-53-7	LCS	20.80	30	69.4	62 - 123	
Dibromofluoromethane	1868-53-7	LCS	21.10	30	70.4	62 - 123	
Toluene-d8	2037-26-5	LCS	23.30	30	77.6	59 - 131	
Toluene-d8	2037-26-5	LCS	23.50	30	78.5	59 - 131	

**QC Batch**

**Associated Samples**

QC Batch	937065	Prep Method	SW846 5035A
Date	01/19/2023 08:42	Analysis Method	SW846 8260B
Tech.	TMP		

3282987016	3282987017	3282987019	3283084001
3283084003	3283084004	3283084005	

**Method Blank** 3613071 (MB) Created on 01/19/2023 08:42 For QC Batch 937065

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND	ug/kg	2.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND	ug/kg	2.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND	ug/kg	2.0	ND



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1-Dichloroethane	75-34-3	BLK	ND	ug/kg	2.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND	ug/kg	2.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND	ug/kg	5.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND	ug/kg	5.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND	ug/kg	5.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND	ug/kg	2.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND	ug/kg	2.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND	ug/kg	2.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND	ug/kg	2.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND	ug/kg	2.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND	ug/kg	2.0	ND
2-Butanone	78-93-3	BLK	ND	ug/kg	10.0	ND
2-Hexanone	591-78-6	BLK	ND	ug/kg	10.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND	ug/kg	10.0	ND
Acetone	67-64-1	BLK	ND	ug/kg	10.0	ND
Benzene	71-43-2	BLK	ND	ug/kg	2.0	ND
Bromochloromethane	74-97-5	BLK	ND	ug/kg	2.0	ND
Bromodichloromethane	75-27-4	BLK	ND	ug/kg	2.0	ND
Bromoform	75-25-2	BLK	ND	ug/kg	2.0	ND
Bromomethane	74-83-9	BLK	ND	ug/kg	2.0	ND
Carbon Disulfide	75-15-0	BLK	ND	ug/kg	2.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND	ug/kg	2.0	ND
Chlorobenzene	108-90-7	BLK	ND	ug/kg	2.0	ND
Chlorodibromomethane	124-48-1	BLK	ND	ug/kg	2.0	ND
Chloroethane	75-00-3	BLK	ND	ug/kg	5.0	ND
Chloroform	67-66-3	BLK	ND	ug/kg	2.0	ND
Chloromethane	74-87-3	BLK	ND	ug/kg	2.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND	ug/kg	2.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND	ug/kg	2.0	ND
Cyclohexane	110-82-7	BLK	ND	ug/kg	2.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND	ug/kg	2.0	ND
Ethylbenzene	100-41-4	BLK	ND	ug/kg	2.0	ND
Freon 113	76-13-1	BLK	ND	ug/kg	2.0	ND
Isopropylbenzene	98-82-8	BLK	ND	ug/kg	2.0	ND
Methyl acetate	79-20-9	BLK	ND	ug/kg	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND	ug/kg	2.0	ND
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/kg	2.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/kg	2.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/kg	4.0	ND
o-Xylene	95-47-6	BLK	ND	ug/kg	2.0	ND
Styrene	100-42-5	BLK	ND	ug/kg	2.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/kg	2.0	ND
Toluene	108-88-3	BLK	ND	ug/kg	2.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/kg	6.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/kg	2.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/kg	2.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/kg	2.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/kg	2.0	ND



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No	BLK	Result	Units	RDL	Qualifiers
Vinyl Chloride	75-01-4	BLK	ND	ug/kg	2.0	ND

*SURROGATES*

Compound	CAS No	BLK	Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	24.60	30	81.9	56 - 124	
4-Bromofluorobenzene	460-00-4	BLK	23.20	30	77.2	51 - 128	
Dibromofluoromethane	1868-53-7	BLK	19.30	30	64.3	62 - 123	
Toluene-d8	2037-26-5	BLK	23.60	30	78.7	59 - 131	

<b>Lab Control Standard</b>	3613072	(LCS)	Created on 01/19/2023 08:42	For QC Batch 937065
<b>Lab Control Std Duplicate</b>	3613073	(LCSD)	Created on 01/19/2023 08:42	For QC Batch 937065

*RESULTS*

Compound	CAS No	BLK	Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	18.50		20	92.6	68 - 131		
1,1,1-Trichloroethane	71-55-6	LCSD	18.60		20	93.2	68 - 131	RPD 0.72 (Max-40)	
1,1,2,2-Tetrachloroethane	79-34-5	LCS	21.70		20	109	72 - 134		
1,1,2,2-Tetrachloroethane	79-34-5	LCSD	22.40		20	112	72 - 134	RPD 2.84 (Max-40)	
1,1,2-Trichloroethane	79-00-5	LCS	20.50		20	103	79 - 123		
1,1,2-Trichloroethane	79-00-5	LCSD	20.60		20	103	79 - 123	RPD 0.30 (Max-40)	
1,1-Dichloroethane	75-34-3	LCS	21.70		20	108	74 - 131		
1,1-Dichloroethane	75-34-3	LCSD	21.50		20	108	74 - 131	RPD 0.63 (Max-40)	
1,1-Dichloroethene	75-35-4	LCS	18.30		20	91.6	59 - 139		
1,1-Dichloroethene	75-35-4	LCSD	18.30		20	91.4	59 - 139	RPD 0.22 (Max-40)	
1,2,3-Trichlorobenzene	87-61-6	LCS	16.80		20	84.1	68 - 129		
1,2,3-Trichlorobenzene	87-61-6	LCSD	17.20		20	86.2	68 - 129	RPD 2.42 (Max-40)	
1,2,4-Trichlorobenzene	120-82-1	LCS	15.80		20	79	63 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCSD	16.10		20	80.6	63 - 132	RPD 1.97 (Max-40)	
1,2-Dibromo-3-chloropropane	96-12-8	LCS	16.30		20	81.7	52 - 151		
1,2-Dibromo-3-chloropropane	96-12-8	LCSD	15.80		20	79.1	52 - 151	RPD 3.27 (Max-40)	
1,2-Dibromoethane	106-93-4	LCS	17		20	85.2	76 - 127		
1,2-Dibromoethane	106-93-4	LCSD	17.20		20	85.9	76 - 127	RPD 0.73 (Max-40)	
1,2-Dichlorobenzene	95-50-1	LCS	16.30		20	81.4	75 - 126		
1,2-Dichlorobenzene	95-50-1	LCSD	16.60		20	83.2	75 - 126	RPD 2.20 (Max-40)	
1,2-Dichloroethane	107-06-2	LCS	22		20	110	69 - 132		
1,2-Dichloroethane	107-06-2	LCSD	21.70		20	108	69 - 132	RPD 1.64 (Max-40)	
1,2-Dichloropropane	78-87-5	LCS	22.20		20	111	78 - 131		
1,2-Dichloropropane	78-87-5	LCSD	21.30		20	106	78 - 131	RPD 4.18 (Max-40)	
1,3-Dichlorobenzene	541-73-1	LCS	19.60		20	97.9	72 - 127		
1,3-Dichlorobenzene	541-73-1	LCSD	19.90		20	99.3	72 - 127	RPD 1.45 (Max-40)	
1,4-Dichlorobenzene	106-46-7	LCS	19		20	95.2	72 - 126		
1,4-Dichlorobenzene	106-46-7	LCSD	19.30		20	96.4	72 - 126	RPD 1.27 (Max-40)	
2-Butanone	78-93-3	LCS	119		100	119	64 - 148		
2-Butanone	78-93-3	LCSD	115		100	115	64 - 148	RPD 3.63 (Max-40)	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2-Hexanone	591-78-6	LCS	113		100	113	62 - 147		
2-Hexanone	591-78-6	LCS	111		100	111	62 - 147	RPD	<u>1.78</u> (Max-40)
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	98.60		100	98.6	64 - 143		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	95.90		100	95.9	64 - 143	RPD	<u>2.79</u> (Max-40)
Acetone	67-64-1	LCS	130		100	130	58 - 146		
Acetone	67-64-1	LCS	125		100	125	58 - 146	RPD	<u>4.11</u> (Max-40)
Benzene	71-43-2	LCS	21.80		20	109	75 - 132		
Benzene	71-43-2	LCS	21.90		20	110	75 - 132	RPD	<u>0.49</u> (Max-40)
Bromochloromethane	74-97-5	LCS	18.10		20	90.7	71 - 120		
Bromochloromethane	74-97-5	LCS	18.50		20	92.6	71 - 120	RPD	<u>2.04</u> (Max-40)
Bromodichloromethane	75-27-4	LCS	16.40		20	82	74 - 127		
Bromodichloromethane	75-27-4	LCS	16.10		20	80.5	74 - 127	RPD	<u>1.85</u> (Max-40)
Bromoform	75-25-2	LCS	14.10		20	70.6	68 - 131		
Bromoform	75-25-2	LCS	14.30		20	71.4	68 - 131	RPD	<u>1.22</u> (Max-40)
Bromomethane	74-83-9	LCS	29.40		20	147	43 - 148		
Bromomethane	74-83-9	LCS	27.60		20	138	43 - 148	RPD	<u>6.27</u> (Max-40)
Carbon Disulfide	75-15-0	LCS	18.10		20	90.7	47 - 144		
Carbon Disulfide	75-15-0	LCS	18.10		20	90.6	47 - 144	RPD	<u>0.18</u> (Max-40)
Carbon Tetrachloride	56-23-5	LCS	17.10		20	85.4	64 - 136		
Carbon Tetrachloride	56-23-5	LCS	16.90		20	84.3	64 - 136	RPD	<u>1.29</u> (Max-40)
Chlorobenzene	108-90-7	LCS	18.50		20	92.7	76 - 125		
Chlorobenzene	108-90-7	LCS	18.70		20	93.4	76 - 125	RPD	<u>0.77</u> (Max-40)
Chlorodibromomethane	124-48-1	LCS	15.40		20	77.2	75 - 124		
Chlorodibromomethane	124-48-1	LCS	15.80		20	79	75 - 124	RPD	<u>2.28</u> (Max-40)
Chloroethane	75-00-3	LCS	14		20	70.2	1 - 141		
Chloroethane	75-00-3	LCS	13.10		20	65.7	1 - 141	RPD	<u>6.72</u> (Max-40)
Chloroform	67-66-3	LCS	20		20	99.9	73 - 126		
Chloroform	67-66-3	LCS	19.90		20	99.4	73 - 126	RPD	<u>0.52</u> (Max-40)
Chloromethane	74-87-3	LCS	26.70		20	133	44 - 139		
Chloromethane	74-87-3	LCS	26.20		20	131	44 - 139	RPD	<u>1.69</u> (Max-40)
cis-1,2-Dichloroethene	156-59-2	LCS	22.30		20	112	75 - 128		
cis-1,2-Dichloroethene	156-59-2	LCS	22.40		20	112	75 - 128	RPD	<u>0.24</u> (Max-40)
cis-1,3-Dichloropropene	10061-01-5	LCS	14.90		20	74.7*	76 - 123		
cis-1,3-Dichloropropene	10061-01-5	LCS	15.30		20	76.5	76 - 123	RPD	<u>2.37</u> (Max-40)
Cyclohexane	110-82-7	LCS	22		20	110	62 - 143		
Cyclohexane	110-82-7	LCS	21.70		20	108	62 - 143	RPD	<u>1.28</u> (Max-40)
Dichlorodifluoromethane	75-71-8	LCS	28		20	140	16 - 152		
Dichlorodifluoromethane	75-71-8	LCS	27.30		20	136	16 - 152	RPD	<u>2.60</u> (Max-40)
Ethylbenzene	100-41-4	LCS	19.90		20	99.6	73 - 133		
Ethylbenzene	100-41-4	LCS	19.70		20	98.6	73 - 133	RPD	<u>1.04</u> (Max-40)
Freon 113	76-13-1	LCS	22.10		20	110*	40 - 109		
Freon 113	76-13-1	LCS	21.40		20	107	40 - 109	RPD	<u>3.16</u> (Max-40)
Isopropylbenzene	98-82-8	LCS	19.20		20	96.2	71 - 137		
Isopropylbenzene	98-82-8	LCS	19.50		20	97.3	71 - 137	RPD	<u>1.16</u> (Max-40)
Methyl acetate	79-20-9	LCS	23.20		20	116	70 - 130		
Methyl acetate	79-20-9	LCS	22.40		20	112	70 - 130	RPD	<u>3.52</u> (Max-40)
Methyl cyclohexane	108-87-2	LCS	18.10		20	90.5	70 - 130		
Methyl cyclohexane	108-87-2	LCS	17.70		20	88.6	70 - 130	RPD	<u>2.12</u> (Max-40)
Methyl t-Butyl Ether	1634-04-4	LCS	21.30		20	107	70 - 118		



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Methyl t-Butyl Ether	1634-04-4	LCS	21.50		20	108	70 - 118	RPD <u>0.84</u> (Max-40)	
Methylene Chloride	75-09-2	LCS	19.60		20	98.2	68 - 133		
Methylene Chloride	75-09-2	LCS	20.10		20	100	68 - 133	RPD <u>2.30</u> (Max-40)	
mp-Xylene	108383/106423	LCS	34.10		40	85.3	72 - 130		
mp-Xylene	108383/106423	LCS	33.70		40	84.3	72 - 130	RPD <u>1.16</u> (Max-40)	
o-Xylene	95-47-6	LCS	15.30		20	76.4	75 - 129		
o-Xylene	95-47-6	LCS	15.40		20	77	75 - 129	RPD <u>0.74</u> (Max-40)	
Styrene	100-42-5	LCS	17.60		20	87.9	77 - 130		
Styrene	100-42-5	LCS	17.70		20	88.7	77 - 130	RPD <u>1</u> (Max-40)	
Tetrachloroethene	127-18-4	LCS	16.60		20	82.9	58 - 137		
Tetrachloroethene	127-18-4	LCS	16.50		20	82.4	58 - 137	RPD <u>0.63</u> (Max-40)	
Toluene	108-88-3	LCS	18.60		20	92.9	73 - 129		
Toluene	108-88-3	LCS	18.50		20	92.5	73 - 129	RPD <u>0.46</u> (Max-40)	
Total Xylenes	1330-20-7	LCS	49.40		60	82.3	73 - 130		
Total Xylenes	1330-20-7	LCS	49.10		60	81.9	73 - 130	RPD <u>0.57</u> (Max-40)	
trans-1,2-Dichloroethene	156-60-5	LCS	21.30		20	106	66 - 133		
trans-1,2-Dichloroethene	156-60-5	LCS	21.50		20	108	66 - 133	RPD <u>1.16</u> (Max-40)	
trans-1,3-Dichloropropene	10061-02-6	LCS	16.60		20	83.1	77 - 123		
trans-1,3-Dichloropropene	10061-02-6	LCS	16.70		20	83.5	77 - 123	RPD <u>0.51</u> (Max-40)	
Trichloroethene	79-01-6	LCS	20.20		20	101	72 - 129		
Trichloroethene	79-01-6	LCS	20.60		20	103	72 - 129	RPD <u>1.81</u> (Max-40)	
Trichlorofluoromethane	75-69-4	LCS	25.90		20	129	40 - 130		
Trichlorofluoromethane	75-69-4	LCS	23.10		20	116	40 - 130	RPD <u>11.30</u> (Max-40)	
Vinyl Chloride	75-01-4	LCS	26.30		20	132	53 - 141		
Vinyl Chloride	75-01-4	LCS	24.90		20	124	53 - 141	RPD <u>5.76</u> (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	25.70	30	85.8	56 - 124	
1,2-Dichloroethane-d4	17060-07-0	LCS	25.20	30	84	56 - 124	
4-Bromofluorobenzene	460-00-4	LCS	23.50	30	78.3	51 - 128	
4-Bromofluorobenzene	460-00-4	LCS	23.90	30	79.8	51 - 128	
Dibromofluoromethane	1868-53-7	LCS	21	30	69.9	62 - 123	
Dibromofluoromethane	1868-53-7	LCS	21.10	30	70.3	62 - 123	
Toluene-d8	2037-26-5	LCS	23.20	30	77.3	59 - 131	
Toluene-d8	2037-26-5	LCS	23.10	30	77	59 - 131	



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY**

QC Batch			
QC Batch	936291	Prep Method	N/A
Date	N/A	Analysis Method	S25406-11
Tech.			

