

**PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT  
AUTOZONE 5132  
777 CRANSTON STREET  
CRANSTON, RHODE ISLAND 02920**

**PREPARED FOR:**



123 South Front Street  
Memphis, Tennessee 38103

**PREPARED BY:**



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**Report Date:** October 21, 2021  
**Project Number:** 21-1713



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October 21, 2021

**AutoZone, Inc.**

123 South Front Street  
Memphis, Tennessee 38103

Subject: Phase II Environmental Site Assessment Report  
AutoZone 5132  
777 Cranston Street  
Cranston, Rhode Island 02920  
Earth Science Project Number: 21-1713

Earth Science LLC is pleased to provide AutoZone, Inc. (AutoZone) with the results of this Phase II Environmental Site Assessment Report (Report) for the property located at 777 Cranston Street, Cranston, Rhode Island 02920.

The activities documented in this Report were performed in conformance with the scope and limitations detailed in our proposal dated August 20, 2021 (proposal number: 21-1713-2).

We appreciate the opportunity to provide environmental services to AutoZone. If you have any questions concerning this Report, please contact our office at (949) 441-0433.

Respectfully,

Sean Rakhshani, EP  
*Principal*

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2</b>	<b>SITE BACKGROUND .....</b>	<b>2</b>
	2.1 SITE DESCRIPTION.....	2
	2.2 PREVIOUS ENVIRONMENTAL SITE INVESTIGATIONS .....	2
<b>3</b>	<b>LOCAL GEOLOGY AND HYDROGEOLOGY.....</b>	<b>5</b>
<b>4</b>	<b>SITE INVESTIGATION SCOPE OF WORK.....</b>	<b>7</b>
	4.1 HEALTH AND SAFETY.....	7
	4.2 UTILITY CLEARANCE.....	7
	4.3 DRILLING EQUIPMENT.....	7
	4.4 BORING LOCATIONS AND DEPTHS .....	7
	4.5 SOIL, SOIL GAS, AND GROUNDWATER SAMPLING METHODOLOGY.....	8
	4.6 SOIL, SOIL GAS, AND GROUNDWATER ANALYSIS.....	9
	4.7 QUALITY ASSURANCE AND QUALITY CONTROL.....	10
	4.8 WASTE MANAGEMENT .....	11
<b>5</b>	<b>SITE INVESTIGATION RESULTS.....</b>	<b>12</b>
	5.1 LABORATORY ANALYTICAL REPORTS.....	12
	5.2 COMPARISON OF THE INVESTIGATION RESULTS AND REGULATORY SCREENING LEVELS.....	12
	5.2.1 RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.....	12
	5.2.2 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY .....	13
	5.2.3 SOIL ANALYSIS RESULTS.....	13
	5.2.4 SOIL GAS ANALYSIS RESULTS.....	16
	5.2.5 GROUNDWATER ANALYSIS RESULTS .....	19
<b>6</b>	<b>SUMMARY.....</b>	<b>20</b>
	6.1 FINDINGS.....	20
	6.1.1 SOIL CONDITIONS.....	20
	6.1.2 SOIL GAS CONDITIONS .....	21
	6.1.3 GROUNDWATER CONDITIONS .....	21
	6.2 CONCLUSIONS.....	22
<b>7</b>	<b>CERTIFICATIONS AND LIMITATIONS.....</b>	<b>24</b>

## **FIGURES**

- 1 SITE VICINITY MAP**
- 2 BORING LOCATION MAP**

## **TABLES**

- 1 INVESTIGATION SUMMARY**
- 2 SOIL ANALYSIS RESULTS – METALS**
- 3 SOIL ANALYSIS RESULTS – SEMI-VOLATILE ORGANIC COMPOUNDS**
- 4 SOIL ANALYSIS RESULTS – TOTAL PETROLEUM HYDROCARBONS**
- 5 SOIL ANALYSIS RESULTS – VOLATILE ORGANIC COMPOUNDS**
- 6 SOIL GAS ANALYSIS RESULTS – VOLATILE ORGANIC COMPOUNDS**
- 7 GROUNDWATER ANALYSIS RESULTS – METALS**
- 8 GROUNDWATER RESULTS – SEMI-VOLATILE ORGANIC COMPOUNDS**
- 9 GROUNDWATER ANALYSIS RESULTS – TOTAL PETROLEUM HYDROCARBONS**
- 10 GROUNDWATER ANALYSIS RESULTS – VOLATILE ORGANIC COMPOUNDS**

## **APPENDICES**

- A BORING LOGS**
- B LABORATORY ANALYTICAL REPORTS**

# 1 INTRODUCTION

Earth Science LLC (Earth Science) has prepared this Phase II Environmental Site Assessment (ESA) Report (Report) on behalf of AutoZone, Inc. (AutoZone) for the property located at 777 Cranston Street, Cranston, Rhode Island 02920 (Site); please refer to **Figure 1** for the **Site Vicinity Map**.

The objective of the project was to investigate the presence of heavy metals, semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), and volatile organic compounds (VOCs) in the subsurface of the Site as a result of the historic placement of contaminated soils onsite and the leaking underground storage tank (LUST) case associated with the southwest-adjacent gas station.

This Report documents the advancement of five borings (B-1 through B-5) to terminal depths ranging from 10 to 30 feet below ground surface (bgs) and the collection and analysis of soil, soil gas, and groundwater samples from the Site.

The following sections provide information detailing the Site background; local geology and hydrogeology; Site investigation scope of work; Site investigation results; Report summary; and Report certifications and limitations.

## 2 SITE BACKGROUND

The following sections provide details regarding the Site description and previous investigations performed at the Site to date.

### 2.1 SITE DESCRIPTION

The Site is located in a commercial, industrial, and residential area of Cranston, Rhode Island. The Site is bounded to the north by undeveloped land; to the south by Cranston Street; to the east by railroad tracks; and to the west by residential developments. The Site consists of an irregular-shaped, 6.91-acre lot covered with vegetation and improved with perimeter fencing. Access to the Site is available from a Cranston Street located along the southern boundary.

### 2.2 PREVIOUS ENVIRONMENTAL SITE INVESTIGATIONS

The Site has been the subject of multiple phases of environmental investigations to assess soil and groundwater, as well as the subject of remedial actions. The available, previous environmental investigation reports for the Site were reviewed prior to developing and implementing the Site investigation scope of work for this project.

Earth Science prepared a Phase I ESA Report (dated August 11, 2021) for the Site on behalf of AutoZone. Based on available historical information, the Site was undeveloped land until 1900 when the United Traction Electric Company constructed an 113,000 square foot brick building (known as the Trolley Barn) which was used as an electric streetcar depot and repair facility. According to available title records, the Site was owned by Rhode Island Suburban Railway Company from 1900 until 1921 when it was purchased by the United Electric Railway Company.

According to a 1921 fire insurance map, the Site was occupied by The Rhode Island Company Repair Shops (an electric streetcar depot and repair facility) which included onsite equipping, ironworking, machining, painting, upholstery, and woodworking facilities. In 1936, Liberty Real Estate & Investment Corporation purchased the Site and leased portions of the Site to a gas station (reportedly from 1934 to 1939), two sign companies, a bus company, and a trucking company. In 1950, the Narragansett Brewery began to lease the Site. According to fire insurance maps from 1950 and 1951, two gasoline tanks were located in the central portion of the Site, just north of the main industrial building. In 1957, Liberty Real Estate & Investment Corporation declared a portion of the Site for the construction of the Huntington Avenue Expressway.

In 1965, the Site was purchased by the Falstaff Brewing Corporation and the Narragansett Brewery continued to occupy the Site until the brewery operations were shut down on July 31, 1981. In 1998, eight smaller buildings at the Site were demolished, leaving only the main industrial building (the Trolley Barn). Trolley Barn Associates, LLC acquired the Site on October 30, 2000. On May 6, 2005 a fire occurred at the Site which was reportedly an act of arson. On May 31, 2005 the demolition of the Trolley Barn began and the Site has remained undeveloped land from 2005 up to the present day. According to title records, a fuel oil storage tank was installed at the Site on December 6, 1982.

The prior environmental reports prepared for the Site indicate that two underground storage tanks (USTs) containing fuel oil which were formerly located north of the Trolley Barn supplied fuel to the building's heating system prior to installation of a natural gas-fired heating system. These two USTs containing fuel oil were reportedly removed in 1992 or 1993. Available records from the Rhode Island Department of Environmental Management (DEM) indicate that two 1,000-gallon capacity USTs containing gasoline were installed at the Site on October 9, 1984 and were subsequently removed on October 6, 2005.