Associated Samples			
3282987001	3282987002	3282987003	3282987004
3282987005	3282987006	3282987007	3282987008
3282987009	3282987010	3282987011	3282987012
3282987013	3282987014	3282987015	3282987016
3282987017	3282987018	3282987019	

**Duplicate** 3611927 (DUP) 3282928001 (non-Project Sample) For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	19.9829	16.8614	RPD	<u>16.90*</u> (Max-10)
Total Solids	TSP	DUP	80.0170	83.1385	RPD	<u>3.83</u> (Max-5)

**Duplicate** 3611928 (DUP) 3282946001 (non-Project Sample) For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	17.3983	15.6132	RPD	<u>10.80*</u> (Max-10)
Total Solids	TSP	DUP	82.6016	84.3867	RPD	<u>2.14</u> (Max-5)

**Duplicate** 3611929 (DUP) 3282981001 (non-Project Sample) For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	0.2896	0.3043	RPD	<u>4.95</u> (Max-10)
Total Solids	TSP	DUP	99.7103	99.6956	RPD	<u>0.01</u> (Max-5)

**Duplicate** 3611932 (DUP) 3283071001 (non-Project Sample) For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

*RESULTS*

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	93.0838	93.2547	RPD	0.18 (Max-10)
Total Solids	TSP	DUP	6.9161	6.7452	RPD	2.50 (Max-5)

**Duplicate** 3611930 (DUP) 3282987008 For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

*RESULTS*

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	17.4667	18.0658	RPD	3.37 (Max-10)
Total Solids	TSP	DUP	82.5332	81.9341	RPD	0.73 (Max-5)

**Duplicate** 3611931 (DUP) 3282987018 For QC Batch 936291

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

*RESULTS*

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	19.5172	19.1969	RPD	1.65 (Max-10)
Total Solids	TSP	DUP	80.4827	80.8030	RPD	0.40 (Max-5)

**QC Batch**

**Associated Samples**

QC Batch	936302	Prep Method	N/A
Date	N/A	Analysis Method	S25406-11
Tech.			

3283084001	3283084002	3283084003	3283084004
3283084005	3283084006		

**Duplicate** 3611970 (DUP) 3282810002 (non-Project Sample) For QC Batch 936302

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

*RESULTS*

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	98.7384	97.9914	RPD	0.76 (Max-10)
Total Solids	TSP	DUP	1.2615	2.0085	RPD	45.70* (Max-5)





**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

**Duplicate** 3611971 (DUP) 3282811002 (non-Project Sample) For QC Batch 936302

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	97.9374	97.8760	RPD	<u>0.06</u> (Max-10)
Total Solids	TSP	DUP	2.0625	2.1239	RPD	<u>2.93</u> (Max-5)

**Duplicate** 3611973 (DUP) 3283154002 (non-Project Sample) For QC Batch 936302

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	4.3684	4.4157	RPD	<u>1.08</u> (Max-10)
Total Solids	TSP	DUP	95.6315	95.5842	RPD	<u>0.05</u> (Max-5)

**Duplicate** 3611974 (DUP) 3283185001 (non-Project Sample) For QC Batch 936302

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	8.5065	8.4154	RPD	<u>1.08</u> (Max-10)
Total Solids	TSP	DUP	91.4934	91.5845	RPD	<u>0.10</u> (Max-5)

**Duplicate** 3611972 (DUP) 3283084006 For QC Batch 936302

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	12.9938	13.0365	RPD	<u>0.33</u> (Max-10)
Total Solids	TSP	DUP	87.0061	86.9634	RPD	<u>0.05</u> (Max-5)



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

QC Batch			
QC Batch	936340	Prep Method	SW846 3060A
Date	01/18/2023 09:02	Analysis Method	SW846 7196A
Tech.	AKH		

Associated Samples			
3282987001	3282987002	3282987003	3282987004
3282987005	3282987006	3282987007	3282987008
3282987009	3282987010	3282987011	3282987012
3282987013	3282987014	3282987015	3282987016
3282987017			

**Duplicate** 3612109 (DUP) 3282920004 (non-Project Sample) For QC Batch 936340

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)		Qualifiers
Hexavalent Chromium	CR6	DUP	0.4607	0.3777	RPD <u>19.80</u> (Max-20)	ND

**Pre-digestion Soluble MS** 3612110 (MS-PS) 3282920004 (non-Project Sample) For QC Batch 936340

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	28.30	0.38	39.20	71.1*	75 - 125		

**Pre-digestion Insoluble MS** 3612111 (MS-PI) 3282920004 (non-Project Sample) For QC Batch 936340

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	545	0.38	627	86.7	75 - 125		

**Post-digestion MS** 3612112 (MSPOST) 3282920004 (non-Project Sample) For QC Batch 936340

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	41.30	0.38	38.90	105	85 - 115		



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

**Method Blank** 3612107 (MB) Created on 01/17/2023 13:04 For QC Batch 936340

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/kg	1.9	ND

**Lab Control Standard** 3612108 (LCS) Created on 01/17/2023 13:04 For QC Batch 936340

**RESULTS**

Compound	CAS No	Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	LCS	17.10	20	85.3	80 - 120		

QC Batch		Prep Method	
QC Batch	936353	Prep Method	SW846 3060A
Date	01/18/2023 13:40	Analysis Method	SW846 7196A
Tech.	AKH		

Associated Samples			
3282987018	3282987019	3283084001	3283084002
3283084003	3283084004	3283084005	3283084006

**Duplicate** 3612170 (DUP) 3282751027 (non-Project Sample) For QC Batch 936353

\*\*\*\*NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No	Result (mg/kg)	Orig. Result (mg/kg)	RPD	Qualifiers
Hexavalent Chromium	CR6	DUP	0	0 (Max-20)	ND

**Pre-digestion Soluble MS** 3612171 (MS-PS) 3282751027 (non-Project Sample) For QC Batch 936353

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**RESULTS**

Compound	CAS No	Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	0	0	39.70	0*	75 - 125	ND

**Pre-digestion Insoluble MS** 3612172 (MS-PI) 3282751027 (non-Project Sample) For QC Batch 936353

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	262	0	627	41.8*	75 - 125		

**Post-digestion MS**

3612173 (MSPOST)      3282751027 (non-Project Sample)      For QC Batch 936353

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	1.60	0	40	4.03*	85 - 115		ND

**Method Blank**

3612168 (MB)      Created on 01/17/2023 14:13      For QC Batch 936353

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND	mg/kg	2.0	ND

**Lab Control Standard**

3612169 (LCS)      Created on 01/17/2023 14:13      For QC Batch 936353

*RESULTS*

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	LCS	15.60		19.30	80.6	80 - 120		



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3282987001	SB-03-0-2	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 09:25	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
3282987002	SB-03-8-10	SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936471	01/11/2023 09:30	DD	SW846 8260B	936472
		N/A	N/A	N/A		Calculation	
3282987003	SB-02-0-2	N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937237
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
3282987004	SB-02-10-12	SW846 5035A	936310	01/11/2023 10:40	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
3282987005	SB-04-0-2	SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 10:45	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987006	SB-04-14-16	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 11:45	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
3282987007	SB-05-0-2	SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 12:55	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
3282987008	SB-05-4-6	N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 13:00	JTH	SW846 8260B	936311
3282987009	SB-06-0-2	N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
3282987010	SB-06-8-10	SW846 5035A	936310	01/11/2023 14:35	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3282987011	SB-07-0-2	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937237
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 15:25	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987012	SB-07-2-4	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/11/2023 15:30	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987013	SB-01-0-2	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936955	01/19/2023 10:45	WDA	SW846 7471B	937216
		SW846 5035A	936310	01/12/2023 09:50	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987014	SB-01-10-12	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	936310	01/12/2023 09:55	JTH	SW846 8260B	936311
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987015	SB-11-0-2	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	936471	01/12/2023 13:15	DD	SW846 8260B	936472
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987016	SB-11-6-8	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/12/2023 13:20	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987017	SB-12-0-2	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/12/2023 12:20	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936340	01/18/2023 09:02	AKH	SW846 7196A	936533
3282987018	SB-12-10-12	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	936471	01/12/2023 12:25	JTH	SW846 8260B	936472
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600
3282987019	SB-12-10-12D	SW846 3051A	936329	01/18/2023 11:10	JSE	SW846 6020A	937166
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/12/2023 12:30	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936291
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600
3283084001	SB-10-0-2	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937237
		SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/13/2023 09:10	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600



Project 2022FMA SCI Pittsburgh Phase I

Workorder 3282987

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3283084002	SB-10-4-6	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	936471	01/13/2023 09:15	JTH	SW846 8260B	936472
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600
3283084003	SB-09-0-2	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/13/2023 09:30	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600
3283084004	SB-09-4-6	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937237
		SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/13/2023 09:45	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
3283084005	SB-08-0-2	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937237
		SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	937065	01/13/2023 10:30	DD	SW846 8260B	937066
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
3283084006	SB-08-6-8	SW846 3051A	936330	01/18/2023 11:10	JSE	SW846 6020A	937181
		SW846 7471B	936956	01/19/2023 10:45	WDA	SW846 7471B	937217
		SW846 5035A	936471	01/13/2023 10:35	JTH	SW846 8260B	936472
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		S2540G-11	936302
		SW846 3060A	936353	01/18/2023 13:40	AKH	SW846 7196A	936600







301 Fulling Mill Rd, Suite A  
 Middletown, PA 17057  
 P. 717-944-5541

**CHAIN OF CUSTODY / REQUEST FOR ANALYSIS**

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: \_\_\_\_\_ of \_\_\_\_\_  
 ALS Quote #: \_\_\_\_\_

Client Name: **Rhen Engineers**  
 Address: **333 Fowler Rd Suite 301**  
**mean Twp, PA 15108**

Contact: **Zach Wilks**  
 Phone#: **717 580 7511**  
 Project Name#: **SGT Pitt phase 1**  
 Bill To: \_\_\_\_\_  
 Purchase Order #: \_\_\_\_\_

TAT  Normal-Standard TAT is 10-12 business days.  
 Rush-Subject to ALS approval and surcharges.

Date Required: \_\_\_\_\_ Approved?   
 Email?

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	G or C	Matrix (See bottom of COC)	Orthophosphate Filtered? Y N NA	Hexavalent Chromium Filtered? Y N NA	Enter Number of Containers Per Sample or Field Results Below.
1 SB-07-0-2	1/12/23	15:25		65				4
2 SB-07-0-4	1/12/23	15:30						1
3 SB-01-0-2	1/12/23	9:50						
4 SB-01-10-12	1/12/23	9:55						
5 SB-11-0-2		13:15						
6 SB-11-6-8		13:20						
7 SB-12-0-2		12:20						
8 SB-12-10-12		12:21						
9 SB-12-10-12 D		12:30						
10								

Circle Sample Collector: ALS Tech / Client ID: \_\_\_\_\_

Comments: \_\_\_\_\_

Date	Time	Relinquished By / Company Name	Received By / Company Name
1/12/23	17:00	[Signature]	[Signature]
1/12/23	17:30	[Signature]	[Signature]

Temp Taken By: \_\_\_\_\_ Therm ID: \_\_\_\_\_ WO Temp (°C) \_\_\_\_\_

Receipt info completed by: \_\_\_\_\_

Receipt Information (completed by Receiving Lab)

WV Containers 0-6°C Y N NA  
 Deviations? NO YES  
 If YES, list below:

Cooler Custody Seals Intact Y N NA  
 Sample Custody Seal Intact Y N NA  
 Received on Ice Y N NA  
 Coolers & Samples Intact Y N NA  
 Correct Containers Provided Y N NA  
 Sample Label/COC Agree Y N NA  
 Adequate Sample Volumes Y N NA  
 VOA only: Headspace Present Y N NA  
 VOA only: Trip Blank Y N NA  
 NJ ≤ 4 days? Y N NA  
 Courier/Tracking #: \_\_\_\_\_

Client contact: \_\_\_\_\_ Date/Tech: \_\_\_\_\_

Sample(s) for Radiation testing? Y N Rad Screen (uCi) \_\_\_\_\_  
 Reportable SDWA Sample(s)? Y N New Source? Y N  
 SDWA State of Origin? \_\_\_\_\_ New Source Contact: \_\_\_\_\_

PWSID #: \_\_\_\_\_ PWS Contact: \_\_\_\_\_ PWS Phone #: \_\_\_\_\_

SDWA Sample Type Key: D=Distribution E=Entry Point  
 R=Raw P=Plant C=Check S=Special A=Annual Startup

*Terra Care lot 1x Meath 2x DI*

Contains Short Hold Testing YES  NO

Internal Use: If less than 48 hours - notify lab upon receipt

Standard Lvl 1	Standard Lvl 2	Standard Lvl 3	Standard Lvl 4	Excel Summary	Equis	Custom	Sample Disposal	Lab	Special
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State Samples Collected In: NY  NJ  PA  WV  FL  other \_\_\_\_\_

Format Type: \_\_\_\_\_

EDDS: \_\_\_\_\_

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**Rhea Engineers & Consultants, Inc.**

Project 2022FMA SCI Pittsburgh Phase I

Workorder 3282926

Report ID 222596 on 2/3/2023

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jan 13, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Elizabeth Parker (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Zach Wicks - Rhea Engineers & Consultants, Inc.

*Elizabeth Parker*

**Elizabeth Parker**  
Project Coordinator

(ALS Digital Signature)

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3282926001	MW-03	Ground Water	01/12/2023 14:00	01/13/2023 09:02	CBC	Collected By Client
3282926002	MW-02	Ground Water	01/12/2023 12:25	01/13/2023 09:02	CBC	Collected By Client
3282926003	MW-04	Ground Water	01/12/2023 15:40	01/13/2023 09:02	CBC	Collected By Client
3282926004	TB-01	Ground Water	01/12/2023 00:00	01/13/2023 09:02	CBC	Collected By Client
3283083001	MW-05	Ground Water	01/13/2023 12:35	01/14/2023 08:42	CBC	Collected By Client
3283083002	MW-05D	Ground Water	01/13/2023 12:40	01/14/2023 08:42	CBC	Collected By Client
3283083003	MW-06	Ground Water	01/13/2023 13:55	01/14/2023 08:42	CBC	Collected By Client
3283083004	MW-12	Ground Water	01/13/2023 15:35	01/14/2023 08:42	CBC	Collected By Client
3283083005	TB-02	Ground Water	01/13/2023 00:00	01/14/2023 08:42	CBC	Collected By Client
3283219001	MW-07	Ground Water	01/16/2023 10:55	01/17/2023 08:35	CBC	Collected By Client
3283219002	MW-11	Ground Water	01/16/2023 12:15	01/17/2023 08:35	CBC	Collected By Client
3283219003	MW-10	Ground Water	01/16/2023 13:25	01/17/2023 08:35	CBC	Collected By Client
3283219004	MW-09	Ground Water	01/16/2023 14:45	01/17/2023 08:35	CBC	Collected By Client
3283219005	MW-01	Ground Water	01/16/2023 15:45	01/17/2023 08:35	CBC	Collected By Client
3283219006	TB-03	Ground Water	01/16/2023 15:45	01/17/2023 08:35	CBC	Collected By Client
3283430001	MW-08	Ground Water	01/17/2023 16:15	01/18/2023 08:42	CBC	Collected By Client
3283430002	TB-04	Ground Water	01/17/2023 00:00	01/18/2023 08:42	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

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**Project Notations**

**P1** This report was revised to add all the samples from ALS #3283083, 3283219 and 3283430 per the request of Zach Wicks. EXP 2/3/23

**Sample Notations**

**Lab ID**      **Sample ID**



## Result Notations

Notation Ref.	
2	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Ca. The % RSD was reported as 20.8 and the control limits were 0 to 20. RMD 01-18-23
3	The method blank associated with this sample was positive for Cr at 0.004931 mg/L. The sample was non-detect. According to SW846 6020A, the sample was commented. RMD 01-18-23
4	The Relative Percent Difference (RPD) between the matrix spike and the matrix spike duplicate was outside of the established control limits for this analyte.
5	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 152 and the control limits were 57 to 131.
6	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 133 and the control limits were 66 to 130.
7	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 134 and the control limits were 63 to 128.
8	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 129 and the control limits were 71 to 122.
9	The Method Blank for method SW846 8260C reported a value greater than the reporting level for the analyte Methyl acetate. The concentration was
10	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Methyl acetate. The % Recovery was reported as 157 and the control limits were 70 to 130.
11	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 22.6 and the control limits were 0 to 20. RMD 01-25-23
12	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 147 and the control limits were 57 to 131.
13	The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 146 and the control limits were 57 to 131.
14	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 143 and the control limits were 66 to 130.
15	The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 139 and the control limits were 66 to 130.
16	The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 80.7 and the control limits were 81 to 121.
17	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Freon 113. The % Recovery was reported as 146 and the control limits were 50 to 130.
18	The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Freon 113. The % Recovery was reported as 151 and the control limits were 50 to 130.
19	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 133 and the control limits were 70 to 130.
20	This compound was recovered above the 20 percent 8260C criteria in the continuing calibration verification associated with this sample.



**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926

21 The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 23.2 and the control limits were 0 to 20. RMD 01-25-23

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### Detected Results Summary

Client Sample ID	MW-03	Collected	01/12/2023 14:00
Lab Sample ID	3282926001	Lab Receipt	01/13/2023 09:02

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Barium, Dissolved	0.053	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	68.3	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	13.1	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	3.3	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	3.7	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	25.8	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
cis-1,2-Dichloroethene	26.3	ug/L	1.0	SW846 8260C	#
Tetrachloroethene	207	ug/L	5.0	SW846 8260C	#
Toluene	2.4	ug/L	1.0	SW846 8260C	#
Trichloroethene	10.9	ug/L	1.0	SW846 8260C	#





**Detected Results Summary**

Client Sample ID	MW-02	Collected	01/12/2023 12:25
Lab Sample ID	3282926002	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.11	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	161	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	31.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.45	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	14.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	385	mg/L	11.0	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	1.7	ug/L	1.0	SW846 8260C	#
Trichloroethene	1.0	ug/L	1.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-04	Collected	01/12/2023 15:40
Lab Sample ID	3282926003	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.054	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	41.9	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	5.6	mg/L	0.11	SW846 6020A	#
Potassium, Dissolved	8.8	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	19.0	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	63.7	ug/L	1.0	SW846 8260C	#



### Detected Results Summary

Client Sample ID	TB-01	Collected	01/12/2023 00:00
Lab Sample ID	3282926004	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>					
Chloroform	1.3	ug/L	1.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-05	Collected	01/13/2023 12:35
Lab Sample ID	3283083001	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.047	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	117	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	12.6	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.036	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	4.8	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	22.6	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	26.3	ug/L	1.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-05D	Collected	01/13/2023 12:40
Lab Sample ID	3283083002	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.047	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	116	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	12.6	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.035	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	4.8	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	22.2	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	27.2	ug/L	1.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-06	Collected	01/13/2023 13:55
Lab Sample ID	3283083003	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.063	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	51.2	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	2.8	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0067	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	3.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	9.7	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Tetrachloroethene	21.0	ug/L	1.0	SW846 8260C	#



### Detected Results Summary

Client Sample ID	MW-12	Collected	01/13/2023 15:35
Lab Sample ID	3283083004	Lab Receipt	01/14/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Arsenic, Dissolved	0.0085	mg/L	0.0030	SW846 6020A	#
Barium, Dissolved	0.14	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	96.5	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	6.2	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	7.1	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	2.8	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	9.6	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	137	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0056	mg/L	0.0056	SW846 6020A	#



### Detected Results Summary

Client Sample ID	TB-02	Collected	01/13/2023 00:00
Lab Sample ID	3283083005	Lab Receipt	01/14/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>					
Chloroform	1.3	ug/L	1.0	SW846 8260C	#





**Detected Results Summary**

Client Sample ID	MW-07	Collected	01/16/2023 10:55
Lab Sample ID	3283219001	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.048	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	75.5	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.9	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.14	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	5.1	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	26.0	mg/L	0.11	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methyl acetate	8.9	ug/L	2.0	SW846 8260C	#
Tetrachloroethene	4.7	ug/L	1.0	SW846 8260C	#
Toluene	1.7	ug/L	1.0	SW846 8260C	#



### Detected Results Summary

Client Sample ID	MW-11	Collected	01/16/2023 12:15
Lab Sample ID	3283219002	Lab Receipt	01/17/2023 08:35

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Arsenic, Dissolved	0.013	mg/L	0.0030	SW846 6020A	#
Barium, Dissolved	0.37	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	179	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	13.2	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	23.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	8.2	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	8.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	71.4	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0084	mg/L	0.0056	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methyl acetate	6.1	ug/L	2.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-10	Collected	01/16/2023 13:25
Lab Sample ID	3283219003	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Arsenic, Dissolved	0.039	mg/L	0.0030	SW846 6020A	#
Barium, Dissolved	0.20	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	115	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	72.5	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	18.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	18.7	mg/L	0.56	SW846 6020A	#
Potassium, Dissolved	2.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	62.9	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0061	mg/L	0.0056	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methyl acetate	7.7	ug/L	2.0	SW846 8260C	#
<b>WET CHEMISTRY</b>					
Hexavalent Chromium	0.011	mg/L	0.010	SW846 7196A	#



**Detected Results Summary**

Client Sample ID	MW-09	Collected	01/16/2023 14:45
Lab Sample ID	3283219004	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.077	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	96.8	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.067	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	7.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	104	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.016	mg/L	0.0056	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methyl acetate	5.9	ug/L	2.0	SW846 8260C	#



**Detected Results Summary**

Client Sample ID	MW-01	Collected	01/16/2023 15:45
Lab Sample ID	3283219005	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>METALS</b>					
Barium, Dissolved	0.061	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	160	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	0.078	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	41.7	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.18	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	16.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	440	mg/L	110	SW846 6020A	#
<b>VOLATILE ORGANICS</b>					
Methyl acetate	6.9	ug/L	2.0	SW846 8260C	#
Tetrachloroethene	3.7	ug/L	1.0	SW846 8260C	#
Trichloroethene	1.3	ug/L	1.0	SW846 8260C	#



### Detected Results Summary

Client Sample ID	TB-03	Collected	01/16/2023 15:45
Lab Sample ID	3283219006	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>					
Chloroform	1.7	ug/L	1.0	SW846 8260C	#
Methyl acetate	7.4	ug/L	2.0	SW846 8260C	#



### Detected Results Summary

Client Sample ID	MW-08	Collected	01/17/2023 16:15
Lab Sample ID	3283430001	Lab Receipt	01/18/2023 08:42

Compound	Result	Units	RDL	Method	Flag
<b>METALS</b>					
Aluminum, Dissolved	0.12	mg/L	0.089	SW846 6020A	#
Arsenic, Dissolved	0.0084	mg/L	0.0030	SW846 6020A	#
Barium, Dissolved	0.13	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	61.1	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	0.44	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	11.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	3.0	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	5.7	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	61.4	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0072	mg/L	0.0056	SW846 6020A	#



### Detected Results Summary

Client Sample ID	TB-04	Collected	01/17/2023 00:00
Lab Sample ID	3283430002	Lab Receipt	01/18/2023 08:42

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>					
Chloroform	1.6	ug/L	1.0	SW846 8260C	#





## Results

Client Sample ID	MW-03	Collected	01/12/2023 14:00
Lab Sample ID	3282926001	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 12:50	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:50	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 12:50	MO	D1
Barium, Dissolved	0.053	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:50	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 12:50	MO	D1
Calcium, Dissolved	68.3	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:50	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:50	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:50	MO	D1
Magnesium, Dissolved	13.1	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:50	MO	D1
Manganese, Dissolved	3.3	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 12:57	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Potassium, Dissolved	3.7	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:50	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:50	MO	D1
Sodium, Dissolved	25.8	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:50	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:50	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/18/2023 19:05	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:50	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:50	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A



## Results

Client Sample ID	MW-03	Collected	01/12/2023 14:00
Lab Sample ID	3282926001	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
cis-1,2-Dichloroethene	26.3	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Tetrachloroethene	207	P1	ug/L	5.0	SW846 8260C	5	01/20/2023 02:46	PDK	A
Toluene	2.4	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Trichloroethene	10.9	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:41	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.7%	62 - 133	01/18/2023 04:41	
1,2-Dichloroethane-d4	17060-07-0	88.3%	62 - 133	01/20/2023 02:46	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	01/18/2023 04:41	
4-Bromofluorobenzene	460-00-4	109%	79 - 114	01/20/2023 02:46	
Dibromofluoromethane	1868-53-7	90%	78 - 116	01/18/2023 04:41	
Dibromofluoromethane	1868-53-7	89.2%	78 - 116	01/20/2023 02:46	
Toluene-d8	2037-26-5	97.3%	76 - 127	01/18/2023 04:41	
Toluene-d8	2037-26-5	97.1%	76 - 127	01/20/2023 02:46	

### WET CHEMISTRY

**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926



## Results

Client Sample ID	MW-03	Collected	01/12/2023 14:00
Lab Sample ID	3282926001	Lab Receipt	01/13/2023 09:02

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/13/2023 10:15	GMM	F



## Results

Client Sample ID	MW-02	Collected	01/12/2023 12:25
Lab Sample ID	3282926002	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 12:52	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:52	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 12:52	MO	D1
Barium, Dissolved	0.11	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:52	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 12:52	MO	D1
Calcium, Dissolved	161	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:52	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:52	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:52	MO	D1
Magnesium, Dissolved	31.3	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:52	MO	D1
Manganese, Dissolved	0.45	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Mercury, Dissolved	ND	ND,4,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 12:58	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Potassium, Dissolved	14.3	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:52	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:52	MO	D1
Sodium, Dissolved	385	P1	mg/L	11.0	SW846 6020A	100	01/18/2023 14:28	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:52	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/19/2023 08:47	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:52	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:52	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A



## Results

Client Sample ID	MW-02	Collected	01/12/2023 12:25
Lab Sample ID	3282926002	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Tetrachloroethene	1.7	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Trichloroethene	1.0	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:04	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.8%	62 - 133	01/18/2023 05:04	
4-Bromofluorobenzene	460-00-4	111%	79 - 114	01/18/2023 05:04	
Dibromofluoromethane	1868-53-7	88.1%	78 - 116	01/18/2023 05:04	
Toluene-d8	2037-26-5	98.1%	76 - 127	01/18/2023 05:04	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/13/2023 10:15	GMM	F



### Results

Client Sample ID	MW-02	Collected	01/12/2023 12:25
Lab Sample ID	3282926002	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-04	Collected	01/12/2023 15:40
Lab Sample ID	3282926003	Lab Receipt	01/13/2023 09:02

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 12:54	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:54	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 12:54	MO	D1
Barium, Dissolved	0.054	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:54	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 12:54	MO	D1
Calcium, Dissolved	41.9	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:54	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:54	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:54	MO	D1
Magnesium, Dissolved	5.6	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:54	MO	D1
Manganese, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:01	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Potassium, Dissolved	8.8	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:54	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:54	MO	D1
Sodium, Dissolved	19.0	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:54	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:54	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/19/2023 08:48	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:54	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:54	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A



## Results

Client Sample ID	MW-04	Collected	01/12/2023 15:40
Lab Sample ID	3282926003	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Tetrachloroethene	63.7	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:27	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	86.9%	62 - 133	01/18/2023 05:27	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	01/18/2023 05:27	
Dibromofluoromethane	1868-53-7	87.6%	78 - 116	01/18/2023 05:27	
Toluene-d8	2037-26-5	97%	76 - 127	01/18/2023 05:27	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/13/2023 10:15	GMM	F





## Results

Client Sample ID	MW-04	Collected	01/12/2023 15:40
Lab Sample ID	3282926003	Lab Receipt	01/13/2023 09:02

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	TB-01	Collected	01/12/2023 00:00
Lab Sample ID	3282926004	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Chloroform	1.3	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 03:56	PDK	A



## Results

Client Sample ID	TB-01	Collected	01/12/2023 00:00
Lab Sample ID	3282926004	Lab Receipt	01/13/2023 09:02

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 03:56	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.3%	62 - 133	01/18/2023 03:56	
4-Bromofluorobenzene	460-00-4	109%	79 - 114	01/18/2023 03:56	
Dibromofluoromethane	1868-53-7	88.6%	78 - 116	01/18/2023 03:56	
Toluene-d8	2037-26-5	97.5%	76 - 127	01/18/2023 03:56	



## Results

Client Sample ID	MW-05	Collected	01/13/2023 12:35
Lab Sample ID	3283083001	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 12:56	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:56	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 12:56	MO	D1
Barium, Dissolved	0.047	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:56	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 12:56	MO	D1
Calcium, Dissolved	117	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:56	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:56	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:56	MO	D1
Magnesium, Dissolved	12.6	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:56	MO	D1
Manganese, Dissolved	0.036	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:10	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Potassium, Dissolved	4.8	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:56	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:56	MO	D1
Sodium, Dissolved	22.6	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:56	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:56	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/20/2023 08:31	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:56	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:56	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A



## Results

Client Sample ID	MW-05	Collected	01/13/2023 12:35
Lab Sample ID	3283083001	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Tetrachloroethene	26.3	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 05:49	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.2%	62 - 133	01/18/2023 05:49	
4-Bromofluorobenzene	460-00-4	108%	79 - 114	01/18/2023 05:49	
Dibromofluoromethane	1868-53-7	86.5%	78 - 116	01/18/2023 05:49	
Toluene-d8	2037-26-5	97.4%	76 - 127	01/18/2023 05:49	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/14/2023 09:55	GMM	F



### Results

Client Sample ID	MW-05	Collected	01/13/2023 12:35
Lab Sample ID	3283083001	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-05D	Collected	01/13/2023 12:40
Lab Sample ID	3283083002	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 12:58	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:58	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 12:58	MO	D1
Barium, Dissolved	0.047	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:58	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 12:58	MO	D1
Calcium, Dissolved	116	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:58	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:58	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:58	MO	D1
Magnesium, Dissolved	12.6	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:58	MO	D1
Manganese, Dissolved	0.035	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:11	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Potassium, Dissolved	4.8	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:58	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:58	MO	D1
Sodium, Dissolved	22.2	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 12:58	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 12:58	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/20/2023 08:32	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 12:58	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 12:58	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A



## Results

Client Sample ID	MW-05D	Collected	01/13/2023 12:40
Lab Sample ID	3283083002	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Tetrachloroethene	27.2	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:12	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.1%	62 - 133	01/18/2023 06:12	
4-Bromofluorobenzene	460-00-4	112%	79 - 114	01/18/2023 06:12	
Dibromofluoromethane	1868-53-7	88.7%	78 - 116	01/18/2023 06:12	
Toluene-d8	2037-26-5	98.4%	76 - 127	01/18/2023 06:12	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/14/2023 09:55	GMM	F





## Results

Client Sample ID	MW-05D	Collected	01/13/2023 12:40
Lab Sample ID	3283083002	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-06	Collected	01/13/2023 13:55
Lab Sample ID	3283083003	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 13:00	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:00	MO	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 13:00	MO	D1
Barium, Dissolved	0.063	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 13:00	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 13:00	MO	D1
Calcium, Dissolved	51.2	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:00	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:00	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:00	MO	D1
Magnesium, Dissolved	2.8	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:00	MO	D1
Manganese, Dissolved	0.0067	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:12	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Potassium, Dissolved	3.0	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:00	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:00	MO	D1
Sodium, Dissolved	9.7	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:00	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 13:00	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/20/2023 08:33	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:00	MO	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:00	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A



## Results

Client Sample ID	MW-06	Collected	01/13/2023 13:55
Lab Sample ID	3283083003	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Tetrachloroethene	21.0	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 06:34	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.5%	62 - 133	01/18/2023 06:34	
4-Bromofluorobenzene	460-00-4	111%	79 - 114	01/18/2023 06:34	
Dibromofluoromethane	1868-53-7	88.9%	78 - 116	01/18/2023 06:34	
Toluene-d8	2037-26-5	97%	76 - 127	01/18/2023 06:34	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/14/2023 09:55	GMM	F



## Results

Client Sample ID	MW-06	Collected	01/13/2023 13:55
Lab Sample ID	3283083003	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-12	Collected	01/13/2023 15:35
Lab Sample ID	3283083004	Lab Receipt	01/14/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/18/2023 13:02	MO	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:02	MO	D1
Arsenic, Dissolved	0.0085	P1	mg/L	0.0030	SW846 6020A	1	01/18/2023 13:02	MO	D1
Barium, Dissolved	0.14	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 13:02	MO	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/18/2023 13:02	MO	D1
Calcium, Dissolved	96.5	2,P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:02	MO	D1
Chromium, Dissolved	ND	ND,3,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:02	MO	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Iron, Dissolved	6.2	P1	mg/L	0.056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:02	MO	D1
Magnesium, Dissolved	7.1	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:02	MO	D1
Manganese, Dissolved	2.8	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:13	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Potassium, Dissolved	9.6	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:02	MO	D1
Selenium, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:02	MO	D1
Sodium, Dissolved	137	P1	mg/L	0.11	SW846 6020A	1	01/18/2023 13:02	MO	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/18/2023 13:02	MO	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/20/2023 08:34	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/18/2023 13:02	MO	D1
Zinc, Dissolved	0.0056	P1	mg/L	0.0056	SW846 6020A	1	01/18/2023 13:02	MO	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A



## Results

Client Sample ID	MW-12	Collected	01/13/2023 15:35
Lab Sample ID	3283083004	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 07:06	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.4%	62 - 133	01/18/2023 07:06	
4-Bromofluorobenzene	460-00-4	114%	79 - 114	01/18/2023 07:06	
Dibromofluoromethane	1868-53-7	90.2%	78 - 116	01/18/2023 07:06	
Toluene-d8	2037-26-5	98.3%	76 - 127	01/18/2023 07:06	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/14/2023 09:55	GMM	F

**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926



## Results

Client Sample ID	MW-12	Collected	01/13/2023 15:35
Lab Sample ID	3283083004	Lab Receipt	01/14/2023 08:42

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	TB-02	Collected	01/13/2023 00:00
Lab Sample ID	3283083005	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Chloroform	1.3	P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/18/2023 04:18	PDK	A





## Results

Client Sample ID	TB-02	Collected	01/13/2023 00:00
Lab Sample ID	3283083005	Lab Receipt	01/14/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/18/2023 04:18	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.4%	62 - 133	01/18/2023 04:18	
4-Bromofluorobenzene	460-00-4	111%	79 - 114	01/18/2023 04:18	
Dibromofluoromethane	1868-53-7	88.9%	78 - 116	01/18/2023 04:18	
Toluene-d8	2037-26-5	97.9%	76 - 127	01/18/2023 04:18	



## Results

Client Sample ID	MW-07	Collected	01/16/2023 10:55
Lab Sample ID	3283219001	Lab Receipt	01/17/2023 08:35

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Barium, Dissolved	0.048	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Calcium, Dissolved	75.5	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Magnesium, Dissolved	7.9	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Manganese, Dissolved	0.14	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:14	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Potassium, Dissolved	5.1	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Selenium, Dissolved	ND	ND,11,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Sodium, Dissolved	26.0	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/27/2023 10:11	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:06	RMD	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:06	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 17:18	TMP	A