Earth Science reviewed a Remedial Action Work Plan (RAWP) (dated October 31, 2005) which was prepared for the Site by CMG Environmental, Inc. (CMG). CMG prepared the RAWP for the portion of the former Narragansett Brewery/Falstaff Brewing Company facility which operated at the Site. According to the RAWP, soils impacted by polynuclear aromatic hydrocarbons (PAHs) and heavy metals from the main Narragansett Brewery plant (which was historically located adjacent to the south of the Site, across Cranston Street) were relocated to the northern and central portions of the Site. As part of the redevelopment of the south-adjacent main Narragansett Brewery plant into a new City of Cranston police headquarters, approximately 9,400 cubic yards of soil was removed from the south-adjacent parcel. The soils impacted by PAHs and heavy metals from the former main Narragansett Brewery plant were reportedly placed at the Site beneath an approximately 2.0-foot thick layer of clean soil acting as a cap covering the contaminated soils.

The Site is listed in the Environmental Radius Report (ERR) as a Rhode Island Underground Storage Tank (RI UST) site. Earth Science submitted a records request to the DEM and received a copy of a UST Closure Assessment Report (CAR) (dated October 22, 2005) from the DEM. According to the CAR, two 1,000-gallon gasoline USTs and the associated piping were removed from the Site. The USTs were reportedly manufactured of a thinner than normal gauge of steel and the USTs had disintegrated significantly and had to be removed in pieces from the tank grave. A soil sample was collected from the bottom of the tank grave and was submitted to an environmental laboratory and analyzed for VOCs. The results of the laboratory analysis indicated the presence of toluene in the soil sample at a concentration of 39 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ).

The available records for the Site from the DEM's Permits, Licenses and Other Vital Environmental Records (PLOVER) database indicate that the UST case status for the Site is listed as closed. According to previous investigations which were summarized by CMG in the RAWP, groundwater samples were collected from six monitoring wells (PES-1 through PES-6) located at the Site. The results of these analyses indicated the presence of trace levels of benzene (0.009 milligrams per liter [mg/L]), toluene (0.032 mg/L), ethylbenzene (0.001 mg/L), xylenes (0.02 mg/L), and methyl tertiary butyl ether (MTBE) (0.004 mg/L) in groundwater monitoring well PES-1 and chloroform (0.002 mg/L) in groundwater monitoring well PES-5. It was reported that the laboratory analyses did not identify any other analytes at or above laboratory method detection limits. According to the RAWP, groundwater at the Site reportedly flows in a northerly direction. It was concluded that the presence of MTBE (introduced in 1979 and commonly contained in gasoline starting in the mid-1980s) suggested a more recent, offsite source for the VOCs in PES-1 which is likely located on the up-gradient end of the Site. According to the RAWP, it was suggested that the Food N' Fuel gasoline station located near the southwestern boundary of the Site (and believed to be positioned cross-/up-gradient of the Site) may be a possible source of the VOC impacts in groundwater at the Site.

The Food N' Fuel facility (also known as Lucky PT Inc.) is listed in the ERR as a RI UST and a Rhode Island Leaking Underground Storage Tank (RI LUST) site. This facility is located adjacent to the west/southwest of the Site (beyond a narrow strip of wooded land formerly occupied by railroad tracks) and is presumed to be situated hydrogeologically cross-/up-gradient relative to the Site. This facility is currently a closed (shutdown) gas station and convenience store. According to available regulatory records, there are five permanently closed USTs and two active gasoline USTs and an open contaminant release case associated with this facility. This facility also has an open Notice of Violation (NOV) on record with the DEM pertaining to a failed tightness test due to the inability to test the interstitial spaces of the product piping systems. According to a Groundwater Monitoring and Remedial System Status Report (dated October 8, 2009) prepared for the Food N' Fuel facility, VOC concentrations in groundwater exceeded the DEM's regulatory screening levels and the contamination in groundwater extended beyond the limits of the Food N' Fuel facility (and possibly towards the Site).



### 3 LOCAL GEOLOGY AND HYDROGEOLOGY

The Site is located at an elevation of approximately 55-75 feet above mean sea level. The topography in the immediate vicinity of the Site gradually slopes towards the northeast (United States Geological Survey [USGS] 7.5 Minute Topographic Map, Providence, Rhode Island Quadrangle, 2018).

The geology of Rhode Island is based on nearly one billion year old igneous crystalline basement rocks formed as part of the micro-continent Avalonia that collided with the supercontinent Gondwana. The region experienced substantial folding associated with its landlocked position during the Alleghanian orogeny mountain building event. The region accumulated sedimentary rocks, including small deposits of coal. The region was covered with thick Atlantic Coastal Plain sediments, with the erosion of the Appalachians and the creation of the Atlantic Ocean throughout the past 200 million years. These surficial sediments and soils were substantially reworked by the Pleistocene glaciations. The State's geology is part of the broader geology of New England. Rhode Island is divided into two distinct physiographic regions. The Eastern Highlands occupy the northwestern interior of the State, near the State line with Connecticut while the majority of the State's land area is grouped with the larger Atlantic Coastal Plain that extends along the eastern seaboard of the United States (USGS, 2017).

Rhode Island's bedrock is divided into six main categories. The oldest rocks are metamorphic and date to the Precambrian or early Paleozoic. Metamorphic rocks in the southwestern portion of the State have been correlated to Cambrian and Ordovician rocks in Connecticut, while the quartzite, marble, and greenschist of the Blackstone Group are common in northern Rhode Island. Other metamorphic rocks are exposed in Newport and Tiverton. Much of the State's land area, including most of the central, western, and interior areas of Rhode Island are made up of intrusive plutonic rocks from the Paleozoic. This most extensive grouping of bedrock is made up of gneiss, granite, and quartz diorite. Notable examples of plutonic rock groups include Hope Valley alaskite gneiss, Metacom granite gneiss, Esmond Granite, Bulgarmarsh Granite, Ponaganset Gneiss, and Scituate Granite Gneiss. Some locations in northeastern Rhode Island and in the East Greenwich Group are granite and volcanic igneous rocks. Sedimentary rocks are common in the Narragansett Basin in North Scituate and Woonsocket, where rocks date to the Pennsylvanian and are clastic sedimentary rocks, with different levels of metamorphism. In the southern part of the state, the Westerly Granite and Narragansett Pier Granite belong to a series of granitic rocks from the Pennsylvanian and later. The youngest bedrock is found beneath Block Island where clay and sand are exposed from the Cretaceous (USGS, 2017).

Rhode Island's surficial geology includes sediments, soil, and groundwater near the surface and lying atop the bedrock lithology. As a result of Pleistocene glaciation, much of the State is covered in glacial till including virtually all of the towns of Tiverton, Middletown, Newport, Portsmouth, Bristol, Jamestown, Burrillville, and Foster. Glacial outwash dominates in Providence, Pawtucket, Cranston, Woonsocket, Pawtucket, Warwick, and sections of the coast and interior (USGS, 2017). The soils of Rhode Island are a part of the State's surficial geology, but are often studied separately because of their role in development planning, construction, and agriculture. Approximately 65 percent of the soils were developed from glacial till. Most soils are loamy sand and sandy loam, with medium or coarse textured grains of acid crystalline rock. A narrow strip along the western shore of Narragansett Bay originated from Carboniferous rocks including slate and shale. The soils on the western shore are dark-colored, silt loam. Approximately 20 percent of soil in Rhode Island resulted from glacial outwash and tends to be thick, well sorted layers of sediment with stratified layers of sand and gravel. The remaining soil in the state is 10 percent fine, wind-blown loess sediments that range from six inches to four feet in thickness, with an average thickness of 30 inches. Loess soils hold large quantities of water and are deemed high quality agricultural soils. An additional five percent of soils are entirely organic, forming in freshwater wetlands, with thicknesses between one foot and 20 feet. Only one percent of soils are found in saltwater marshes, with 16 inches of organic material layered over sand (USGS, 2017).

Based on information obtained from the National Cooperative Soil Survey prepared by the United States Department of Agriculture Soil Conservation Service, the soils in the vicinity of the Site are classified as Merrimac-Urban land complex with 0.0 to 8.0 percent slopes, Udorthents-Urban land complex, and Urban land. Merrimac-Urban land complex, Udorthents-Urban land complex, and Urban land soils are not considered to be prime farmland. Merrimac-Urban land complex soils are formed in outwash plains, kames, eskers, moraines, and outwash terraces.

The City of Cranston, Rhode Island has a total area of approximately 30 square miles, comprised of 28.3 square miles of land and 1.7 square miles of water, with water equating to approximately five percent of the total area (United States Census Bureau, 2020). The nearest surface water body in the vicinity of the Site is the Tongue Pond, which is located approximately 1,300 feet to the south of the Site. Based on the information obtained during the advancement of borings at the Site as part of this Phase II ESA, the encountered geology included fine to coarse-grained silty sands with traces of gravel, brick, and concrete fragments. The encountered materials were dry to wet, and were brown and tan in color. Groundwater was encountered at the Site (in boring B-5) a depth of 26 feet bgs. Please refer to the **Boring Logs** in **Appendix A** for additional information regarding the geologic and hydrogeologic conditions encountered at the Site as part of this Phase II ESA.

## 4 SITE INVESTIGATION SCOPE OF WORK

The following sections detail the scope of work performed as part of this Site investigation.