## Results

Client Sample ID	MW-07	Collected	01/16/2023 10:55
Lab Sample ID	3283219001	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Carbon Disulfide	ND	ND,5,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Cyclohexane	ND	ND,6,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Methyl acetate	8.9	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Tetrachloroethene	4.7	P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Toluene	1.7	P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:18	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 - 133	01/23/2023 17:18	
4-Bromofluorobenzene	460-00-4	105%	79 - 114	01/23/2023 17:18	
Dibromofluoromethane	1868-53-7	98.3%	78 - 116	01/23/2023 17:18	
Toluene-d8	2037-26-5	99.3%	76 - 127	01/23/2023 17:18	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/17/2023 10:00	GMM	F



## Results

Client Sample ID	MW-07	Collected	01/16/2023 10:55
Lab Sample ID	3283219001	Lab Receipt	01/17/2023 08:35

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-11	Collected	01/16/2023 12:15
Lab Sample ID	3283219002	Lab Receipt	01/17/2023 08:35

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Arsenic, Dissolved	0.013	P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Barium, Dissolved	0.37	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Calcium, Dissolved	179	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Iron, Dissolved	13.2	P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Magnesium, Dissolved	23.5	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Manganese, Dissolved	8.2	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:16	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Potassium, Dissolved	8.5	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Selenium, Dissolved	ND	ND,11,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Sodium, Dissolved	71.4	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/27/2023 10:12	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:08	RMD	D1
Zinc, Dissolved	0.0084	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:08	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 17:41	TMP	A



## Results

Client Sample ID	MW-11	Collected	01/16/2023 12:15
Lab Sample ID	3283219002	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Carbon Disulfide	ND	ND,5,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Cyclohexane	ND	ND,6,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Methyl acetate	6.1	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 17:41	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 - 133	01/23/2023 17:41	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	01/23/2023 17:41	
Dibromofluoromethane	1868-53-7	96.7%	78 - 116	01/23/2023 17:41	
Toluene-d8	2037-26-5	99.8%	76 - 127	01/23/2023 17:41	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/17/2023 10:00	GMM	F



## Results

Client Sample ID	MW-11	Collected	01/16/2023 12:15
Lab Sample ID	3283219002	Lab Receipt	01/17/2023 08:35

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-10	Collected	01/16/2023 13:25
Lab Sample ID	3283219003	Lab Receipt	01/17/2023 08:35

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Arsenic, Dissolved	0.039	P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Barium, Dissolved	0.20	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Calcium, Dissolved	115	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Iron, Dissolved	72.5	P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Magnesium, Dissolved	18.5	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Manganese, Dissolved	18.7	P1	mg/L	0.56	SW846 6020A	100	01/25/2023 18:50	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:19	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Potassium, Dissolved	2.4	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Selenium, Dissolved	ND	ND,11,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Sodium, Dissolved	62.9	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/25/2023 21:14	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:11	RMD	D1
Zinc, Dissolved	0.0061	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:11	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:04	TMP	A





## Results

Client Sample ID	MW-10	Collected	01/16/2023 13:25
Lab Sample ID	3283219003	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Carbon Disulfide	ND	ND,5,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Cyclohexane	ND	ND,6,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Methyl acetate	7.7	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:04	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.6%	62 - 133	01/23/2023 18:04	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	01/23/2023 18:04	
Dibromofluoromethane	1868-53-7	95.1%	78 - 116	01/23/2023 18:04	
Toluene-d8	2037-26-5	97.9%	76 - 127	01/23/2023 18:04	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	0.011	P1	mg/L	0.010	SW846 7196A	1	01/17/2023 10:00	GMM	F



## Results

Client Sample ID	MW-10	Collected	01/16/2023 13:25
Lab Sample ID	3283219003	Lab Receipt	01/17/2023 08:35

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-09	Collected	01/16/2023 14:45
Lab Sample ID	3283219004	Lab Receipt	01/17/2023 08:35

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Barium, Dissolved	0.077	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Calcium, Dissolved	96.8	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Iron, Dissolved	ND	ND,P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Magnesium, Dissolved	7.5	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Manganese, Dissolved	0.067	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:23	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Potassium, Dissolved	7.0	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Selenium, Dissolved	ND	ND,11,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Sodium, Dissolved	104	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/25/2023 21:15	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:13	RMD	D1
Zinc, Dissolved	0.016	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:13	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:26	TMP	A



## Results

Client Sample ID	MW-09	Collected	01/16/2023 14:45
Lab Sample ID	3283219004	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Carbon Disulfide	ND	ND,5,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Cyclohexane	ND	ND,6,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Methyl acetate	5.9	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:26	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 - 133	01/23/2023 18:26	
4-Bromofluorobenzene	460-00-4	107%	79 - 114	01/23/2023 18:26	
Dibromofluoromethane	1868-53-7	95.9%	78 - 116	01/23/2023 18:26	
Toluene-d8	2037-26-5	100%	76 - 127	01/23/2023 18:26	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/17/2023 10:00	GMM	F



## Results

Client Sample ID	MW-09	Collected	01/16/2023 14:45
Lab Sample ID	3283219004	Lab Receipt	01/17/2023 08:35

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	MW-01	Collected	01/16/2023 15:45
Lab Sample ID	3283219005	Lab Receipt	01/17/2023 08:35

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	ND	ND,P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Arsenic, Dissolved	ND	ND,P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Barium, Dissolved	0.061	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Calcium, Dissolved	160	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Iron, Dissolved	0.078	P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Magnesium, Dissolved	41.7	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Manganese, Dissolved	0.18	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:24	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Potassium, Dissolved	16.0	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Selenium, Dissolved	ND	ND,11,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Sodium, Dissolved	440	P1	mg/L	110	SW846 6020A	1000	01/25/2023 18:52	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	0.010	Calculation	1	01/25/2023 21:16	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:15	RMD	D1
Zinc, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:15	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 18:49	TMP	A



## Results

Client Sample ID	MW-01	Collected	01/16/2023 15:45
Lab Sample ID	3283219005	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Carbon Disulfide	ND	ND,5,12,13,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
cis-1,3-Dichloropropene	ND	ND,16,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Cyclohexane	ND	ND,6,14,15,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Freon 113	ND	ND,17,18,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Methyl acetate	6.9	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Methyl cyclohexane	ND	ND,19,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Tetrachloroethene	3.7	P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Trichloroethene	1.3	P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 18:49	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.7%	62 - 133	01/23/2023 18:49	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	01/23/2023 18:49	
Dibromofluoromethane	1868-53-7	95.7%	78 - 116	01/23/2023 18:49	
Toluene-d8	2037-26-5	104%	76 - 127	01/23/2023 18:49	

### WET CHEMISTRY

**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926



## Results

Client Sample ID	MW-01	Collected	01/16/2023 15:45
Lab Sample ID	3283219005	Lab Receipt	01/17/2023 08:35

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Hexavalent Chromium	ND	ND,P1	mg/L	0.010	SW846 7196A	1	01/17/2023 10:00	GMM	F





## Results

Client Sample ID	TB-03	Collected	01/16/2023 15:45
Lab Sample ID	3283219006	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,1-Dichloroethene	ND	ND,7,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Acetone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Carbon Disulfide	ND	ND,5,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Chloroform	1.7	P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Cyclohexane	ND	ND,6,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Methyl acetate	7.4	9,10,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/23/2023 19:12	TMP	A



## Results

Client Sample ID	TB-03	Collected	01/16/2023 15:45
Lab Sample ID	3283219006	Lab Receipt	01/17/2023 08:35

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND,8,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/23/2023 19:12	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 - 133	01/23/2023 19:12	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	01/23/2023 19:12	
Dibromofluoromethane	1868-53-7	98.4%	78 - 116	01/23/2023 19:12	
Toluene-d8	2037-26-5	99.7%	76 - 127	01/23/2023 19:12	



## Results

Client Sample ID	MW-08	Collected	01/17/2023 16:15
Lab Sample ID	3283430001	Lab Receipt	01/18/2023 08:42

### METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Aluminum, Dissolved	0.12	P1	mg/L	0.089	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Antimony, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Arsenic, Dissolved	0.0084	P1	mg/L	0.0030	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Barium, Dissolved	0.13	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Beryllium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Cadmium, Dissolved	ND	ND,P1	mg/L	0.0011	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Calcium, Dissolved	61.1	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Chromium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Cobalt, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Copper, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Iron, Dissolved	0.44	P1	mg/L	0.056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Lead, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Magnesium, Dissolved	11.3	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Manganese, Dissolved	3.0	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Mercury, Dissolved	ND	ND,P1	mg/L	0.00050	SW846 7470A	1	01/19/2023 13:25	WDA	D
Nickel, Dissolved	ND	ND,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Potassium, Dissolved	5.7	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Selenium, Dissolved	ND	ND,21,P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Silver, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Sodium, Dissolved	61.4	P1	mg/L	0.11	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Thallium, Dissolved	ND	ND,P1	mg/L	0.0010	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Trivalent Chromium	ND	ND,P1	mg/L	1.0	Calculation	1	01/27/2023 10:13	CW	F
Vanadium, Dissolved	ND	ND,P1	mg/L	0.0022	SW846 6020A	1	01/25/2023 18:54	RMD	D1
Zinc, Dissolved	0.0072	P1	mg/L	0.0056	SW846 6020A	1	01/25/2023 18:54	RMD	D1

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Acetone	ND	ND,20,P1	ug/L	10.0	SW846 8260C	1	01/26/2023 15:25	TMP	A



## Results

Client Sample ID	MW-08	Collected	01/17/2023 16:15
Lab Sample ID	3283430001	Lab Receipt	01/18/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Chloroform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 15:25	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92%	62 - 133	01/26/2023 15:25	
4-Bromofluorobenzene	460-00-4	109%	79 - 114	01/26/2023 15:25	
Dibromofluoromethane	1868-53-7	91.5%	78 - 116	01/26/2023 15:25	
Toluene-d8	2037-26-5	97.3%	76 - 127	01/26/2023 15:25	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Hexavalent Chromium	ND	ND,P1	mg/L	1.0	SW846 7196A	100	01/18/2023 12:10	GMM	F



### Results

Client Sample ID	MW-08	Collected	01/17/2023 16:15
Lab Sample ID	3283430001	Lab Receipt	01/18/2023 08:42

### WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
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## Results

Client Sample ID	TB-04	Collected	01/17/2023 00:00
Lab Sample ID	3283430002	Lab Receipt	01/18/2023 08:42

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,1,2-Trichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,1-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,1-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2,3-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2,4-Trichlorobenzene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND,P1	ug/L	7.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2-Dibromoethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2-Dichloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,2-Dichloropropane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,3-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
1,4-Dichlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
2-Butanone	ND	ND,P1	ug/L	10.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
2-Hexanone	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND,P1	ug/L	5.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Acetone	ND	ND,20,P1	ug/L	10.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Benzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Bromochloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Bromodichloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Bromoform	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Bromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Carbon Disulfide	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Carbon Tetrachloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Chlorobenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Chlorodibromomethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Chloroethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Chloroform	1.6	P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Chloromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
cis-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
cis-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Dichlorodifluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Ethylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Freon 113	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Isopropylbenzene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Methyl acetate	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Methyl cyclohexane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Methyl t-Butyl Ether	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Methylene Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
mp-Xylene	ND	ND,P1	ug/L	2.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
o-Xylene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Styrene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Tetrachloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Toluene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Total Xylenes	ND	ND,P1	ug/L	3.0	SW846 8260C	1	01/26/2023 12:46	TMP	A



## Results

Client Sample ID	TB-04	Collected	01/17/2023 00:00
Lab Sample ID	3283430002	Lab Receipt	01/18/2023 08:42

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
trans-1,3-Dichloropropene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Trichloroethene	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Trichlorofluoromethane	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A
Vinyl Chloride	ND	ND,P1	ug/L	1.0	SW846 8260C	1	01/26/2023 12:46	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	87.3%	62 - 133	01/26/2023 12:46	
4-Bromofluorobenzene	460-00-4	112%	79 - 114	01/26/2023 12:46	
Dibromofluoromethane	1868-53-7	90.2%	78 - 116	01/26/2023 12:46	
Toluene-d8	2037-26-5	96.8%	76 - 127	01/26/2023 12:46	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3282926001	MW-03	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3282926002	MW-02	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3282926003	MW-04	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3282926004	TB-01	SW846 8260C	N/A	
3283083001	MW-05	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283083002	MW-05D	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283083003	MW-06	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283083004	MW-12	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283083005	TB-02	SW846 8260C	N/A	
3283219001	MW-07	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283219002	MW-11	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283219003	MW-10	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	





**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3283219004	MW-09	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283219005	MW-01	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283219006	TB-03	SW846 8260C	N/A	
3283430001	MW-08	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260C	N/A	
		Calculation	N/A	
		SW846 7196A	N/A	
3283430002	TB-04	SW846 8260C	N/A	



**QUALITY CONTROL SAMPLES**

**METALS**

QC Batch			
QC Batch	936952	Prep Method	SW846 7470A
Date	01/19/2023 08:21	Analysis Method	SW846 7470A
Tech.	WDA		

Associated Samples			
3282926001	3282926002	3283219004	3283219005
3283430001	3282926003	3283083001	3283083002
3283083003	3283083004	3283219001	3283219002
3283219003			

**Method Blank** 3612944 (MB) Created on 01/19/2023 06:20 For QC Batch 936952

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Mercury, Dissolved	7439-97-6_D	BLK	ND mg/L	0.00050	ND

**Lab Control Standard** 3612945 (LCS) Created on 01/19/2023 06:20 For QC Batch 936952

**RESULTS**

Compound	CAS No	Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Dissolved	7439-97-6_D	LCS	0.0019	0.0020	96	85 - 115		

**Matrix Spike** 3612946 (MS) 3282926002 For QC Batch 936952

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612947 (MSD) 3282926002 For QC Batch 936952

**RESULTS**

Compound	CAS No	Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Dissolved	7439-97-6_D	MS	0.0060	0	0.0050	119	70 - 130	
Mercury, Dissolved	7439-97-6_D	MSD	0.0040	0	0.0050	80.4	70 - 130	RPD 38.90* (Max-20)

**Matrix Spike** 3612948 (MS) 3283219002 For QC Batch 936952

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612949 (MSD) 3283219002 For QC Batch 936952

**RESULTS**

Compound	CAS No	Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Dissolved	7439-97-6_D	MS	0.0054	0.000005	0.0050	107	70 - 130	
Mercury, Dissolved	7439-97-6_D	MSD	0.0061	0.000005	0.0050	122	70 - 130	RPD 12.60 (Max-20)



**QUALITY CONTROL SAMPLES**

**METALS (cont.)**



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS**

QC Batch			
QC Batch	936394	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260C
Tech.			