### 4.1 HEALTH AND SAFETY

A site-specific Health and Safety Plan (HASP) was prepared and reviewed with all onsite personnel involved in the project prior to the commencement of field activities.

### 4.2 UTILITY CLEARANCE

The Site and boring locations were marked-out and Rhode Island-811 (Dig Safe) was notified prior to performing fieldwork activities in order to clear public utilities. The Site owner was also provided prior notice of the planned investigation activities to commence on October 5, 2021.

### 4.3 DRILLING EQUIPMENT

On October 5, 2021, New England Geotech mobilized the required drilling equipment and personnel in order to advance five borings at the Site. The five borings were advanced at the Site using a truck-mounted, direct-push (Geoprobe 6600) drill rig. All drilling equipment was cleaned using a high-pressure washer prior to beginning field work and was decontaminated between samples and boreholes to prevent cross-contamination.

### 4.4 BORING LOCATIONS AND DEPTHS

Five borings (B-1 through B-5) were advanced at the Site to terminal depths ranging from 10 to 30 feet bgs. Borings B-1 through B-4 were advanced to 10 feet bgs and boring B-5 was advanced to 30 feet bgs. The boring locations were selected based on field conditions/observations and the identified areas of concern, which included the areas where contaminated soils were historically placed onsite and the area down-gradient to a gas station with known contaminant releases impacting the underlying groundwater. Four of the borings were placed within the footprint of the proposed AutoZone building to be constructed at the Site, where the majority of grading and earthwork will likely take place as part of future redevelopment activities. Please refer to **Figure 2** for the ***Boring Location Map***. The five borings were advanced at the Site at the following locations:

- Boring B-1 was advanced to 10 feet bgs in the western portion of the Site, in the northwestern area of the proposed AutoZone building.

- Boring B-2 was advanced to 10 feet bgs in the eastern portion of the Site, in the northeastern area of the proposed AutoZone building.
- Boring B-3 was advanced to 10 feet bgs in the central portion of the Site, in the southwestern area of the proposed AutoZone building.
- Boring B-4 was advanced to 10 feet bgs in the eastern portion of the Site, in the southeastern area of the proposed AutoZone building.
- Boring B-5 was advanced to 30 feet bgs in the western portion of the Site, down-gradient of a gas station with known contaminant releases impacting the underlying groundwater.

#### **4.5 SOIL, SOIL GAS, AND GROUNDWATER SAMPLING METHODOLOGY**

Soil samples were continuously logged from grade down to the terminal boring depth in all five borings (B-1 through B-5) in order to obtain information on the general Site lithology and to attempt to locate any water-bearing zones. Soil samples were collected using a sampler with an acetate liner and sampling point. The sampler was advanced by a direct-push drill rig using hollow rods with the inner rods in-place to prevent soil from entering the sampler. Following the advancement of each core interval, the core was retrieved, the core barrel was disassembled, and the sample liner was removed. All collected soil samples were visually inspected for discoloration, monitored for odors, classified in accordance with the Unified Soil Classification System (USCS), and field-screened for VOCs using a photo-ionization detector (PID) calibrated to isobutylene. None of the collected soil samples exhibited any evidence of significant discoloration/staining or odors. All VOC concentrations detected during the screening of soil samples with the PID were 0.0 parts per million (ppm).

Temporary soil gas sampling probes screened at 5.0 feet bgs were constructed at the Site within all five borings (B-1 through B-5). In each of these five borings, new 1/2-inch diameter polyvinyl chloride (PVC) casing was inserted into the borehole to the terminal depth, and new 1/4-inch diameter Nylaflo<sup>®</sup> nylon tubing with a 1/4-inch diameter stainless steel filter at the terminal end was inserted into the borehole through the PVC casing to the desired sampling depths. The PVC casing was used as a guide for the tubing to ensure that the desired sampling depth was achieved. Number 3 sand was poured into the boring annulus through the PVC casing to form an approximately 1.0-foot long sand pack around the stainless steel filter. A minimum of 6.0-inches of dry granular Bentonite was installed as a transition seal and a Bentonite annular seal was placed up to grade. The sampling end of the tubing was fitted with an open/shut valve and each temporary soil gas sampling probe was labeled for identification.

Each temporary soil gas sampling probe was allowed to equilibrate for at least two hours after installation prior to sampling. The sample collection rate for the soil gas samples was 200 milliliters per minute (mL/min). Shut-in tests were performed for all collected soil gas samples. Three purge volumes were removed from each temporary soil gas sampling probe prior to collecting the soil gas samples. Tracer gas (isopropyl alcohol) was placed around each temporary soil gas sampling probe at the ground surface while sampling to detect ambient air intrusion. The tracer gas was not detected in any of the soil gas samples, indicating that the integrity of the Bentonite seal was maintained. Additionally, recovery of all surrogate compounds included with each analysis was within acceptable limits, indicating that the sampling containers and analysis equipment did not leak. Following completion of all sampling activities, all temporary soil gas sampling probes were removed.

A grab (Hydropunch™) groundwater sample was collected from boring B-5 at a depth of 26 feet bgs. No obvious evidence of contamination was encountered in the collected groundwater sample, including no obvious signs of free product, sheen, or odors.

All sampling equipment was decontaminated prior to the start of sampling activities and between sampling events to avoid cross-contamination. All collected samples to be analyzed were placed into containers provided by the environmental analytical laboratory. Following the completion of all sampling activities, the borings were backfilled up to grade with hydrated Bentonite. Please refer to **Table 1, Investigation Summary** for a description of the soil, soil gas, and groundwater sampling activities performed at the Site.

## 4.6 SOIL, SOIL GAS, AND GROUNDWATER ANALYSIS

The collected soil and groundwater samples were immediately transferred into a cooler packed with ice. The soil gas samples were stored in a separate sealed cooler without ice. All samples were delivered on October 5, 2021 under chain-of-custody procedures to Eurofins Environment Testing New England, a State-certified environmental analytical laboratory. In each of the five borings, one select soil sample from the depth interval with the greatest likelihood of containing contamination (based on the encountered field conditions/observations, such as soil lithology) was prepared for laboratory analysis.

In total, five soil samples were analyzed for Resource Conservation and Recovery Act (RCRA) 8 Metals using United States Environmental Protection Agency (USEPA) Method 6010D (with USEPA Method 7471B used for the mercury analysis), SVOCs using USEPA Method 8270D, TPH as diesel- and gasoline- range organics (DRO and GRO) using USEPA Method 8015D, and VOCs using USEPA Method 8260C.

A total of five soil gas samples collected from the temporary soil gas sampling probes were prepared for laboratory analysis. All five soil gas samples were analyzed for VOCs using USEPA Method Toxic Organics (TO)-15. The soil gas samples were submitted to the laboratory immediately after collection and on the same day they were collected; however, due to delays caused by the laboratory, the samples were analyzed after the sample hold times had expired.

One groundwater sample was collected from boring B-5 and was analyzed for RCRA 8 Metals using USEPA Method 6010D (with USEPA Method 7471B used for the mercury analysis), SVOCs using USEPA Method 8270D, TPH as DRO and GRO using USEPA Method 8015D, and VOCs using USEPA Method 8260C.

Please refer to **Table 1, Investigation Summary** for a description of the selected soil, soil gas, and groundwater samples which were analyzed.

#### 4.7 QUALITY ASSURANCE AND QUALITY CONTROL

Quality assurance/quality control (QA/QC) and chain-of-custody protocols were followed for all sampling and sample handling activities. QC is achieved through considered procedures and steps which are employed to ensure that the QA objectives are met. The QA objectives of data validation are to ensure that sampling, analysis, and reporting activities provide data that are accurate, precise, representative, and legally defensible. The QC steps and protocols include:

- Procedures for the collection of field samples, discussed above;
- Appropriate methods and protocols for the analysis of samples, discussed above, and;
- Data validation.

The soil gas samples were submitted to the laboratory immediately after collection and on the same day they were collected; however, due to delays caused by the laboratory, the samples were analyzed after the sample hold times had expired, causing the laboratory to note a qualifier for the soil gas analysis results.

While there is the potential for the analysis of the soil gas samples to be affected by the expired hold times, given that the samples were contained in a sealed cooler (protected from outside elements including ultraviolet light), the results of the analyzed samples are believed to be generally representative and reliable regardless of the expired hold times.

The generally low concentrations of VOCs detected in the analyzed soil gas samples are further validated by the fact that all of the analyzed soil samples collected from the Site were non-detect for all VOCs and the fact that all VOC concentrations detected during the screening of soil samples from all depth intervals with the PID were 0.0 ppm.

With the exception of the above-mentioned qualifier, no findings which significantly affected the quality of the samples collected or the laboratory analytical results were identified.

Please refer to the ***Laboratory Analytical Reports*** in **Appendix B** for further information regarding the laboratory QC methods, protocols, and results.