Associated Samples			
3282926001	3282926002	3282926003	3282926004
3283083001	3283083002	3283083003	3283083004
3283083005			

**Method Blank** 3612254 (MB) Created on 01/17/2023 22:28 For QC Batch 936394

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND	ug/L	1.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND	ug/L	1.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND	ug/L	1.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND	ug/L	1.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND	ug/L	2.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND	ug/L	2.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND	ug/L	7.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND	ug/L	1.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND	ug/L	1.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND	ug/L	1.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND	ug/L	1.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND	ug/L	1.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND	ug/L	1.0	ND
2-Butanone	78-93-3	BLK	ND	ug/L	10.0	ND
2-Hexanone	591-78-6	BLK	ND	ug/L	5.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND	ug/L	5.0	ND
Acetone	67-64-1	BLK	ND	ug/L	10.0	ND
Benzene	71-43-2	BLK	ND	ug/L	1.0	ND
Bromochloromethane	74-97-5	BLK	ND	ug/L	1.0	ND
Bromodichloromethane	75-27-4	BLK	ND	ug/L	1.0	ND
Bromoform	75-25-2	BLK	ND	ug/L	1.0	ND
Bromomethane	74-83-9	BLK	ND	ug/L	1.0	ND
Carbon Disulfide	75-15-0	BLK	ND	ug/L	1.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND	ug/L	1.0	ND
Chlorobenzene	108-90-7	BLK	ND	ug/L	1.0	ND
Chlorodibromomethane	124-48-1	BLK	ND	ug/L	1.0	ND
Chloroethane	75-00-3	BLK	ND	ug/L	1.0	ND
Chloroform	67-66-3	BLK	ND	ug/L	1.0	ND
Chloromethane	74-87-3	BLK	ND	ug/L	1.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND	ug/L	1.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND	ug/L	1.0	ND
Cyclohexane	110-82-7	BLK	ND	ug/L	1.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND	ug/L	1.0	ND
Ethylbenzene	100-41-4	BLK	ND	ug/L	1.0	ND
Freon 113	76-13-1	BLK	ND	ug/L	1.0	ND
Isopropylbenzene	98-82-8	BLK	ND	ug/L	1.0	ND
Methyl acetate	79-20-9	BLK	ND	ug/L	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND	ug/L	1.0	ND



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/L	1.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/L	1.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/L	2.0	ND
o-Xylene	95-47-6	BLK	ND	ug/L	1.0	ND
Styrene	100-42-5	BLK	ND	ug/L	1.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/L	1.0	ND
Toluene	108-88-3	BLK	ND	ug/L	1.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/L	3.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/L	1.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/L	1.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/L	1.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/L	1.0	ND
Vinyl Chloride	75-01-4	BLK	ND	ug/L	1.0	ND

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	26.50	30	88.4	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	33.30	30	111	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	26.40	30	87.8	78 - 116	
Toluene-d8	2037-26-5	BLK	29.30	30	97.8	76 - 127	

Lab Control Standard

3612255 (LCS)

Created on 01/17/2023 22:28

For QC Batch 936394

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	21		20	105	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	21.60		20	108	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.50		20	103	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20.70		20	103	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.60		20	108	63 - 128		
1,2,3-Trichlorobenzene	87-61-6	LCS	21		20	105	61 - 126		
1,2,4-Trichlorobenzene	120-82-1	LCS	21		20	105	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	19.40		20	97.2	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	20.60		20	103	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	21.10		20	105	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.40		20	102	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	21		20	105	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	21.60		20	108	81 - 118		
1,4-Dichlorobenzene	106-46-7	LCS	21.30		20	106	81 - 116		
2-Butanone	78-93-3	LCS	93.30		100	93.3	50 - 152		
2-Hexanone	591-78-6	LCS	97.10		100	97.1	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	112		100	112	71 - 146		
Acetone	67-64-1	LCS	104		100	104	40 - 151		
Benzene	71-43-2	LCS	21.30		20	106	80 - 124		



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Bromochloromethane	74-97-5	LCS	21		20	105	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.80		20	104	79 - 126		
Bromoform	75-25-2	LCS	21.50		20	107	70 - 123		
Bromomethane	74-83-9	LCS	21		20	105	45 - 148		
Carbon Disulfide	75-15-0	LCS	22.30		20	112	57 - 131		
Carbon Tetrachloride	56-23-5	LCS	21.50		20	107	62 - 132		
Chlorobenzene	108-90-7	LCS	20.50		20	103	85 - 117		
Chlorodibromomethane	124-48-1	LCS	18		20	90.2	77 - 122		
Chloroethane	75-00-3	LCS	23.80		20	119	51 - 142		
Chloroform	67-66-3	LCS	20.80		20	104	78 - 122		
Chloromethane	74-87-3	LCS	20.30		20	101	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	20.90		20	104	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.70		20	103	81 - 121		
Cyclohexane	110-82-7	LCS	22.50		20	113	66 - 130		
Dichlorodifluoromethane	75-71-8	LCS	24		20	120	17 - 166		
Ethylbenzene	100-41-4	LCS	21.20		20	106	80 - 124		
Freon 113	76-13-1	LCS	22.80		20	114	50 - 130		
Isopropylbenzene	98-82-8	LCS	23.20		20	116	73 - 129		
Methyl acetate	79-20-9	LCS	18.80		20	94.1	70 - 130		
Methyl cyclohexane	108-87-2	LCS	22		20	110	70 - 130		
Methyl t-Butyl Ether	1634-04-4	LCS	20.40		20	102	69 - 115		
Methylene Chloride	75-09-2	LCS	20.50		20	102	76 - 121		
mp-Xylene	108383/106423	LCS	43.30		40	108	79 - 125		
o-Xylene	95-47-6	LCS	21.20		20	106	79 - 124		
Styrene	100-42-5	LCS	22.60		20	113	79 - 123		
Tetrachloroethene	127-18-4	LCS	20.70		20	103	72 - 124		
Toluene	108-88-3	LCS	21.40		20	107	80 - 125		
Total Xylenes	1330-20-7	LCS	64.50		60	108	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	21.20		20	106	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21		20	105	78 - 126		
Trichloroethene	79-01-6	LCS	19.60		20	98	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	21.50		20	107	38 - 123		
Vinyl Chloride	75-01-4	LCS	22.30		20	112	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	26.70	30	88.9	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	32.20	30	107	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	26.80	30	89.4	78 - 116	
Toluene-d8	2037-26-5	LCS	28.10	30	93.6	76 - 127	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

QC Batch		Prep Method		N/A	
QC Batch	937135	Prep Method	N/A		
Date	N/A	Analysis Method	SW846 8260C		
Tech.					

Associated Samples  
 3282926001

Method Blank 3613232 (MB) Created on 01/19/2023 12:42 For QC Batch 937135

RESULTS

Compound	CAS No	Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND ug/L	1.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND ug/L	1.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND ug/L	1.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND ug/L	1.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND ug/L	2.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND ug/L	2.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND ug/L	7.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND ug/L	1.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND ug/L	1.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND ug/L	1.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND ug/L	1.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND ug/L	1.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND ug/L	1.0	ND
2-Butanone	78-93-3	BLK	ND ug/L	10.0	ND
2-Hexanone	591-78-6	BLK	ND ug/L	5.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND ug/L	5.0	ND
Acetone	67-64-1	BLK	ND ug/L	10.0	ND
Benzene	71-43-2	BLK	ND ug/L	1.0	ND
Bromochloromethane	74-97-5	BLK	ND ug/L	1.0	ND
Bromodichloromethane	75-27-4	BLK	ND ug/L	1.0	ND
Bromoform	75-25-2	BLK	ND ug/L	1.0	ND
Bromomethane	74-83-9	BLK	ND ug/L	1.0	ND
Carbon Disulfide	75-15-0	BLK	ND ug/L	1.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND ug/L	1.0	ND
Chlorobenzene	108-90-7	BLK	ND ug/L	1.0	ND
Chlorodibromomethane	124-48-1	BLK	ND ug/L	1.0	ND
Chloroethane	75-00-3	BLK	ND ug/L	1.0	ND
Chloroform	67-66-3	BLK	ND ug/L	1.0	ND
Chloromethane	74-87-3	BLK	ND ug/L	1.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND ug/L	1.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND ug/L	1.0	ND
Cyclohexane	110-82-7	BLK	ND ug/L	1.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND ug/L	1.0	ND
Ethylbenzene	100-41-4	BLK	ND ug/L	1.0	ND
Freon 113	76-13-1	BLK	ND ug/L	1.0	ND
Isopropylbenzene	98-82-8	BLK	ND ug/L	1.0	ND
Methyl acetate	79-20-9	BLK	ND ug/L	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND ug/L	1.0	ND



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/L	1.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/L	1.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/L	2.0	ND
o-Xylene	95-47-6	BLK	ND	ug/L	1.0	ND
Styrene	100-42-5	BLK	ND	ug/L	1.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/L	1.0	ND
Toluene	108-88-3	BLK	ND	ug/L	1.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/L	3.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/L	1.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/L	1.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/L	1.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/L	1.0	ND
Vinyl Chloride	75-01-4	BLK	ND	ug/L	1.0	ND

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	25.10	30	83.6	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	32.70	30	109	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	26.20	30	87.3	78 - 116	
Toluene-d8	2037-26-5	BLK	28.70	30	95.8	76 - 127	

**Lab Control Standard**

3613233 (LCS)

Created on 01/19/2023 12:42

For QC Batch 937135

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	20.30		20	101	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	22.90		20	115	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.50		20	102	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	20		20	100	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.40		20	107	63 - 128		
1,2,3-Trichlorobenzene	87-61-6	LCS	22.70		20	114	61 - 126		
1,2,4-Trichlorobenzene	120-82-1	LCS	22.90		20	115	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	22		20	110	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	20.80		20	104	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	21.80		20	109	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.20		20	101	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.50		20	102	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	22		20	110	81 - 118		
1,4-Dichlorobenzene	106-46-7	LCS	22		20	110	81 - 116		
2-Butanone	78-93-3	LCS	116		100	116	50 - 152		
2-Hexanone	591-78-6	LCS	107		100	107	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	119		100	119	71 - 146		
Acetone	67-64-1	LCS	117		100	117	40 - 151		
Benzene	71-43-2	LCS	20.70		20	103	80 - 124		





QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Bromochloromethane	74-97-5	LCS	20.90		20	104	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.90		20	104	79 - 126		
Bromoform	75-25-2	LCS	22.60		20	113	70 - 123		
Bromomethane	74-83-9	LCS	30.60		20	153*	45 - 148		
Carbon Disulfide	75-15-0	LCS	23.60		20	118	57 - 131		
Carbon Tetrachloride	56-23-5	LCS	21.80		20	109	62 - 132		
Chlorobenzene	108-90-7	LCS	19.90		20	99.3	85 - 117		
Chlorodibromomethane	124-48-1	LCS	17.90		20	89.6	77 - 122		
Chloroethane	75-00-3	LCS	24.10		20	120	51 - 142		
Chloroform	67-66-3	LCS	20.20		20	101	78 - 122		
Chloromethane	74-87-3	LCS	20.50		20	103	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	20.70		20	103	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.40		20	102	81 - 121		
Cyclohexane	110-82-7	LCS	22.90		20	115	66 - 130		
Dichlorodifluoromethane	75-71-8	LCS	23.30		20	116	17 - 166		
Ethylbenzene	100-41-4	LCS	20.80		20	104	80 - 124		
Freon 113	76-13-1	LCS	23		20	115	50 - 130		
Isopropylbenzene	98-82-8	LCS	23.10		20	116	73 - 129		
Methyl acetate	79-20-9	LCS	21.10		20	106	70 - 130		
Methyl cyclohexane	108-87-2	LCS	23.50		20	117	70 - 130		
Methyl t-Butyl Ether	1634-04-4	LCS	21.20		20	106	69 - 115		
Methylene Chloride	75-09-2	LCS	20.60		20	103	76 - 121		
mp-Xylene	108383/106423	LCS	42.30		40	106	79 - 125		
o-Xylene	95-47-6	LCS	20.60		20	103	79 - 124		
Styrene	100-42-5	LCS	22.10		20	110	79 - 123		
Tetrachloroethene	127-18-4	LCS	19.40		20	97	72 - 124		
Toluene	108-88-3	LCS	20.70		20	103	80 - 125		
Total Xylenes	1330-20-7	LCS	62.80		60	105	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.60		20	103	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21.50		20	107	78 - 126		
Trichloroethene	79-01-6	LCS	19		20	95.2	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	20.30		20	102	38 - 123		
Vinyl Chloride	75-01-4	LCS	22.20		20	111	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	27	30	90	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	32.70	30	109	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	27.50	30	91.6	78 - 116	
Toluene-d8	2037-26-5	LCS	28.30	30	94.4	76 - 127	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

QC Batch

QC Batch	937662	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260C
Tech.			

Associated Samples

3283219005	3283219006	3283219001	3283219002
3283219003	3283219004		

Method Blank

3614377 (MB)

Created on 01/23/2023 13:39

For QC Batch 937662

RESULTS

Compound	CAS No	Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND ug/L	1.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND ug/L	1.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND ug/L	1.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND ug/L	1.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND ug/L	2.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND ug/L	2.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND ug/L	7.0	ND
1,2-Dibromoethane	106-93-4	BLK	ND ug/L	1.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND ug/L	1.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND ug/L	1.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND ug/L	1.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND ug/L	1.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND ug/L	1.0	ND
2-Butanone	78-93-3	BLK	ND ug/L	10.0	ND
2-Hexanone	591-78-6	BLK	ND ug/L	5.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND ug/L	5.0	ND
Acetone	67-64-1	BLK	ND ug/L	10.0	ND
Benzene	71-43-2	BLK	ND ug/L	1.0	ND
Bromochloromethane	74-97-5	BLK	ND ug/L	1.0	ND
Bromodichloromethane	75-27-4	BLK	ND ug/L	1.0	ND
Bromoform	75-25-2	BLK	ND ug/L	1.0	ND
Bromomethane	74-83-9	BLK	ND ug/L	1.0	ND
Carbon Disulfide	75-15-0	BLK	ND ug/L	1.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND ug/L	1.0	ND
Chlorobenzene	108-90-7	BLK	ND ug/L	1.0	ND
Chlorodibromomethane	124-48-1	BLK	ND ug/L	1.0	ND
Chloroethane	75-00-3	BLK	ND ug/L	1.0	ND
Chloroform	67-66-3	BLK	ND ug/L	1.0	ND
Chloromethane	74-87-3	BLK	ND ug/L	1.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND ug/L	1.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND ug/L	1.0	ND
Cyclohexane	110-82-7	BLK	ND ug/L	1.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND ug/L	1.0	ND
Ethylbenzene	100-41-4	BLK	ND ug/L	1.0	ND
Freon 113	76-13-1	BLK	ND ug/L	1.0	ND
Isopropylbenzene	98-82-8	BLK	ND ug/L	1.0	ND
Methyl acetate	79-20-9	BLK	8.9 ug/L	2.0	
Methyl cyclohexane	108-87-2	BLK	ND ug/L	1.0	ND



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/L	1.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/L	1.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/L	2.0	ND
o-Xylene	95-47-6	BLK	ND	ug/L	1.0	ND
Styrene	100-42-5	BLK	ND	ug/L	1.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/L	1.0	ND
Toluene	108-88-3	BLK	ND	ug/L	1.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/L	3.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/L	1.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/L	1.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/L	1.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/L	1.0	ND
Vinyl Chloride	75-01-4	BLK	ND	ug/L	1.0	ND

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	29.90	30	99.7	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	30	30	100	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	28.70	30	95.6	78 - 116	
Toluene-d8	2037-26-5	BLK	29.90	30	99.6	76 - 127	

**Lab Control Standard** 3614378 (LCS) Created on 01/23/2023 13:39 For QC Batch 937662

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	23.90		20	120	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	19.70		20	98.3	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	18.90		20	94.7	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	23.60		20	118	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	26.70		20	134*	63 - 128		
1,2,3-Trichlorobenzene	87-61-6	LCS	16.70		20	83.7	61 - 126		
1,2,4-Trichlorobenzene	120-82-1	LCS	18.20		20	90.9	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	14.50		20	72.7	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	19.60		20	98.1	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	18.60		20	93	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	21.60		20	108	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.10		20	101	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	19		20	94.8	81 - 118		
1,4-Dichlorobenzene	106-46-7	LCS	18.50		20	92.4	81 - 116		
2-Butanone	78-93-3	LCS	104		100	104	50 - 152		
2-Hexanone	591-78-6	LCS	87.60		100	87.6	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	89.30		100	89.3	71 - 146		
Acetone	67-64-1	LCS	91.90		100	91.9	40 - 151		
Benzene	71-43-2	LCS	21.50		20	108	80 - 124		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Bromochloromethane	74-97-5	LCS	20.80		20	104	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.10		20	100	79 - 126		
Bromoform	75-25-2	LCS	15.80		20	79.2	70 - 123		
Bromomethane	74-83-9	LCS	23.50		20	118	45 - 148		
Carbon Disulfide	75-15-0	LCS	30.50		20	152*	57 - 131		
Carbon Tetrachloride	56-23-5	LCS	23.70		20	119	62 - 132		
Chlorobenzene	108-90-7	LCS	19.10		20	95.6	85 - 117		
Chlorodibromomethane	124-48-1	LCS	16.70		20	83.4	77 - 122		
Chloroethane	75-00-3	LCS	10.80		20	54.1	51 - 142		
Chloroform	67-66-3	LCS	22.70		20	114	78 - 122		
Chloromethane	74-87-3	LCS	21.60		20	108	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	23.80		20	119	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	17.30		20	86.3	81 - 121		
Cyclohexane	110-82-7	LCS	26.60		20	133*	66 - 130		
Dichlorodifluoromethane	75-71-8	LCS	21.30		20	107	17 - 166		
Ethylbenzene	100-41-4	LCS	19.50		20	97.5	80 - 124		
Freon 113	76-13-1	LCS	25.60		20	128	50 - 130		
Isopropylbenzene	98-82-8	LCS	20.40		20	102	73 - 129		
Methyl acetate	79-20-9	LCS	31.40		20	157*	70 - 130		
Methyl cyclohexane	108-87-2	LCS	23.50		20	117	70 - 130		
Methyl t-Butyl Ether	1634-04-4	LCS	21.40		20	107	69 - 115		
Methylene Chloride	75-09-2	LCS	21.80		20	109	76 - 121		
mp-Xylene	108383/106423	LCS	39.70		40	99.4	79 - 125		
o-Xylene	95-47-6	LCS	19.30		20	96.6	79 - 124		
Styrene	100-42-5	LCS	20.10		20	101	79 - 123		
Tetrachloroethene	127-18-4	LCS	19.80		20	99	72 - 124		
Toluene	108-88-3	LCS	19.50		20	97.5	80 - 125		
Total Xylenes	1330-20-7	LCS	59.10		60	98.4	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	25.70		20	129*	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	17.30		20	86.3	78 - 126		
Trichloroethene	79-01-6	LCS	19.70		20	98.4	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	10.80		20	53.8	38 - 123		
Vinyl Chloride	75-01-4	LCS	20.40		20	102	27 - 138		

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	32.10	30	107	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	30.10	30	100	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	30.80	30	103	78 - 116	
Toluene-d8	2037-26-5	LCS	30.20	30	101	76 - 127	



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

**Matrix Spike** 3614450 (MS) 3283219005 For QC Batch 937662

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3614451 (MSD) 3283219005 For QC Batch 937662