## **4.8 WASTE MANAGEMENT**

Due to the use of a direct-push drill rig, no significant amounts of derived wastes were generated during this investigation. Any remnants of the samples submitted to the analytical laboratories will be held until the maximum sample hold times at which time the sample remnants will be disposed of by the analytical laboratories in a manner consistent with applicable regulations.

## 5 SITE INVESTIGATION RESULTS

The following sections present the soil, soil gas, and groundwater analysis results from the Site investigation and the applicable regulatory screening levels.

### 5.1 LABORATORY ANALYTICAL REPORTS

Please refer to the *Laboratory Analytical Reports* in **Appendix B** for the results of the analyzed soil, soil gas, and groundwater samples. The laboratory results are summarized in **Table 2 (Soil Analysis Results – Metals)**, **Table 3 (Soil Analysis Results – Semi-Volatile Organic Compounds)**, **Table 4 (Soil Analysis Results – Total Petroleum Hydrocarbons)**, **Table 5 (Soil Analysis Results – Volatile Organic Compounds)**, **Table 6 (Soil Gas Analysis Results – Volatile Organic Compounds)**, **Table 7 (Groundwater Analysis Results – Metals)**, **Table 8 (Groundwater Analysis Results – Semi-Volatile Organic Compounds)**, **Table 9 (Groundwater Analysis Results – Total Petroleum Hydrocarbons)**, and **Table 10 (Groundwater Analysis Results – Volatile Organic Compounds)**.

### 5.2 COMPARISON OF THE INVESTIGATION RESULTS AND REGULATORY SCREENING LEVELS

The following sections describe the soil, soil gas, and groundwater analysis results in comparison to the applicable regulatory screening levels.

#### 5.2.1 RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

The DEM Office of Waste Management issued “Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases” (known also as “Remediation Regulations”) which provide regulatory screening levels for soil and groundwater contamination. The DEM’s Remediation Regulations were last amended in February of 2004.

In order to assess the soil analysis results from this Site investigation in comparison to the appropriate regulatory screening levels, the DEM Remediation Regulations Direct Exposure Criteria (DEC) screening levels were used for this Report. The applicable groundwater screening levels for this Site investigation included the DEM Remediation Regulations GB Groundwater Objectives (GOs). According to a Limited Subsurface Investigation (dated December 18, 2000) prepared for the Site by Paragon Environmental Services, Inc., the DEM classifies groundwater at the Site and the Site vicinity as GB, which the DEM defines as groundwater considered not suitable for public or private drinking water uses.



## 5.2.2 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Regional Screening Levels (RSLs) (last updated in May of 2021), formerly known as Preliminary Remediation Goal (PRGs), are generic, risk-based chemical concentrations developed by the USEPA for use in initial screening-level evaluations of soil and air. RSLs combine human health toxicity values with standard exposure factors to estimate contaminant concentrations that are considered to be health protective of human exposures over a lifetime through direct exposure pathways (e.g., via inhalation and/or ingestion of and/or dermal contact with, impacted soil). RSLs are not legally enforceable standards, but rather are considered guidelines to determine if potential risks associated with encountered contamination may warrant further evaluation.

In order to assess the soil gas analysis results from this Site investigation in comparison to the appropriate regulatory screening levels, the RSLs for air were modified using the USEPA recommended attenuation factor of 0.03 to obtain the corresponding soil gas screening levels.

Maximum Contaminant Levels (MCLs) (last updated in May of 2021) are standards that are set by the USEPA for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act. To set a MCL for a contaminant, the USEPA first determines how much of the contaminant may be present with no adverse health effects. This level is called the Maximum Contaminant Level Goal (MCLG). MCLGs are non-enforceable public health goals. The legally enforced MCL is then set as close as possible to the MCLG. The MCL for a contaminant may be higher than the MCLG because of difficulties in measuring small quantities of a contaminant, a lack of available treatment technologies, or if USEPA determines that the costs of treatment would outweigh the public health benefits of a lower MCL. In the last case, the USEPA is permitted to choose an MCL that balances the cost of treatment with the public health benefits. For some contaminants, the USEPA establishes a Treatment Technique (TT) instead of an MCL. TTs are enforceable procedures that drinking water systems must follow in treating their water for a contaminant. MCLs and TTs are known jointly as "National Primary Drinking Water Regulations" ("NPDWRs"), or primary standards.

USEPA MCLs were used for comparison to the results of this Site investigation in addition to the DEM GB GOs (as secondary regulatory screening levels) since some of the detected analytes from this Site investigation did not have corresponding DEM GB GOs.

## 5.2.3 SOIL ANALYSIS RESULTS

The following analytes were detected in the analyzed soil samples collected from the Site:

- Acenaphthene was detected in soil sample B-5 at a concentration of 0.123 milligrams per kilogram (mg/kg). The DEM DEC for acenaphthene in soil is 43 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Anthracene was detected in soil samples B-1 and B-5 at concentrations of 1.16 and 0.332 mg/kg, respectively. The DEM DEC for anthracene in soil is 35 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Arsenic was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 5.00, 6.39, 8.12, 3.80, and 2.06 mg/kg, respectively. The DEM DEC for arsenic in soil is 7.0 mg/kg for both residential and for industrial/commercial land uses.
- Barium was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 33.2, 64.7, 18.5, 31.1, and 19.8 mg/kg, respectively. The DEM DEC for barium in soil is 5,500 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Benzo[a]anthracene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 2.86, 0.363, 0.858, 0.664, and 0.969 mg/kg, respectively. The DEM DEC for benzo[a]anthracene in soil is 0.9 mg/kg for residential land uses and 7.8 mg/kg for industrial/commercial land uses.
- Benzo[a]pyrene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 2.63, 0.382, 0.850, 0.611, and 0.856 mg/kg, respectively. The DEM DEC for benzo[a]pyrene in soil is 0.4 mg/kg for residential land uses and 0.8 mg/kg for industrial/commercial land uses.
- Benzo[b]fluoranthene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 2.26, 0.430, 0.920, 0.597, and 0.963 mg/kg, respectively. The DEM DEC for benzo[a]fluoranthene in soil is 7.8 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Benzo[g,h,i]perylene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 1.75, 0.334, 0.703, 0.480, and 0.609 mg/kg, respectively. The DEM DEC for benzo[g,h,i]perylene in soil is 0.8 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.

- Benzo[k]fluoranthene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 2.20, 0.344, 0.820, 0.653, and 0.683 mg/kg, respectively. The DEM DEC for benzo[k]fluoranthene in soil is 0.9 mg/kg for residential land uses and 78 mg/kg for industrial/commercial land uses.
- Carbazole was detected in soil sample B-5 at a concentration of 0.180 mg/kg. There is no DEM DEC for carbazole in soil.
- Chromium was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 15.1, 13.2, 17.1, 7.52, and 4.08 mg/kg, respectively. The DEM DEC for chromium in soil is 1,400 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Chrysene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 2.69, 0.388, 0.949, 0.720, and 0.954 mg/kg, respectively. The DEM DEC for chrysene in soil is 0.4 mg/kg for residential land uses and 780 mg/kg for industrial/commercial land uses.
- Dibenz(a,h)anthracene was detected in soil samples B-1, B-2, and B-5 at concentrations of 0.850, 0.144, and 0.299 mg/kg, respectively. The DEM DEC for dibenz(a,h)anthracene in soil is 0.4 mg/kg for residential land uses and 0.8 mg/kg for industrial/commercial land uses.
- Fluoranthene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 5.79, 0.566, 1.80, 1.28, and 1.93 mg/kg, respectively. The DEM DEC for fluoranthene in soil is 20 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Fluorene was detected in soil sample B-5 at a concentration of 0.117 mg/kg. The DEM DEC for fluorene in soil is 28 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Indeno[1,2,3-cd]pyrene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 1.71, 0.322, 7.07, 4.86, and 0.605 mg/kg, respectively. The DEM DEC for indeno[1,2,3-cd]pyrene in soil is 0.9 mg/kg for residential land uses and 7.8 mg/kg for industrial/commercial land uses.

- Lead was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 123, 356, 31.7, 98.0, and 35.8 mg/kg, respectively. The DEM DEC for lead in soil is 150 mg/kg for residential land uses and 500 mg/kg for industrial/commercial land uses.
- Mercury was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 0.427, 0.318, 0.130, 0.176, and 0.0428 mg/kg, respectively. The DEM DEC for mercury in soil is 23 mg/kg for residential land uses and 610 mg/kg for industrial/commercial land uses.
- Naphthalene was detected in soil sample B-5 at a concentration of 0.0757 mg/kg. The DEM DEC for naphthalene in soil is 54 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Phenanthrene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 3.84, 0.236, 0.987, 0.652, and 1.50 mg/kg, respectively. The DEM DEC for phenanthrene in soil is 40 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- Pyrene was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 5.73, 0.571, 1.54, 1.06, and 1.73 mg/kg, respectively. The DEM DEC for pyrene in soil is 13 mg/kg for residential land uses and 10,000 mg/kg for industrial/commercial land uses.
- TPH as DRO was detected in soil samples B-1, B-2, B-3, B-4, and B-5 at concentrations of 818, 45.9, 61.6, 97.8, and 41.6 mg/kg, respectively. The DEM DEC for TPH as DRO in soil is 500 mg/kg for residential land uses and 2,500 mg/kg for industrial/commercial land uses.