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	MS	24.70	0.31	20	122	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	23.80	0.31	20	118	66 - 130	RPD <u>3.86</u>	(Max-20)
1,1,2,2-Tetrachloroethane	79-34-5	MS	21.60	0	20	108	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	21.80	0	20	109	74 - 135	RPD <u>0.67</u>	(Max-16)
1,1,2-Trichloroethane	79-00-5	MS	21.20	0	20	106	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	20.10	0	20	100	82 - 126	RPD <u>5.76</u>	(Max-15)
1,1-Dichloroethane	75-34-3	MS	21.20	0	20	106	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	21.70	0	20	108	78 - 124	RPD <u>2.33</u>	(Max-15)
1,1-Dichloroethene	75-35-4	MS	25.20	0	20	126	63 - 128		
1,1-Dichloroethene	75-35-4	MSD	25	0	20	125	63 - 128	RPD <u>1.05</u>	(Max-21)
1,2,3-Trichlorobenzene	87-61-6	MS	19	0	20	94.8	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	19.10	0	20	95.6	61 - 126	RPD <u>0.89</u>	(Max-36)
1,2,4-Trichlorobenzene	120-82-1	MS	21.10	0	20	105	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	21.10	0	20	106	67 - 123	RPD <u>0.32</u>	(Max-22)
1,2-Dibromo-3-chloropropane	96-12-8	MS	14.90	0	20	74.7	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	14.20	0	20	70.9	59 - 133	RPD <u>5.14</u>	(Max-26)
1,2-Dibromoethane	106-93-4	MS	21.40	0	20	107	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	20.60	0	20	103	80 - 124	RPD <u>3.86</u>	(Max-19)
1,2-Dichlorobenzene	95-50-1	MS	20.60	0	20	103	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	20	0	20	100	82 - 118	RPD <u>2.61</u>	(Max-15)
1,2-Dichloroethane	107-06-2	MS	23	0	20	115	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	21.10	0	20	106	70 - 133	RPD <u>8.46</u>	(Max-19)
1,2-Dichloropropane	78-87-5	MS	23	0	20	115	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	21.40	0	20	107	81 - 127	RPD <u>7.31</u>	(Max-15)
1,3-Dichlorobenzene	541-73-1	MS	21.10	0	20	105	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	20.50	0	20	103	81 - 118	RPD <u>2.80</u>	(Max-16)
1,4-Dichlorobenzene	106-46-7	MS	20.70	0	20	103	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	20.10	0	20	100	81 - 116	RPD <u>3.01</u>	(Max-15)
2-Butanone	78-93-3	MS	105	0	100	105	50 - 152		
2-Butanone	78-93-3	MSD	109	0	100	109	50 - 152	RPD <u>3.76</u>	(Max-16)
2-Hexanone	591-78-6	MS	90.10	0	100	90.1	65 - 154		
2-Hexanone	591-78-6	MSD	87.70	0	100	87.7	65 - 154	RPD <u>2.79</u>	(Max-17)
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	91.40	0	100	91.4	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	88	0	100	88	71 - 146	RPD <u>3.79</u>	(Max-16)
Acetone	67-64-1	MS	81.30	0	100	81.3	40 - 151		
Acetone	67-64-1	MSD	93.20	0	100	93.2	40 - 151	RPD <u>13.60</u>	(Max-40)
Benzene	71-43-2	MS	23.40	0	20	117	80 - 124		
Benzene	71-43-2	MSD	21.60	0	20	108	80 - 124	RPD <u>7.64</u>	(Max-26)
Bromochloromethane	74-97-5	MS	22.40	0	20	112	73 - 117		
Bromochloromethane	74-97-5	MSD	22.40	0	20	112	73 - 117	RPD <u>0.14</u>	(Max-19)
Bromodichloromethane	75-27-4	MS	23	0	20	115	79 - 126		
Bromodichloromethane	75-27-4	MSD	22.20	0	20	111	79 - 126	RPD <u>3.40</u>	(Max-16)



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Bromoform	75-25-2	MS	18.80	0	20	93.8	70 - 123		
Bromoform	75-25-2	MSD	17.40	0	20	87.2	70 - 123	RPD	<u>7.29</u> (Max-16)
Bromomethane	74-83-9	MS	15.40	0	20	77.1	45 - 148		
Bromomethane	74-83-9	MSD	14.20	0	20	71.2	45 - 148	RPD	<u>7.89</u> (Max-26)
Carbon Disulfide	75-15-0	MS	29.30	0	20	147*	57 - 131		
Carbon Disulfide	75-15-0	MSD	29.30	0	20	146*	57 - 131	RPD	<u>0.30</u> (Max-28)
Carbon Tetrachloride	56-23-5	MS	25.90	0	20	130	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	24	0	20	120	62 - 132	RPD	<u>7.64</u> (Max-17)
Chlorobenzene	108-90-7	MS	21.50	0	20	107	85 - 117		
Chlorobenzene	108-90-7	MSD	20.30	0	20	102	85 - 117	RPD	<u>5.56</u> (Max-15)
Chlorodibromomethane	124-48-1	MS	18.30	0	20	91.3	77 - 122		
Chlorodibromomethane	124-48-1	MSD	17.30	0	20	86.4	77 - 122	RPD	<u>5.46</u> (Max-15)
Chloroethane	75-00-3	MS	14.10	0	20	70.6	51 - 142		
Chloroethane	75-00-3	MSD	13.70	0	20	68.7	51 - 142	RPD	<u>2.77</u> (Max-24)
Chloroform	67-66-3	MS	22.40	0	20	112	78 - 122		
Chloroform	67-66-3	MSD	21.50	0	20	107	78 - 122	RPD	<u>4.25</u> (Max-16)
Chloromethane	74-87-3	MS	23.50	0	20	117	38 - 156		
Chloromethane	74-87-3	MSD	22.50	0	20	113	38 - 156	RPD	<u>4.26</u> (Max-27)
cis-1,2-Dichloroethene	156-59-2	MS	22.80	0	20	114	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	21.50	0	20	108	78 - 125	RPD	<u>5.79</u> (Max-21)
cis-1,3-Dichloropropene	10061-01-5	MS	18.40	0	20	92.1	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	16.10	0	20	80.7*	81 - 121	RPD	<u>13.30</u> (Max-16)
Cyclohexane	110-82-7	MS	28.70	0	20	143*	66 - 130		
Cyclohexane	110-82-7	MSD	27.80	0	20	139*	66 - 130	RPD	<u>2.97</u> (Max-20)
Dichlorodifluoromethane	75-71-8	MS	24.70	0	20	124	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	24.40	0	20	122	17 - 166	RPD	<u>1.29</u> (Max-24)
Ethylbenzene	100-41-4	MS	22.60	0	20	113	80 - 124		
Ethylbenzene	100-41-4	MSD	21.30	0	20	106	80 - 124	RPD	<u>6.30</u> (Max-19)
Freon 113	76-13-1	MS	29.10	0	20	146*	50 - 130		
Freon 113	76-13-1	MSD	30.20	0	20	151*	50 - 130	RPD	<u>3.61</u> (Max-26)
Isopropylbenzene	98-82-8	MS	25.90	0	20	129	73 - 129		
Isopropylbenzene	98-82-8	MSD	23.80	0	20	119	73 - 129	RPD	<u>8.50</u> (Max-18)
Methyl acetate	79-20-9	MS	23.70	6.90	20	84.2	70 - 130		
Methyl acetate	79-20-9	MSD	27.70	6.90	20	104	70 - 130	RPD	<u>15.50</u> (Max-18)
Methyl cyclohexane	108-87-2	MS	26.60	0	20	133*	70 - 130		
Methyl cyclohexane	108-87-2	MSD	24.60	0	20	123	70 - 130	RPD	<u>7.84</u> (Max-18)
Methyl t-Butyl Ether	1634-04-4	MS	18.70	0	20	93.6	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	20.30	0	20	102	69 - 115	RPD	<u>8.14</u> (Max-20)
Methylene Chloride	75-09-2	MS	20.80	0	20	104	76 - 121		
Methylene Chloride	75-09-2	MSD	21.50	0	20	108	76 - 121	RPD	<u>3.49</u> (Max-17)
mp-Xylene	108383/106423	MS	46.10	0	40	115	79 - 125		
mp-Xylene	108383/106423	MSD	42.90	0	40	107	79 - 125	RPD	<u>7.21</u> (Max-21)
o-Xylene	95-47-6	MS	22.10	0	20	110	79 - 124		
o-Xylene	95-47-6	MSD	20.60	0	20	103	79 - 124	RPD	<u>7.04</u> (Max-19)
Styrene	100-42-5	MS	24.20	0	20	121	79 - 123		
Styrene	100-42-5	MSD	21.90	0	20	110	79 - 123	RPD	<u>10.10</u> (Max-16)
Tetrachloroethene	127-18-4	MS	26.10	3.70	20	112	72 - 124		
Tetrachloroethene	127-18-4	MSD	23.40	3.70	20	98.8	72 - 124	RPD	<u>10.70</u> (Max-38)
Toluene	108-88-3	MS	22.10	0	20	111	80 - 125		



**QUALITY CONTROL SAMPLES**

**VOLATILE ORGANICS (cont.)**

*RESULTS*

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Toluene	108-88-3	MSD	18.90	0	20	94.7	80 - 125	RPD 15.50 (Max-20)	
Total Xylenes	1330-20-7	MS	68.20	0	60	114	79 - 125		
Total Xylenes	1330-20-7	MSD	63.50	0	60	106	79 - 125	RPD 7.16 (Max-35)	
trans-1,2-Dichloroethene	156-60-5	MS	22.50	0	20	113	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	22.20	0	20	111	71 - 122	RPD 1.41 (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	18.30	0	20	91.7	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	17.10	0	20	85.5	78 - 126	RPD 6.99 (Max-18)	
Trichloroethene	79-01-6	MS	23.70	1.30	20	112	77 - 124		
Trichloroethene	79-01-6	MSD	21.50	1.30	20	101	77 - 124	RPD 9.94 (Max-18)	
Trichlorofluoromethane	75-69-4	MS	18	0	20	89.8	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	22.30	0	20	112	38 - 123	RPD 21.70 (Max-23)	
Vinyl Chloride	75-01-4	MS	22.80	0	20	114	27 - 138		
Vinyl Chloride	75-01-4	MSD	20.80	0	20	104	27 - 138	RPD 8.94 (Max-40)	

*SURROGATES*

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	30.10	30	100	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	30.70	30	102	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	32.30	30	108	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	33.70	30	112	79 - 114	
Dibromofluoromethane	1868-53-7	MS	28.90	30	96.2	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	30.40	30	101	78 - 116	
Toluene-d8	2037-26-5	MS	29.20	30	97.4	76 - 127	
Toluene-d8	2037-26-5	MSD	27.20	30	90.8	76 - 127	

**QC Batch**

**Associated Samples**

QC Batch	939059	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260C
Tech.			

3283430001 3283430002

**Method Blank**

3616160 (MB)

Created on 01/26/2023 12:10

For QC Batch 939059

*RESULTS*

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1-Trichloroethane	71-55-6	BLK	ND	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	79-34-5	BLK	ND	ug/L	1.0	ND
1,1,2-Trichloroethane	79-00-5	BLK	ND	ug/L	1.0	ND
1,1-Dichloroethane	75-34-3	BLK	ND	ug/L	1.0	ND
1,1-Dichloroethene	75-35-4	BLK	ND	ug/L	1.0	ND
1,2,3-Trichlorobenzene	87-61-6	BLK	ND	ug/L	2.0	ND
1,2,4-Trichlorobenzene	120-82-1	BLK	ND	ug/L	2.0	ND
1,2-Dibromo-3-chloropropane	96-12-8	BLK	ND	ug/L	7.0	ND



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,2-Dibromoethane	106-93-4	BLK	ND	ug/L	1.0	ND
1,2-Dichlorobenzene	95-50-1	BLK	ND	ug/L	1.0	ND
1,2-Dichloroethane	107-06-2	BLK	ND	ug/L	1.0	ND
1,2-Dichloropropane	78-87-5	BLK	ND	ug/L	1.0	ND
1,3-Dichlorobenzene	541-73-1	BLK	ND	ug/L	1.0	ND
1,4-Dichlorobenzene	106-46-7	BLK	ND	ug/L	1.0	ND
2-Butanone	78-93-3	BLK	ND	ug/L	10.0	ND
2-Hexanone	591-78-6	BLK	ND	ug/L	5.0	ND
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	ND	ug/L	5.0	ND
Acetone	67-64-1	BLK	ND	ug/L	10.0	ND
Benzene	71-43-2	BLK	ND	ug/L	1.0	ND
Bromochloromethane	74-97-5	BLK	ND	ug/L	1.0	ND
Bromodichloromethane	75-27-4	BLK	ND	ug/L	1.0	ND
Bromoform	75-25-2	BLK	ND	ug/L	1.0	ND
Bromomethane	74-83-9	BLK	ND	ug/L	1.0	ND
Carbon Disulfide	75-15-0	BLK	ND	ug/L	1.0	ND
Carbon Tetrachloride	56-23-5	BLK	ND	ug/L	1.0	ND
Chlorobenzene	108-90-7	BLK	ND	ug/L	1.0	ND
Chlorodibromomethane	124-48-1	BLK	ND	ug/L	1.0	ND
Chloroethane	75-00-3	BLK	ND	ug/L	1.0	ND
Chloroform	67-66-3	BLK	ND	ug/L	1.0	ND
Chloromethane	74-87-3	BLK	ND	ug/L	1.0	ND
cis-1,2-Dichloroethene	156-59-2	BLK	ND	ug/L	1.0	ND
cis-1,3-Dichloropropene	10061-01-5	BLK	ND	ug/L	1.0	ND
Cyclohexane	110-82-7	BLK	ND	ug/L	1.0	ND
Dichlorodifluoromethane	75-71-8	BLK	ND	ug/L	1.0	ND
Ethylbenzene	100-41-4	BLK	ND	ug/L	1.0	ND
Freon 113	76-13-1	BLK	ND	ug/L	1.0	ND
Isopropylbenzene	98-82-8	BLK	ND	ug/L	1.0	ND
Methyl acetate	79-20-9	BLK	ND	ug/L	2.0	ND
Methyl cyclohexane	108-87-2	BLK	ND	ug/L	1.0	ND
Methyl t-Butyl Ether	1634-04-4	BLK	ND	ug/L	1.0	ND
Methylene Chloride	75-09-2	BLK	ND	ug/L	1.0	ND
mp-Xylene	108383/106423	BLK	ND	ug/L	2.0	ND
o-Xylene	95-47-6	BLK	ND	ug/L	1.0	ND
Styrene	100-42-5	BLK	ND	ug/L	1.0	ND
Tetrachloroethene	127-18-4	BLK	ND	ug/L	1.0	ND
Toluene	108-88-3	BLK	ND	ug/L	1.0	ND
Total Xylenes	1330-20-7	BLK	ND	ug/L	3.0	ND
trans-1,2-Dichloroethene	156-60-5	BLK	ND	ug/L	1.0	ND
trans-1,3-Dichloropropene	10061-02-6	BLK	ND	ug/L	1.0	ND
Trichloroethene	79-01-6	BLK	ND	ug/L	1.0	ND
Trichlorofluoromethane	75-69-4	BLK	ND	ug/L	1.0	ND
Vinyl Chloride	75-01-4	BLK	ND	ug/L	1.0	ND





QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	27.20	30	90.8	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	33.20	30	111	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	27	30	89.9	78 - 116	
Toluene-d8	2037-26-5	BLK	30.20	30	101	76 - 127	

Lab Control Standard

3616161 (LCS)

Created on 01/26/2023 12:10

For QC Batch 939059

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1-Trichloroethane	71-55-6	LCS	19.90		20	99.6	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	20.70		20	104	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20		20	100	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	19.70		20	98.6	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	20.40		20	102	63 - 128		
1,2,3-Trichlorobenzene	87-61-6	LCS	20.10		20	101	61 - 126		
1,2,4-Trichlorobenzene	120-82-1	LCS	20.70		20	104	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	22.80		20	114	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	19.70		20	98.5	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	19		20	94.9	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.60		20	103	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	20.30		20	102	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	18.90		20	94.4	81 - 118		
1,4-Dichlorobenzene	106-46-7	LCS	19.40		20	97	81 - 116		
2-Butanone	78-93-3	LCS	95.90		100	95.9	50 - 152		
2-Hexanone	591-78-6	LCS	101		100	101	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	101		100	101	71 - 146		
Acetone	67-64-1	LCS	134		100	134	40 - 151		
Benzene	71-43-2	LCS	20.60		20	103	80 - 124		
Bromochloromethane	74-97-5	LCS	20.50		20	103	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.40		20	102	79 - 126		
Bromoform	75-25-2	LCS	20.40		20	102	70 - 123		
Bromomethane	74-83-9	LCS	20.90		20	105	45 - 148		
Carbon Disulfide	75-15-0	LCS	22.40		20	112	57 - 131		
Carbon Tetrachloride	56-23-5	LCS	20.40		20	102	62 - 132		
Chlorobenzene	108-90-7	LCS	18.70		20	93.7	85 - 117		
Chlorodibromomethane	124-48-1	LCS	19.50		20	97.6	77 - 122		
Chloroethane	75-00-3	LCS	23.10		20	116	51 - 142		
Chloroform	67-66-3	LCS	20.30		20	102	78 - 122		
Chloromethane	74-87-3	LCS	21.70		20	109	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	21		20	105	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	17.80		20	89	81 - 121		
Cyclohexane	110-82-7	LCS	21.30		20	107	66 - 130		
Dichlorodifluoromethane	75-71-8	LCS	22.70		20	113	17 - 166		
Ethylbenzene	100-41-4	LCS	19.20		20	95.8	80 - 124		
Freon 113	76-13-1	LCS	21.30		20	107	50 - 130		



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Isopropylbenzene	98-82-8	LCS	20.40		20	102	73 - 129		
Methyl acetate	79-20-9	LCS	20.60		20	103	70 - 130		
Methyl cyclohexane	108-87-2	LCS	19.90		20	99.5	70 - 130		
Methyl t-Butyl Ether	1634-04-4	LCS	21.30		20	107	69 - 115		
Methylene Chloride	75-09-2	LCS	20.50		20	102	76 - 121		
mp-Xylene	108383/106423	LCS	39.10		40	97.7	79 - 125		
o-Xylene	95-47-6	LCS	18.90		20	94.6	79 - 124		
Styrene	100-42-5	LCS	18.50		20	92.7	79 - 123		
Tetrachloroethene	127-18-4	LCS	18		20	89.8	72 - 124		
Toluene	108-88-3	LCS	20		20	100	80 - 125		
Total Xylenes	1330-20-7	LCS	58		60	96.7	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.30		20	102	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	17.60		20	88.1	78 - 126		
Trichloroethene	79-01-6	LCS	19.10		20	95.3	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	21.20		20	106	38 - 123		
Vinyl Chloride	75-01-4	LCS	21.30		20	106	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	27.80	30	92.8	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	32.20	30	107	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	27.70	30	92.3	78 - 116	
Toluene-d8	2037-26-5	LCS	28.40	30	94.6	76 - 127	



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY**

QC Batch			
QC Batch	935213	Prep Method	N/A
Date	N/A	Analysis Method	SW846 7196A
Tech.			

Associated Samples			
3282926001	3282926002	3282926003	

**Method Blank** 3610948 (MB) Created on 01/13/2023 10:03 For QC Batch 935213

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND

**Matrix Spike** 3610950 (MS) 3282926001 For QC Batch 935213

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3610951 (MSD) 3282926001 For QC Batch 935213

**RESULTS**

Compound	CAS No	Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	0.50	0.0026	0.50	99.5	85 - 115	
Hexavalent Chromium	CR6	MSD	0.51	0.0026	0.50	101	RPD 1.53 (Max-20)	

**Method Blank** 3610952 (MB) Created on 01/13/2023 10:03 For QC Batch 935213

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND

QC Batch			
QC Batch	935467	Prep Method	N/A
Date	N/A	Analysis Method	SW846 7196A
Tech.			

Associated Samples			
3283083001	3283083002	3283083003	3283083004

**Method Blank** 3611336 (MB) Created on 01/14/2023 09:32 For QC Batch 935467

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

**Matrix Spike** 3611338 (MS) 3283083001 For QC Batch 935467

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3611339 (MSD) 3283083001 For QC Batch 935467

**RESULTS**

Compound	CAS No		Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	0.52	0	0.50	105	85 - 115		
Hexavalent Chromium	CR6	MSD	0.52	0	0.50	104	85 - 115	RPD <u>0.51</u> (Max-20)	

**Method Blank** 3611340 (MB) Created on 01/14/2023 09:32 For QC Batch 935467

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND	mg/L	0.010	ND

QC Batch		Prep Method	
QC Batch	936307	Prep Method	N/A
Date	N/A	Analysis Method	SW846 7196A
Tech.			

**Associated Samples**

3283219004	3283219005	3283219001	3283219002
3283219003			

**Method Blank** 3611981 (MB) Created on 01/17/2023 09:59 For QC Batch 936307

**RESULTS**

Compound	CAS No		Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND	mg/L	0.010	ND

**Matrix Spike** 3611983 (MS) 3283219004 For QC Batch 936307

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3611984 (MSD) 3283219004 For QC Batch 936307

**RESULTS**

Compound	CAS No		Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS	0.51	0.0013	0.50	102	85 - 115		
Hexavalent Chromium	CR6	MSD	0.52	0.0013	0.50	103	85 - 115	RPD <u>1.03</u> (Max-20)	



**QUALITY CONTROL SAMPLES**

**WET CHEMISTRY (cont.)**

**Method Blank** 3611985 (MB) Created on 01/17/2023 09:59 For QC Batch 936307

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND

QC Batch		Prep Method	
QC Batch	936511	Prep Method	N/A
Date	N/A	Analysis Method	SW846 7196A
Tech.			

**Associated Samples**  
 3283430001

**Method Blank** 3612524 (MB) Created on 01/18/2023 10:31 For QC Batch 936511

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND

**Matrix Spike** 3612526 (MS) 3283430001 For QC Batch 936511

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

**Matrix Spike Duplicate** 3612527 (MSD) 3283430001 For QC Batch 936511

**RESULTS**

Compound	CAS No	Result (mg/L)	Orig. Result (mg/L)	Spk Added (mg/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Hexavalent Chromium	CR6	MS 0.48	0	0.50	96	85 - 115		ND
Hexavalent Chromium	CR6	MSD 0.49	0	0.50	97.6	85 - 115	RPD <u>1.71</u> (Max-20)	ND

**Method Blank** 3612528 (MB) Created on 01/18/2023 10:31 For QC Batch 936511

**RESULTS**

Compound	CAS No	Result	Units	RDL	Qualifiers
Hexavalent Chromium	CR6	BLK	ND mg/L	0.010	ND



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3282926001	MW-03	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		SW846 8260C	937135
		N/A	N/A	N/A		Calculation	
3282926002	MW-02	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935213
3282926003	MW-04	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935213
3282926004	TB-01	N/A	N/A	N/A		SW846 8260C	936394
3283083001	MW-05	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935467
3283083002	MW-05D	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935467
3283083003	MW-06	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935467
3283083004	MW-12	SW846 3015A	935508	01/15/2023 21:28	ANN	SW846 6020A	936548
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	936394
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	935467
3283083005	TB-02	N/A	N/A	N/A		SW846 8260C	936394
3283219001	MW-07	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	937662
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936307
3283219002	MW-11	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	937662
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936307
3283219003	MW-10	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	937662
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936307
3283219004	MW-09	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	937662
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936307



**Project** 2022FMA SCI Pittsburgh Phase I

**Workorder** 3282926

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3283219005	MW-01	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	937662
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936307
3283219006	TB-03	N/A	N/A	N/A		SW846 8260C	937662
3283430001	MW-08	SW846 3015A	936604	01/19/2023 22:52	ANN	SW846 6020A	937412
		SW846 7470A	936952	01/19/2023 08:21	WDA	SW846 7470A	937213
		N/A	N/A	N/A		SW846 8260C	939059
		N/A	N/A	N/A		Calculation	
		N/A	N/A	N/A		SW846 7196A	936511
3283430002	TB-04	N/A	N/A	N/A		SW846 8260C	939059



301 Fulling Mill Rd, Suite A  
Middletown, PA 17057  
P: 717-944-5541

CHAIN OF CUSTODY  
REQUEST FOR ANALY  
ALL SHADED AREAS MUST BE COMPL  
SAMPLER, INSTRUCTIONS OI

3282926  
Logged By: KSB  
PM: EXP

CC #: 2926  
Quote #:

6f

Client Name: RHEA ENGINEERS  
Address: 333 ROUSER RD  
STE 301  
MOON TWP, PA 15108

Contact: ZACH WICKS  
Phone#: 717-580-7511  
Project Name#: SEI PITT PHASE II / 2370  
Bill To:

Purchase Order #:  
 Normal-Standard TAT is 10-12 business days.  
 Rush-Subject to ALS approval and surcharges.  
 Date Required: Approved?  
 Email?

Container Type	G	P	P	Orthophosphate Filtered?	Y	N	NA	Hexavalent Chromium Filtered?	Y	N	NA
Container Size	50 ml	125 ml	500 ml								
Preservative	HCL	HNO3	UNP								

SDWA Sample Type (see key)	*Matrix (See bottom of COC)	Enter Number of Containers Per Sample or Field Results Below.
8260 TCL VOCs		2
TAL METALS - FF		2
7190 CR6		2

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm
1 MW-03	1/12/23	1400
2 MW-02	1/12/23	1225
3 MW-04	1/12/23	1540
4 TB-01	1/12/23	NA
5		
6		
7		
8		
9		
10		

Circle Sample Collector: ALS Tech / Client ID: \_\_\_\_\_

Date: 1/12/23 17:00  
1/12/23 17:30  
1.12.23 902

Relinquished By / Company Name  
 [Signature] / Rhea  
 [Signature] / ALS  
 [Signature]

Comments:

Receipt Information (completed by Receiving Lab)  
 mp Taken By: KSB Therm ID: 570 WO Temp (°C): 0  
 Receipt Info completed by: \_\_\_\_\_ WV Containers 0-6°C: Y N NA  
 Temp By: KSB WO Temp (°C): 0 Therm ID: 570  
 Deviations? NO YES IF YES, list below: NA  
 Receipt Info Completed By: DPB  
 Cooler Custody Seal Intact Y N  
 Sample Custody Seal Intact Y N  
 Received on Ice Y N  
 Cooler & Samples Intact Y N  
 Correct Containers Provided Y N  
 Sample Label/COC Agree Y N  
 Adequate Sample Volumes Y N  
 CR6 Samples Filtered Y N  
 OP Samples Filtered Y N  
 VOA Headspace Present Y N  
 VOA Trip Blank Y N  
 NLS 4 Days? Y N  
 Rad Screen (uCi) Y N  
 Courier/Tracking #: 6019 2999 81572  
 SDWA Compliance Y  
 PWSID Y  
 WV Containers 0-6°C Y N  
 e#:  
 SDWA Sample Type Key: D=Distribution E=Entry Point  
 R=Raw P=Plant C=Check S=Special A=Annual Startup  
 6019 2999 1609  
 CR60/CR3 = 24 HC TAT  
 No Samples  
 DWP  
 1/15/23  
 Contains Short Hold Testing YES NO  
 Internal Use: If less than 48 hours - notify lab upon receipt  
 Standard LW 1  CLP-like  HSCA  
 Standard LW 2  DOD  Landfill  
 Standard LW 3  NJ RED  NJ GW  
 Standard LW 4  NJ Full   
 Excel Summary  Sample Disposal  
 Equis  Lab   
 Custom  Special   
 Fomal Type  
 State Samples Collected In NY  NJ  PA  WV  FL  other



## **APPENDIX D**

**Waste Disposal Documents**

**(Provided at a Later Date)**

## **APPENDIX E**

### **Environmental Professional Resumes**

## ZACHARY D. WICKS, PWS

PROJECT MANAGER/SCIENTIST III



### FIRM

Rhea Engineers & Consultants, Inc.  
Moon Township, PA

### EDUCATION

Shippensburg University  
BS, Geo-environmental Studies,

### REGISTRATIONS / CERTIFICATIONS

GIS Professional Certificate #91244  
Professional Wetland Scientist (PWS)

### TRAINING

Wetland Delineation 40-Hour Training  
OSHA HAZWOPER 40-Hour Training

### YEARS OF EXPERIENCE

With Current Firm: 13  
With Other Firms: 1

## PROFILE

Since joining Rhea in 2008, Mr. Wicks' project experience has included Environmental Site Assessments (ESAs), wetland and stream delineations and investigations, landfill inspections, gas monitoring, asbestos and lead inspections, soil delineations and low-flow groundwater sampling, technical report writing, and preparing maps for clients using geographic information systems (ArcGIS) technology.

## EXPERIENCE

### Blue Comet Diner Environmental Investigation, Hazleton, Pennsylvania

The former Blue Comet Diner, located in Hazleton, PA was to be demolished in preparation for the construction of a new parking lot for the Hazleton Public Transit (HPT). Prior to demolition, a Phase I ESA was required, as well as an asbestos-containing material (ACM) and lead-based paint (LBP) survey of the interior and exterior of the former diner, as well as a Historic Code Compliance evaluation. Mr. Wicks, Project Manager, worked closely with the client to develop the initial cost estimate and scope of work for the project. Mr. Wicks ensured that all project work was carried out in accordance with the approved scope of work and budget, as well as the applicable state and federal standards and regulations. Following field work, Mr. Wicks oversaw and reviewed the findings reports, which documented all Recognized Environmental Conditions (RECs) and areas of concern identified at the property. Rhea's findings, conclusions, and recommendations were used by HPT to determine the appropriate course of action for demolition and construction activities and worker safety.

### Homestead-Duquesne Road Improvement Project Environmental Site Assessment, West Mifflin, Pennsylvania

Mr. Wicks, Project Manager and PWS, managed and participated in an environmental investigation on a 0.80-mile length of Homestead-Duquesne Road in West Mifflin, PA. The purpose of this investigation was to identify and evaluate environmental and cultural concerns at the subject property prior to the proposed road improvement activities. Resources evaluated included wetlands and streams, threatened and endangered species, hazardous waste impacts, as well as cultural resources and archaeological concerns. Results from the investigation were then entered into PennDOT's online Categorical Exclusion Expert System (CEES) for review and approval during the preliminary planning phase of the project. Mr. Wicks also attended several on-site scoping meetings and monthly virtual meetings with PennDOT, PADEP, the Allegheny County Conservation District to provide routine updates on the status of the project.

## **EXPERIENCE (CONTINUED)**

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### **Wetland Investigations in Support of Dam Rehabilitation Projects, Various Sites, Western Pennsylvania**

Mr. Wicks, PWS, performed wetland investigations at five dams throughout Western Pennsylvania with the intent of identifying and evaluating potential wetland resources adjacent to, or within, the proposed construction footprint of each site prior to site activities. The dams visited included Kahle Lake Dam, Hemlock Lake Dam, High Point Lake Dam, Virgin Run Lake Dam, and Cloe Lake Dam. While most of these dams were in good overall condition with no physical deficiencies, the majority fell short of the required spillway capacity and were beyond their 50-year design life. Typical rehabilitation activities at each dam included partial spillway reconstruction, flattening of the embankment, installing seepage collection drainage systems, increasing drawdown capacity, and improving the outlet works. Mr. Wicks' investigation results were evaluated and considered during the preliminary planning phase to help minimize and/or avoid impacts to delineated wetland resources at each site.

### **Pittsburgh International Airport Terminal Modernization Program Phase I Environmental Site Assessment, Moon Township, Pennsylvania**

Mr. Wicks, PWS and Project Manager, managed a large-scale Phase I ESA of the Area of Potential Effects for the Pittsburgh International Airport Terminal Modernization Program. The Phase I ESA was conducted in accordance with USEPA All Appropriate Inquires and ASTM E1527-13 and included an environmental records review (including record review at the appropriate PADEP regional office), site reconnaissance, and interviews. Mr. Wicks oversaw and managed all aspects of the project including the initial development of the project scope and budget, coordination with the client and regulatory agencies, site reconnaissance, background research, and development of the Phase I ESA report. The report included documentation of records reviewed, observations made during the site reconnaissance, results of the interviews conducted, documentation and/or description of RECs identified, identification of potential data gaps; and conclusions and recommendations.

### **Phase II Environmental Site Assessment, State Correctional Institution, Pittsburgh, Pennsylvania**

Mr. Wicks was involved in the completion of a Phase II ESA at the former SCI Pittsburgh facility in support of proposed redevelopment activities. The Phase II ESA was completed in accordance with current ASTM regulations and standards and included geophysical and subsurface investigations. Throughout the course of the project, Mr. Wicks acted as field team leader, overseeing the installation and sampling of temporary groundwater monitoring wells and the collection and environmental characterization of soil from borings throughout the project site. Groundwater and soil samples collected were submitted to a laboratory and analyzed for constituents of concern. The results and conclusions summarized in Rhea's report were used in the determination of the future potential uses of the property.

### **Asbestos-Containing Materials Assessment, E Gates Terminal, Pittsburgh International Airport, Pittsburgh, Pennsylvania**

Mr. Wicks, Project Manager, and registered asbestos building inspector in PA, both managed and participated in an ACM Assessment of the E Gates Terminal Building at the Pittsburgh International Airport (PIT) in support of the Terminal Modernization Program (TMP). Work on this project was conducted in accordance with the United States Environmental Protection Agency (USEPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP) standards. Mr. Wicks collected roughly 50 bulk samples from various homogeneous areas throughout the terminal building and submitted them to an accredited laboratory for analysis. Following receipt of results, Mr. Wicks oversaw the completion of a Findings Report, which documented the precise locations, homogeneous areas, and materials that were sampled along with their associated asbestos content. Areas of concern and recommendations for further action were then discussed in detail with the client.