No other analytes were detected in the analyzed soil samples at concentrations above the applicable laboratory reporting limits (RLs).

#### **5.2.4 SOIL GAS ANALYSIS RESULTS**

The following analytes were detected in the analyzed soil gas samples collected from the Site:

- 1,1,1-Trichloroethane (1,1,1-TCA) was detected in soil gas samples B-3-SG5 and B-5-SG5 at concentrations of 5.87 and 3.10 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), respectively. The USEPA Modified RSL for 1,1,1-TCA in soil gas is 173,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 733,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.

- 1,2,4-Trimethylbenzene was detected in soil gas sample B-2-SG5 at a concentration of 1.26  $\mu\text{g}/\text{m}^3$ . The USEPA Modified RSL for 1,2,4-trimethylbenzene in soil gas is 2,100  $\mu\text{g}/\text{m}^3$  for residential land uses and 8,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- 2-Butanone (methyl ethyl ketone [MEK]) was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 403, 8.48, 7.83, 8.09, and 3.44  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for MEK in soil gas is 173,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 733,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- 4-Methyl-2-pentanone (methyl isobutyl ketone [MIBK]) was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 7.66, 5.54, 5.09, and 8.28  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for MIBK in soil gas is 103,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 433,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Acetone was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 266, 73.6, 85.6, 70.9, and 54.5  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for acetone in soil gas is 1,066,667  $\mu\text{g}/\text{m}^3$  for residential land uses and 4,666,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Benzene was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 2.47, 5.40, 2.61, and 1.74  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for benzene in soil gas is 12  $\mu\text{g}/\text{m}^3$  for residential land uses and 53  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Carbon disulfide was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 17.6, 16.0, 23.1, 18.7, and 12.0  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for carbon disulfide in soil gas is 24,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 103,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Cyclohexane was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 9.75, 8.63, 3.81, and 2.24  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for cyclohexane in soil gas is 210,000  $\mu\text{g}/\text{m}^3$  for residential land uses and 866,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Ethylbenzene was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 7.17, 17.6, 10.7, 9.46, and 15.8  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for ethylbenzene in soil gas is 37  $\mu\text{g}/\text{m}^3$  for residential land uses and 163  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.

- Hexane was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 3.55, 12.8, 4.30, and 3.19  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for hexane in soil gas is 24,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 103,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- M,p-xylene was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 27.8, 78.8, 47.3, 41.3, and 69.4  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for m,p-xylene in soil gas is 3,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 14,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Methylene chloride was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 18.3, 17.0, 31.6, 14.7, and 13.0  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for methylene chloride in soil gas is 3,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 40,000  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- O-xylene was detected in soil gas samples B-1-SG5, B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 21.7, 69.0, 40.4, 34.8, and 60.1  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for o-xylene in soil gas is 3,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 14,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Styrene was detected in soil gas samples B-2-SG5 and B-3-SG5 at concentrations of 1.44 and 0.966  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for styrene in soil gas is 33,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 146,667  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Tetrachloroethene (PCE) was detected in soil gas sample B-4-SG5 at a concentration of 1.71  $\mu\text{g}/\text{m}^3$ . The USEPA Modified RSL for PCE in soil gas is 367  $\mu\text{g}/\text{m}^3$  for residential land uses and 1567  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Toluene was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 14.6, 15.0, 10.9, and 16.4  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for toluene in soil gas is 173,333  $\mu\text{g}/\text{m}^3$  for residential land uses and 733,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.
- Trichloroethene (TCE) was detected in soil gas samples B-1-SG5 and B-2-SG5 at concentrations of 45.6 and 1.15  $\mu\text{g}/\text{m}^3$ , respectively. The USEPA Modified RSL for TCE in soil gas is 16  $\mu\text{g}/\text{m}^3$  for residential land uses and 100  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.

- Trichlorofluoromethane (R-11) was detected in soil gas samples B-2-SG5, B-3-SG5, B-4-SG5, and B-5-SG5 at concentrations of 2.60, 48.0, 4.63, and 1.87  $\mu\text{g}/\text{m}^3$ , respectively. There is no USEPA Modified RSL for R-11 in soil gas.
- Vinyl acetate was detected in soil gas sample B-3-SG5 at a concentration of 18.2  $\mu\text{g}/\text{m}^3$ . The USEPA Modified RSL for vinyl acetate in soil gas is 7,000  $\mu\text{g}/\text{m}^3$  for residential land uses and 29,333  $\mu\text{g}/\text{m}^3$  for industrial/commercial land uses.

No other analytes were detected in the analyzed soil gas samples at concentrations above the applicable laboratory RLs.

## 5.2.5 GROUNDWATER ANALYSIS RESULTS

The following analytes were detected in the analyzed groundwater sample collected from the Site:

- 2-Hexanone (methyl butyl ketone [MBK]) was detected in groundwater sample B-5-GW at a concentration of 0.00597 mg/L. There is no DEM GB GO or USEPA MCL for MBK in groundwater.
- Arsenic was detected in groundwater sample B-5-GW at a concentration of 0.0800 mg/L. There is no DEM GB GO for arsenic in groundwater. The USEPA MCL for arsenic in groundwater is 0.010 mg/L.
- Barium was detected in groundwater sample B-5-GW at a concentration of 0.311 mg/L. There is no DEM GB GO for barium in groundwater. The USEPA MCL for barium in groundwater is 2.0 mg/L.
- Chromium was detected in groundwater sample B-5-GW at a concentration of 0.0982 mg/L. There is no DEM GB GO for chromium in groundwater. The USEPA MCL for chromium in groundwater is 0.10 mg/L.
- Lead was detected in groundwater sample B-5-GW at a concentration of 0.108 mg/L. There is no DEM GB GO for lead in groundwater. The USEPA MCL for lead in groundwater is 0.015 mg/L.

No other analytes were detected in the analyzed groundwater sample at concentrations above the applicable laboratory RLs.

## 6 SUMMARY

The objective of the project was to investigate the presence of heavy metals, SVOCs, TPH, and VOCs in the subsurface of the Site as a result of the historic placement of contaminated soils onsite and the LUST case associated with the southwest-adjacent gas station. This Report documents the advancement of five borings (B-1 through B-5) to terminal depths ranging from 10 to 30 feet bgs and the collection and analysis of soil, soil gas, and groundwater samples from the Site.

### 6.1 FINDINGS

#### 6.1.1 SOIL CONDITIONS

None of the collected soil samples exhibited any significant evidence of discoloration/staining or odors. All VOC concentrations detected during the screening of soil samples with the PID were 0.0 ppm.

Low to high concentrations of various metals, SVOCs, and TPH as DRO were detected in the analyzed soil samples collected from the Site. No TPH as GRO or VOCs were detected in any of the analyzed soil samples collected from the Site.

One of the five detections of arsenic in soil exceeded the residential and industrial/commercial use DEM DECs.

Two of the five detections of benzo[a]anthracene in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.

Four of the five detections of benzo[a]pyrene in soil exceeded the residential use DEM DEC and three of the five detections of benzo[a]pyrene exceeded the industrial/commercial use DEM DEC.

One of the five detections of benzo[g,h,i]perylene in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.

One of the five detections of benzo[k]fluoranthene in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.

Four of the five detections of chrysene in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.



One of the three detections of dibenz(a,h)anthracene in soil exceeded the residential and industrial/commercial use DEM DEC.

One of the five detections of indeno[1,2,3-cd]pyrene in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.

One of the five detections of lead in soil exceeded the residential use DEM DEC; however, none of the detections exceeded the industrial/commercial use DEM DEC.

No other analytes were detected in the analyzed soil samples at concentrations above the applicable regulatory screening levels.

### **6.1.2 SOIL GAS CONDITIONS**

Low concentrations of various VOCs were detected in the analyzed soil gas samples collected from the Site.

One of the five detections of TCE in soil gas exceeded the residential use USEPA Modified RSL; however, none of the detections exceeded the industrial/commercial use USEPA Modified RSL.

No other analytes were detected in the analyzed soil gas samples at concentrations above the applicable regulatory screening levels.

### **6.1.3 GROUNDWATER CONDITIONS**

A low concentration of one VOC (MBK) and low to high concentrations of various metals were detected in the analyzed groundwater sample collected from the Site. No SVOCs or TPH as DRO and GRO were detected in the analyzed groundwater sample collected from the Site.

None of the analytes detected in the analyzed groundwater sample exceeded the DEM GB GOs. Arsenic and lead were detected in the analyzed groundwater sample at concentrations exceeding the USEPA MCLs; however, the DEM GB GOs are considered the primary applicable screening levels for the Site.

No other analytes were detected in the analyzed groundwater sample at concentrations above the applicable regulatory screening levels.