## MICHAEL R STOHR, PG

Assistant Project Manager/  
Geologist II



### FIRM

Rhea Engineers & Consultants, Inc.  
Moon Township, PA

### EDUCATION

Indiana University of Pennsylvania  
B.S., Geology

Shippensburg University  
M.S., Geo-Environmental Studies

### REGISTRATIONS / CERTIFICATIONS

Professional Geologist  
PA License Number: PG005518

Asbestos Building Inspector – PA –  
056261; VA – 3303004425; WV –  
AI010797

Radon Measurement Provider –  
108998RT

PADEP Certified Radon Testing  
Individual – 3332

### TRAINING

OSHA 40-Hour HAZWOPER  
OSHA 40-Hour HAZWOPER Refresher  
OSHA 30-Hour Construction Safety  
OSHA 8-Hour HAZWOPER Supervisor  
First Aid, CPR, and AED  
Bloodborne Pathogens

### YEARS OF EXPERIENCE

With Current Firm: 6  
With Other Firms: 0

## PROFILE

Mr. Stohr has 6 years of experience. He is involved in many types of environmental projects, which include Phase I and Phase II Environmental Site Assessments, groundwater monitoring, asbestos surveys, geophysical surveys, infiltration testing, and hazardous materials reporting, among others. Mr. Stohr's responsibilities include project management; field work preparation, coordination, and execution; data preparation and analysis; mapping; and technical report writing.

## EXPERIENCE

**Pittsburgh International Airport Terminal Modernization Program Phase I Environmental Site Assessment, Moon Township, Pennsylvania.** Mr. Stohr was involved with the Phase I ESA of the Area of Potential Effects for the Pittsburgh International Airport Terminal Modernization Program. The Phase I ESA was conducted in accordance with USEPA All Appropriate Inquires and ASTM E1527-13, and included an environmental records review (including record review at the appropriate PADEP regional office), site reconnaissance, and interviews. Mr. Stohr's primary role in the project was to perform the site reconnaissance and collaborate on the Phase I ESA report, which included: documentation of records reviewed; observations made during the site reconnaissance; results of the interviews conducted; documentation and/or description of any Recognized Environmental Conditions (RECs); identification of potential data gaps; and conclusions and recommendations.

**State Correctional Institution – Pittsburgh, Phase II Environmental Site Assessment, Pittsburgh, Pennsylvania.** Mr. Stohr was involved in the completion of the Phase II ESA at the SCI – Pittsburgh facility in support of proposed redevelopment activities. The Phase II ESA was completed in accordance with ASTM E1903-11 and included geophysical and subsurface investigations. Throughout the course of the project, Mr. Stohr has collaborated on the proposal, led the geophysical and subsurface investigations, and served as the primary report writer.

**Drilling Inspector, Pittsburgh Water and Sewer Authority Subsurface Utility Excavation, Maytide Street, Pittsburgh, Pennsylvania.** Mr. Stohr served as the drilling inspector during the excavation of sanitary, water, and gas utility lines from approximately 13 test holes in support of drainage improvements for the Pittsburgh Water and Sewer Authority. Mr. Stohr's responsibilities included the oversight

## EXPERIENCE (CONTINUED)

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of excavation activities, the completion of subsurface utility excavation logs, and acting as the liaison between the driller and the client. Mr. Stoehr ensured that the test holes were excavated and backfilled appropriately, all necessary information was obtained, and that any issues regarding the field work were relayed to the client.

**Annual Groundwater Monitoring and Reporting, Naval Support Activity Mechanicsburg, Mechanicsburg, Pennsylvania.** Mr. Stoehr's responsibilities included the coordination and management of the groundwater sampling field work, which included the collection, handling, and organization of groundwater samples from approximately 50 monitoring wells. In addition to managing the field work, Mr. Stoehr was also responsible for the data processing, data analysis and writing the Annual Monitoring Report.

**Allegheny County Airport Authority Phase I Environmental Site Assessment, Moon Township, Pennsylvania.** Mr. Stoehr was involved with the Phase I ESA at ACAA Site 1, located north of the Pittsburgh International Airport. The Phase I ESA was conducted in accordance with USEPA All Appropriate Inquires and ASTM E1527-13, and included an environmental records review (including record review at the appropriate PADEP regional office), site reconnaissance, and interviews. Mr. Stoehr's primary role in these projects was to perform the site reconnaissance and collaborate on the Phase I ESA reports, which included: documentation of records reviewed; observations made during the site reconnaissance; results of the interviews conducted; documentation and/or description of any Recognized Environmental Conditions (RECs); identification of potential data gaps; and conclusions and recommendations.

**Reporting Year 2019 Emergency Planning and Community Right-to-Know Act Section 312/313 at Joint Base Anacostia-Bolling, Washington DC.** Mr. Stoehr's responsibilities included EPCRA Section 312 field work coordination and management, which included a hazardous materials inventory of approximately 60 buildings. Mr. Stoehr also served as the technical lead and managed other staff members during the preparation of the Tier II Report, which included the submission of a Tier II form to state regulators. For the Section 313 portion of the project, Mr. Stoehr was responsible for managing other staff members during the preparation of the TRI Report, which included the submission of a Form R to federal and state regulators.

**Compressed Natural Gas (CNG) P3 Phase II Environmental Site Assessments, Various Pennsylvania Sites, Bureau of Public Transportation.** Mr. Stoehr was involved in the completion of multiple Phase II ESAs, located at various transit agencies in western and central PA, in support of the PennDOT BPT's compressed natural gas fueling station initiative. The Phase II ESAs were conducted in accordance with ASTM E1903-11 and included a geophysical and subsurface investigation. Throughout the course of the projects, Mr. Stoehr has collaborated on the proposal, served as a member of the field team for the geophysical and subsurface investigations, and acted as the primary report writer.

**Radon Technical Services at Naval Support Activity Bethesda, Bethesda, Maryland, Naval Surface Warfare Center Carderock, West Bethesda, Maryland, Naval Air Station Patuxent River, Lexington Park, Maryland.** Mr. Stoehr was part of the field team that was tasked with deploying long-term Radon test kits throughout NSA Bethesda, NSWC Carderock, and NAS Patuxent River. As a Certified Radon Measurement Provider, Mr. Stoehr was able to place the test kits in appropriate locations so that they would not be disturbed by base personnel or environmental factors that could affect the device. Mr. Stoehr was also involved in the record keeping and quality control measures during the week long field event.

## EXPERIENCE (CONTINUED)

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**On-Call Environmental Services – Evaluation of Allegheny County Airport Authority Fuel Farm Monitoring Wells, Pittsburgh, Pennsylvania.** Mr. Stoehr was involved in all phases of the redevelopment of the monitoring wells surrounding the Pittsburgh International Airport Fuel Farm. Over the course of this evaluation, the wells were measured, cleaned, developed, and repaired on an as needed basis. Over the course of the project, Mr. Stoehr gained experience using sampling equipment including pumps and water level meters.

**Geophysical Investigations, Various Pennsylvania Sites.** Mr. Stoehr has completed multiple geophysical investigations in support of various projects across Pennsylvania. As part of these investigations, Mr. Stoehr has led the field work and operated a Geonics EM61 high sensitivity, high resolution metal detector, as well as a MALA Geoscience X3M radar system. He was also responsible for the subsequent processing and presentation of the data and preparing the final report.

**Asbestos-Containing Material Assessment, Pittsburgh International Airport E Gates Terminal, Moon Township, Pennsylvania.** The E Gates Terminal at the Pittsburgh International Airport is preparing to undergo demolition activities in as part of the Terminal Modernization Program. In support of these activities, Mr. Stoehr assisted in an asbestos-containing material (ACM) assessment of the interior and exterior of the E Gates Terminal. The ACM assessment included a surface-by-surface investigation, which resulted in the collection of thermal system insulation, surfacing material, and miscellaneous materials samples. Mr. Stoehr was responsible for writing the proposal, conducting the field work, and preparing the report.

**ERIK T HARTLE**  
GEOLOGIC SPECIALIST I



**FIRM**

Rhea Engineers & Consultants, Inc.  
Moon Township, PA

**EDUCATION**

Clarion University of Pennsylvania  
B.S., Geology

**REGISTRATIONS / CERTIFICATIONS**

Registered Pennsylvania Asbestos  
Inspector – 063208

**TRAINING**

StormwaterOne Pennsylvania NPDES  
General Permit for Discharge of  
Stormwater Associated with  
Construction Activities, 2020

OSHA 40-Hour HAZWOPER Training  
(29CFR 1910.120), 2021

StormwaterOne Qualified Preparer of  
Storm Water Pollution Prevention  
Plans, 2022

StormwaterOne Qualified Compliance  
Inspector of Stormwater 2022

PEC Safety Safe Land, 2016  
Adult First Aid/CPR/AED, 2022

**YEARS OF EXPERIENCE**

With Current Firm: 1

With Other Firms: 7

**PROFILE**

Mr. Hartle is a Geologic Specialist I at Rhea Engineers and Consultants, Inc. (Rhea). His project experience includes Underground Storage Tank (UST) Inspections, Erosion and Sediment Control Inspections, long-term monitoring (LTM) investigations in groundwater, wetland investigations/delineations, creation and modification of maps using ArcGIS, and technical report writing/review. Mr. Hartle has been with Rhea since September 2021.

**EXPERIENCE**

**Long-Term Monitoring of Russel Road Landfill, MCB-2 Landfill, and Site 4 Landfill, Marine Corps Base Quantico, VA.** The long-term monitoring (LTM) project involves routine groundwater monitoring at three closed landfill sites at Marine Corps Base (MCB) Quantico, VA. In addition to LTM, operations and maintenance (O&M) activities conducted at these sites include methane monitoring at over 30 gas monitoring/compliance wells to monitor off-site gas migration; regular landfill inspections of the cap, vegetative cover, drainage systems, surface water management controls, leachate collection features and outlet structures; leachate sump inspections; annual benchmark surveys; and general grounds maintenance. Mr. Hartle has been tasked to assist with each aspect of the LTM and O&M activities for these sites. Mr. Hartle conducts groundwater sampling, regular landfill inspections, methane monitoring, well inspections, and technical report writing for each of the routine events that are conducted at each landfill.

**Pennsylvania Riverine and Wetland Condition Level 2 Rapid Assessment Protocol, Various Sites, Western PA.** Rhea has been tasked to complete Riverine and Wetland Condition Level 2 Rapid Assessment Protocols (L2RAP) for various dam rehabilitation projects in Western PA. The Dam Safety and Encroachments Act requires that the obtaining of a permit from the Department of Environmental Protection (DEP) to construct, operate, maintain, enlarge, or abandon a dam, water obstruction or encroachment. The primary objective of the L2RAP is to assess existing riverine and wetland resource conditions to be potentially impacted during construction activities using information gathered in the field and compiled in wetland investigation reports. By categorizing each riverine and wetland area as the Assessment Area (AA), Mr. Hartle was able to distinguish the proper Zone of Influence (ZOI) for each region surrounding the AA. Once completed, Mr. Hartle imports the information to ArcMap to illustrate the ZOI for each AA by assessing the surrounding areas by creating a buffer zone around the AA. Once completed, the map and L2RAP assessment were combined for incorporation into the site permitting application.



## EXPERIENCE (CONTINUED)

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**Wetland Investigation, Cloe Lake Dam Rehabilitation Project, Jefferson County, PA.** Mr. Hartle assisted Mr. Zachary Wicks, Professional Wetland Scientist (PWS), with the wetland investigation at Cloe Lake Dam in Jefferson County, PA. This investigation was done with the intent of identifying and evaluating potential wetland resources adjacent to, or within the proposed footprints of Cloe Lake Dam prior to site activities. While Cloe Lake Dam is in good overall condition with no major physical deficiencies, the rehabilitation activities that are expected to take place at Cloe Lake Dam are downstream slope modifications on the embankment and the installation of a new toe drain. Mr. Wicks' investigation results, with the aid of Mr. Hartle, were evaluated and considered during the preliminary planning phase to help mitigate and/or avoid any impacts to delineated wetland resources at the Cloe Lake Dam.

**Hydraulic Lift/Storage Tank Removal, Interim Remedial Action, and Site Characterization Activities PTC Former 980 Full-Service Mart Site, McDonald, PA.** Rhea was consulted to document the descriptions of various activities, including Site Characterization and sampling on parcel 222 SR 980. Previously, the site operated as a Full-Service Mart that operated as a retail fuel dispensary and had four registered Underground Storage Tanks (USTs). Rhea was tasked to provide support for the various environmental activities that were to occur at the site. One task related to the environmental support of the site is groundwater monitoring events. These events are to be completed on a quarterly basis and include groundwater elevation data collection and sampling. Groundwater samples are to be submitted for the analysis of Used Oil parameters on the PADEP Short List along with samples submitted for lead analysis. Mr. Hartle acquired the depth to water in the monitoring wells using a water level meter. Mr. Hartle obtained the groundwater samples to be analyzed using a Peristaltic Pump that pumped water through a YSI Flow Through Cell. Readings were documented for consistency at five-minute intervals for an approximate time of one-half hour before collecting samples for laboratory analysis.

**FY21 WNY Boiler CEMS/COMS, Washington Navy Yard, D.C.** Mr. Hartle has performed draft reports and reviewal of technical reports for the NAVFAC WNY Boiler CEMS/COMS for FY21 and FY22. Mr. Hartle was tasked with inputting and/or updating existing information that had been provided in the updated Scope of Work (SOW).

**Facility Compliance Inspections, Miscellaneous Inspections and Technical Support Tasks Various Sites in District 1, PA.** Rhea has been contracted to provide On-site Support and Documentation Services at Pennsylvania Turnpike Commission (PTC) Facilities in District 1 for various inspections and compliance with the Pennsylvania Department of Environmental Protection (PADEP) requirements and the PA Storage Tank Regulations. These inspections are primarily conducted for completing documentation that supports the PADEP Form 2630-FM-BECB0575, 'UNDERGROUND STORAGE TANK MODIFICATION REPORT'. Mr. Hartle has performed the Walk-Through Compliance Inspection process along with testing the Veeder-Root monitor, alarm systems, sump integrity, sump liquid sensor, and leak detector functionality. Mr. Hartle has also assisted in the appropriate documentation of stated inspections and discussed proper documentation to assist with the completion of the PADEP Form for UST Systems with appropriate Facility Personnel including photographs and or emails of any areas of concern.

**Semi-Annual Groundwater Monitoring and Stormwater Outfall Sampling Ervin Amasteel, Butler, PA.** Mr. Hartle, Geologic Specialist 1, has been tasked to assist in the semi-annual groundwater monitoring of four monitoring wells and semi-annual outfall sampling at two locations at Ervin Amasteel (Ervin), located in Butler, PA. These activities are completed each year as part of the NPDES General Permit requirements for the facility. Groundwater monitoring is completed by purging and sampling each well using dedicated hand bailers provided by Ervin. Outfall sampling is completed by collecting grab samples of stormwater exiting each outfall following a significant rainfall event. Following receipt of

## EXPERIENCE (CONTINUED)

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laboratory results, Rhea is also tasked with the tabulation and trend analysis of historic analytical results for constituents of concern at each monitoring well.

**Semi-Annual Stormwater Outfall Sampling and Inspections, Heniff Transportation Systems, Karns City, PA.** Mr. Hartle, Geologic Specialist 1, was tasked to assist in the semi-annual stormwater outfall sampling and inspections at two locations at the Heniff Transportation Systems (formerly Superior Carriers) facility, located in Karns City, PA. These activities are completed each year as part of the NPDES General Permit requirements for the facility. Outfall sampling is completed by collecting grab samples of stormwater exiting each outfall following a significant rainfall event. Mr. Hartle is responsible for obtaining field samples and getting them delivered to the laboratory, take photographs of areas of concern, and fill out forms for each inspection and sampling event. Following each inspection, Mr. Hartle assists with the recommendations for the facility regarding each outfall location and how to prevent sedimentation and/or pollution from entering adjacent surface water bodies. Based on sampling and inspection results, Rhea recommended that the client install BMPs (inlet protection filters) and to install riprap to maintain and improve water quality leaving the site.

**Erosion and Sediment Control and Health and Environmental Safety Inspections, OH, PA, and WV.** As an Environmental Supervisor, Mr. Hartle conducted Erosion and Sediment Control Inspections along with Health and Environmental Safety Inspections on oil and gas drilling sites across OH, PA, and WV. Inspections were conducted to ensure that compliance was met through regional DEP and DCNR regulations along with Client Specific guidelines. Inspections were intended to document any irregularity with Best Management Practices (BMPs) and to distinguish the construction phase of the site, whether it be E&S, PCSM, or Site Restoration/Remediation phases. Along with performing inspections, Mr. Hartle aided in the management of the Inspection Team and performed QA/QC Audits to ensure all Standard Operating Procedures (SOP) were followed. Mr. Hartle reviewed inspection work for accuracy, grammar, spelling, and correct area identification for inspections before reports were submitted to the Client.

**Above Ground Storage Tank Inspections, Various Sites, US.** As a technician, Mr. Hartle assisted in the Above Ground Storage Tank process per API 650 and API 653. The purpose of these inspections was to indicate the amount of corrosion occurring on the metal through external and internal inspections. Along with corrosion, inspections also consisted of performing leveling measurements (external or internal) of the tank, tank layout and drawings, piping layout and drawings, nozzle layout and drawings, and internal floating roof inspections. Mr. Hartle was previously certified and Ultrasonic Thickness Testing Level I and Level II and Magnetic Particle Testing Level I and Level II.