## 6.2 CONCLUSIONS

Low to high concentrations of various metals, SVOCs, and TPH as DRO were detected in soil at the Site. No TPH as GRO or VOCs were detected in soil at the Site.

Arsenic, benzo[a]pyrene, and dibenz(a,h)anthracene, were detected in soil at concentrations exceeding both the residential and industrial/commercial screening levels.

Benzo[a]anthracene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, indeno[1,2,3-cd]pyrene, and lead were detected in soil at concentrations exceeding only the residential screening levels.

No other analytes were detected in the analyzed soil samples at concentrations above the applicable regulatory screening levels.

Low concentrations of various VOCs were detected in the analyzed soil gas samples collected from the Site. TCE was detected in soil gas at concentrations exceeding only the residential screening levels.

No other analytes were detected in the analyzed soil gas samples at concentrations above the applicable regulatory screening levels.

A low concentration of one VOC and low to high concentrations of various metals were detected in the analyzed groundwater sample collected from the Site. No SVOCs or TPH as DRO and GRO were detected in any of the analyzed groundwater samples collected from the Site.

None of the analytes detected in the analyzed groundwater sample exceeded the DEM GB GOs. Arsenic and lead were detected in the analyzed groundwater sample at concentrations exceeding the USEPA MCLs; however, the DEM GB GOs are considered the primary applicable screening levels for the Site. No other analytes were detected in the analyzed groundwater sample at concentrations above the USEPA MCLs.

Given the fact that the Site is currently zoned for industrial/commercial uses, the industrial/commercial use regulatory screening levels are considered most-applicable for comparison to the soil and soil gas contaminants detected at the Site. While USEPA MCLs were listed for comparison purposes, the DEM GB GOs are considered most-applicable for comparison to the groundwater contaminants detected at the Site.

The extent of contamination at the Site has not been fully delineated; therefore, it is recommended that additional Site investigation activities be performed in order to further characterize and delineate the extent of the contamination at the Site.

Additionally, detections of heavy metals, SVOCs, and TPH as DRO in soil at the Site may pose a concern to Site workers during the proposed redevelopment of the Site. In the event that the Site is redeveloped, precautionary measures should be implemented to minimize worker exposure to the contaminated Site soils (through inhalation/ingestion of airborne dust or dermal contact) and to minimize the potential for the contaminated soils to impact the environment (through airborne dust or surface water runoff). Therefore, Earth Science recommends that a Site-Specific Health and Safety Plan (HASP) and a Site-Specific Soil Management Plan (SMP) be prepared by an environmental professional detailing these precautionary measures for use by the General Contractor, subcontractors, and other Site workers during construction.

If a formal regulatory closure/“No Further Action” (“NFA”) status is desired for the Site, it is recommended that the responsible party enter into an oversight agreement with an appropriate environmental regulatory agency (i.e., the DEM).

## 7 CERTIFICATIONS AND LIMITATIONS

This Report was prepared under the direction and review of the professional listed below. The work described herein was prepared in accordance with generally accepted environmental practices. The completed work includes observations of the Site conditions encountered and the analytical results from samples analyzed by an independent, third-party laboratory during the course of the project. The number and location of samples were selected to provide the required information; however, it cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

The results, findings, and conclusions in this Report are based on the conditions encountered at in the areas explored at the Site at the time of the Earth Science's investigation; in the event that varying conditions are encountered in other areas of the Site during grading and/or construction activities that pose a potential environmental concern, additional investigation and/or testing of the Site may be warranted.

All conclusions and/or recommendations are based on observations, laboratory analyses, and governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

Earth Science warrants that the environmental consulting services contained herein were accomplished in accordance with generally accepted practices in the environmental industry that existed at the time and location of work. No other warranties are implied or expressed.

All reports, both verbal and written, as they pertain to the above-referenced property are for the sole use and benefit of the AutoZone. This Report has no other purpose and may not be relied upon by any other person or entity without the prior written consent of Earth Science.

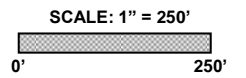
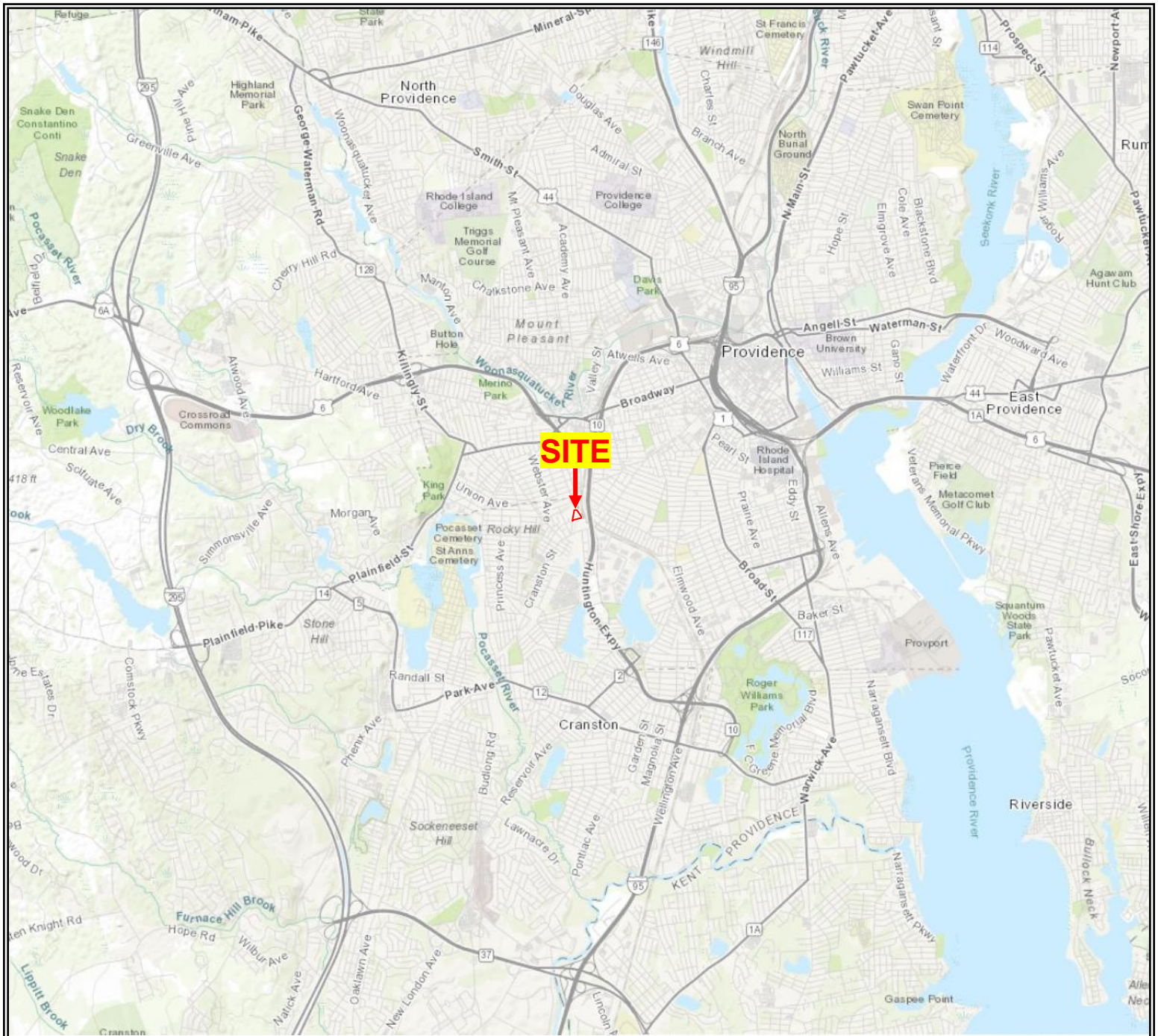
Should you have any questions or comments concerning this Report, please contact our office at (949) 441-0433.

Respectfully,



**Sean Rakhshani, EP**  
*Principal*

# **FIGURE 1: SITE VICINITY MAP**



Base Map Source: United States Geological Survey, 2021

**FIGURE 1: SITE VICINITY MAP**  
PROJECT NUMBER: 21-1713

## **FIGURE 2: BORING LOCATION MAP**



SITE BOUNDARY □

PROPOSED AUTOZONE LOT BOUNDARY □

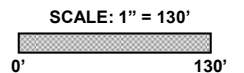
PROPOSED AUTOZONE BUILDING FOOTPRINT □

BORINGS TO 10 FEET BELOW GRADE ●

BORING TO 30 FEET BELOW GRADE ●



Base Map Source: City of Cranston, 2021



**FIGURE 2: BORING LOCATION MAP**  
PROJECT NUMBER: 21-1713



# **TABLE 1: INVESTIGATION SUMMARY**

*Table 1: Investigation Summary*

Boring Identification	Location	Terminal Depth (feet bgs)	Media Sampled	Depths of Analyzed Samples (feet bgs)	Target Contaminants
B-1	Western portion of the Site, in the northwestern area of the proposed AutoZone building	10.0	Soil and soil gas	2.0 (Soil) and 5.0 (soil gas)	Metals, SVOCs, TPH, and VOCs
B-2	Eastern portion of the Site, in the northeastern area of the proposed AutoZone building	10.0	Soil and soil gas	2.0 (Soil) and 5.0 (soil gas)	Metals, SVOCs, TPH, and VOCs
B-3	Central portion of the Site, in the southwestern area of the proposed AutoZone building	10.0	Soil and soil gas	2.0 (Soil) and 5.0 (soil gas)	Metals, SVOCs, TPH, and VOCs
B-4	Eastern portion of the Site, in the southeastern area of the proposed AutoZone building	10.0	Soil and soil gas	2.0 (Soil) and 5.0 (soil gas)	Metals, SVOCs, TPH, and VOCs
B-5	Western portion of the Site, down-gradient of a gas station with known contaminant releases impacting the underlying groundwater	30.0	Soil, soil gas, and groundwater	2.0 (Soil), 5.0 (soil gas), and 26.0 (groundwater)	Metals, SVOCs, TPH, and VOCs

Notes:

bgs = below ground surface

SVOCs = semi-volatile organic compounds

TPH = total petroleum hydrocarbons

VOCs = volatile organic compounds

## **TABLE 2: SOIL ANALYSIS RESULTS –** **METALS**

Table 2: Soil Analysis Results – Metals

Analysis Method	United States Environmental Protection Agency 6010D/7471B					
Units	Milligrams Per Kilogram (mg/kg)					
Sample Identification	Arsenic	Barium	Chromium	Lead	Mercury	All Other Analyzed Metals
B-1-2	5.00	33.2	15.1	123	0.427	ND
B-2-2	6.39	64.7	13.2	356	0.318	ND
B-3-2	8.12	18.5	17.1	31.7	0.130	ND
B-4-2	3.80	31.1	7.52	98.0	0.176	ND
B-5-2	2.06	19.8	4.08	35.8	0.0428	ND
RI DEM DEC - Residential	7.0	5500	1400	150	23	NA
RI DEM DEC - Industrial/Commercial	7.0	10000	10000	500	610	NA

Notes:

ND = not detected above the laboratory reporting limit

Values in RED = exceed one or more regulatory screening levels

RI DEM DEC = Rhode Island Department of Environmental Management Remediation Regulations, Direct Exposure Criteria, February 2004

NA = not applicable

**TABLE 3: SOIL ANALYSIS RESULTS –**  
**SEMI-VOLATILE ORGANIC**  
**COMPOUNDS**

Table 3: Soil Analysis Results – Semi-Volatile Organic Compounds

Analysis Method	United States Environmental Protection Agency 8270D																
Units	Milligrams Per Kilogram (mg/kg)																
Sample Identification	Acenaphthene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Carbazole	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	All Other Analyzed SVOCs
B-1-2	ND	1.16	2.86	2.63	2.26	1.75	2.20	ND	2.69	0.850	5.79	ND	1.71	ND	3.84	5.73	ND
B-2-2	ND	ND	0.363	0.382	0.430	0.334	0.344	ND	0.388	0.144	0.566	ND	0.322	ND	0.236	0.571	ND
B-3-2	ND	ND	0.858	0.850	0.920	0.703	0.820	ND	0.949	ND	1.80	ND	0.707	ND	0.987	1.54	ND
B-4-2	ND	ND	0.664	0.611	0.597	0.480	0.653	ND	0.720	ND	1.28	ND	0.486	ND	0.652	1.06	ND
B-5-2	0.123	0.332	0.969	0.856	0.963	0.609	0.683	0.180	0.954	0.299	1.93	0.117	0.605	0.0757	1.50	1.73	ND
RI DEM DEC - Residential	43	35	0.9	0.4	7.8	0.8	0.9	NRSL	0.4	0.4	20	28	0.9	54	40	13	NA
RI DEM DEC - Industrial/Commercial	10000	10000	7.8	0.8	10000	10000	78	NRSL	780	0.8	10000	10000	7.8	10000	10000	10000	NA

Notes:

SVOCs = semi-volatile organic compounds

ND = not detected above the laboratory reporting limit

Values in RED = exceed one or more regulatory screening levels

RI DEM DEC = Rhode Island Department of Environmental Management Remediation Regulations, Direct Exposure Criteria, February 2004

NRSL = no regulatory screening level

NA = not applicable

**TABLE 4: SOIL ANALYSIS RESULTS –**  
**TOTAL PETROLEUM HYDROCARBONS**

Table 4: Soil Analysis Results – Total Petroleum Hydrocarbons

Analysis Method	United States Environmental Protection Agency 8015D	
Units	Milligrams Per Kilogram (mg/kg)	
Sample Identification	DRO	GRO
B-1-2	818	ND
B-2-2	45.9	ND
B-3-2	61.6	ND
B-4-2	97.8	ND
B-5-2	41.6	ND
RI DEM DEC - Residential	500	500
RI DEM DEC - Industrial/Commercial	2500	2500

Notes:

DRO = diesel range organics (carbon range C10-C28)

GRO = oil range organics (carbon range C6-C10)

Values in **RED** = exceed one or more regulatory screening levels

ND = not detected above the laboratory reporting limit

RI DEM DEC = Rhode Island Department of Environmental Management Remediation Regulations, Direct Exposure Criteria, February 2004



**TABLE 5: SOIL ANALYSIS RESULTS –**  
**VOLATILE ORGANIC COMPOUNDS**

Table 5: Soil Analysis Results – Volatile Organic Compounds

Analysis Method	United States Environmental Protection Agency 8260C
Units	Milligrams Per Kilogram (mg/kg)
Sample Identification	All Analyzed VOCs
B-1-2	ND
B-2-2	ND
B-3-2	ND
B-4-2	ND
B-5-2	ND
RI DEM DEC - Residential	NA
RI DEM DEC - Industrial/Commercial	NA

Notes:

VOCs = volatile organic compounds

ND = not detected above the laboratory reporting limit

RI DEM DEC = Rhode Island Department of Environmental Management Remediation Regulations, Direct Exposure Criteria, February 2004

NA = not applicable

**TABLE 6: SOIL GAS ANALYSIS**  
**RESULTS – VOLATILE ORGANIC**  
**COMPOUNDS**

Table 6: Soil Gas Analysis Results – Volatile Organic Compounds

Analysis Method	United States Environmental Protection Agency (USEPA) Toxic Organics (TO)-15*																			
Units	Micrograms Per Cubic Meter (µg/m³)																			
Sample Identification	1,1,1-Trichloroethane	1,2,4-Trimethylbenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Cyclohexane	Ethylbenzene	Hexane	m,p-Xylene	Methylene Chloride	o-Xylene	Styrene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	Trichlorofluoromethane	Vinyl Acetate	All Other Analyzed VOCs
B-1-SG5	ND	ND	403	ND	266	ND	17.6	ND	7.17	ND	27.8	18.3	21.7	ND	ND	ND	45.6	ND	ND	ND
B-2-SG5	ND	1.26	8.48	7.66	73.6	2.47	16.0	9.75	17.6	3.55	78.8	17.0	69.0	1.44	ND	14.6	1.15	2.60	ND	ND
B-3-SG5	5.87	ND	7.83	5.54	85.6	5.40	23.1	8.63	10.7	12.8	47.3	31.6	40.4	0.966	ND	15.0	ND	48.0	18.2	ND
B-4-SG5	ND	ND	8.09	5.09	70.9	2.61	18.7	3.81	9.46	4.30	41.3	14.7	34.8	ND	1.71	10.9	ND	4.63	ND	ND
B-5-SG5	3.10	ND	3.44	8.28	54.5	1.74	12.0	2.24	15.8	3.19	69.4	13.0	60.1	ND	ND	16.4	ND	1.87	ND	ND
USEPA Modified RSLs - Resident	173333	2100	173333	103333	1066667	12	24333	210000	37	24333	3333	3333	3333	33333	367	173333	16	NRSL	7000	NA
USEPA Modified RSLs - Industrial	733333	8667	733333	433333	4666667	53	103333	866667	163	103333	14667	40000	14667	146667	1567	733333	100	NRSL	29333	NA

Notes:  
 \* = The soil gas samples were submitted to the laboratory immediately after collection and on the same day they were collected; however, due to delays caused by the laboratory, the samples were analyzed after the sample hold times had expired  
 MEK = methyl ethyl ketone  
 MIBK = methyl isobutyl ketone  
 VOCs = volatile organic compounds  
 ND = not detected above the laboratory reporting limit  
 Values in **RED** = exceeds one or more regulatory screening levels  
 RSLs = Regional Screening Levels with a Target Hazard Quotient of 1.0, May 2021, modified using the USEPA recommended attenuation factor of 0.03 to obtain the corresponding soil gas screening level  
 NRSL = no regulatory screening level  
 NA = not applicable

**TABLE 7: GROUNDWATER ANALYSIS**  
**RESULTS – METALS**

Table 7: Groundwater Analysis Results – Metals

Analysis Method	United States Environmental Protection Agency 6010D/7471B				
Units	Milligrams Per Liter (mg/L)				
Sample Identification	Arsenic	Barium	Chromium	Lead	All Other Analyzed Metals
B-5-GW	0.0800	0.311	0.0982	0.108	ND
RI DEM GB GOs	NRSL	NRSL	NRSL	NRSL	NA
USEPA MCLs	0.010	2.0	0.10	0.015	NA

Notes:

Values in **RED** = exceeds one or more regulatory screening levels

ND = not detected above the laboratory reporting limit

RI DEM GB GOs = Rhode Island Department of Environmental Management Remediation Regulations, GB Groundwater Objectives, February 2004

NRSL = no regulatory screening level

NA = not applicable

USEPA MCLs = United States Environmental Protection Agency Maximum Contaminant Levels with a Target Hazard Quotient of 1.0, May 2021

**TABLE 8: GROUNDWATER ANALYSIS**  
**RESULTS – SEMI-VOLATILE ORGANIC**  
**COMPOUNDS**

*Table 8: Groundwater Analysis Results – Semi-Volatile Organic Compounds*

Analysis Method	United States Environmental Protection Agency 8270D
Units	Milligrams Per Liter (mg/L)
Sample Identification	All Analyzed SVOCs
B-5-GW	ND
RI DEM GB GOs	NA
USEPA MCLs	NA

Notes:

SVOCs = semi-volatile organic compounds

ND = not detected above the laboratory reporting limit

RI DEM GB GOs = Rhode Island Department of Environmental Management Remediation Regulations, GB Groundwater Objectives, February 2004

NA = not applicable

USEPA MCLs = United States Environmental Protection Agency Maximum Contaminant Levels with a Target Hazard Quotient of 1.0, May 2021



**TABLE 9: GROUNDWATER ANALYSIS**  
**RESULTS – TOTAL PETROLEUM**  
**HYDROCARBONS**

*Table 9: Groundwater Analysis Results – Total Petroleum Hydrocarbons*

Analysis Method	United States Environmental Protection Agency 8015D	
Units	Milligrams Per Liter (mg/L)	
Sample Identification	DRO	GRO
B-5-GW	ND	ND
RI DEM GB GOs	NRSL	NRSL
USEPA MCLs	NRSL	NRSL

Notes:

DRO = diesel range organics (carbon range C10-C28)

GRO = oil range organics (carbon range C6-C10)

ND = not detected above the laboratory reporting limit

RI DEM GB GOs = Rhode Island Department of Environmental Management Remediation Regulations, GB Groundwater Objectives, February 2004

NRSL = no regulatory screening level

USEPA MCLs = United States Environmental Protection Agency Maximum Contaminant Levels with a Target Hazard Quotient of 1.0, May 2021

**TABLE 10: GROUNDWATER ANALYSIS**  
**RESULTS – VOLATILE ORGANIC**  
**COMPOUNDS**

*Table 10: Groundwater Analysis Results – Volatile Organic Compounds*

Analysis Method	United States Environmental Protection Agency 8260C	
Units	Milligrams Per Liter (mg/L)	
Sample Identification	2-Hexanone (MBK)	All Other Analyzed VOCs
B-5-GW	0.00597	ND
RI DEM GB GOs	NRSL	NA
USEPA MCLs	NRSL	NA

Notes:

MBK = methyl butyl ketone

VOCs = volatile organic compounds

ND = not detected above the laboratory reporting limit

RI DEM GB GOs = Rhode Island Department of Environmental Management Remediation Regulations, GB Groundwater Objectives, February 2004

NRSL = no regulatory screening level

NA = not applicable

USEPA MCLs = United States Environmental Protection Agency Maximum Contaminant Levels with a Target Hazard Quotient of 1.0, May 2021

# APPENDIX A: BORING LOGS

Boring Number:		B-1		Page 1 of 1	
Location:		Western portion, northwestern area of AutoZone building		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	Not encountered
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
0.0		0.0	TS	Topsoil	
0.5	B-1-2	0.0	SM	Sand, fine-grained, silty with trace gravel, brick, and concrete fragments, moist, brown	
1.0					
1.5					
2.0					
2.5					
3.0					
3.5					
4.0					
4.5					
5.0					
5.0	B-1-SG5	0.0			
5.5		0.0			
6.0		0.0			
6.5		0.0			
7.0		0.0			
7.5		0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, dry, tan	
8.0		0.0			
8.5		0.0			
9.0		0.0			
9.5		0.0			
10.0		0.0			Total depth = 10.0 feet below ground surface
10.5					After completion of sampling, backfilled boring to grade
11.0					
11.5					
12.0					
12.5					


Boring Number:		B-2		Page 1 of 1	
Location:		Eastern portion, northeastern area of AutoZone building		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	Not encountered
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
0.0		0.0	TS	Topsoil	
0.5	B-2-2	0.0	SM	Sand, fine-grained, silty with trace gravel, brick, and concrete fragments, moist, brown	
1.0		0.0			
1.5		0.0			
2.0		0.0			
2.5		0.0			
3.0		0.0			
3.5	B-2-SG5	0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, dry, tan	
4.0		0.0			
4.5		0.0			
5.0		0.0			
5.5		0.0			
6.0		0.0			
6.5		0.0			
7.0		0.0			
7.5		0.0			
8.0		0.0			
8.5		0.0			
9.0		0.0			
9.5	0.0				
10.0	0.0	Total depth = 10.0 feet below ground surface			
10.5					After completion of sampling, backfilled boring to grade
11.0					
11.5					
12.0					
12.5					

Boring Number:		B-3		Page 1 of 1	
Location:		Central portion, southwestern area of AutoZone building		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	Not encountered
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
0.0		0.0	TS	Topsoil	
0.5	B-3-2	0.0	SM	Sand, fine-grained, silty with trace gravel, brick, and concrete fragments, moist, brown	
1.0		0.0			
1.5		0.0			
2.0		0.0			
2.5		0.0			
3.0		0.0			
3.5	B-3-SG5	0.0			
4.0		0.0			
4.5		0.0			
5.0		0.0			
5.5		0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, dry, tan	
6.0		0.0			
6.5		0.0			
7.0		0.0			
7.5		0.0			
8.0		0.0			
8.5		0.0			
9.0		0.0			
9.5		0.0			
10.0		0.0			
					Total depth = 10.0 feet below ground surface
10.5					After completion of sampling, backfilled boring to grade
11.0					
11.5					
12.0					
12.5					



Boring Number:		B-4		Page 1 of 1	
Location:		Eastern portion, southeastern area of AutoZone building		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	Not encountered
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
0.0		0.0	TS	Topsoil	
0.5	B-4-2	0.0	SM	Sand, fine-grained, silty with trace gravel, brick, and concrete fragments, moist, brown	
1.0					
1.5					
2.0					
2.5					
3.0					
3.5					
4.0					
4.5					
5.0					
5.0	B-4-SG5	0.0			
5.5		0.0			
6.0		0.0			
6.5		0.0			
7.0		0.0			
7.5		0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, dry, tan	
8.0		0.0			
8.5		0.0			
9.0		0.0			
9.5		0.0			
10.0		0.0			Total depth = 10.0 feet below ground surface
10.5					After completion of sampling, backfilled boring to grade
11.0					
11.5					
12.0					
12.5					

Boring Number:		B-5		Page 1 of 2	
Location:		Western portion, down-gradient of a gas station release		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	26 Feet bgs
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
0.0		0.0	TS	Topsoil	
1.0		0.0	SM	Sand, fine-grained, silty with trace gravel, brick, and concrete fragments, moist, brown	
2.0	B-5-2	0.0			
3.0	B-5-SG5	0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, dry, tan	
4.0		0.0			
5.0		0.0			
6.0		0.0			
7.0		0.0			
8.0		0.0			
9.0		0.0			
10.0		0.0			
11.0		0.0			
12.0		0.0			
13.0		0.0			
14.0		0.0			
15.0		0.0			
16.0		0.0			
17.0		0.0			
18.0		0.0			
19.0		0.0			
20.0	0.0				
21.0	0.0				
22.0	0.0				
23.0	0.0				
24.0	0.0				
25.0	0.0				

Boring Number:		B-5		Page 2 of 2	
Location:		Western portion, down-gradient of a gas station release		Date Started:	10/5/2021
Site Address:		777 Cranston Road		Date Completed:	10/5/2021
		Cranston, Rhode Island 02907		Depth to Groundwater:	26 Feet bgs
Project Number:		21-1713		Field Technician(s):	ML
Drill Rig Type:		Truck-mounted, direct-push (Geoprobe 6600)		Earth Science LLC	
Sampling Equipment:		1.125-Inch-diameter sampler w/2.0-foot acetate liner		5319 University Drive, Suite 20	
Borehole Diameter:		2.0-Inches		Irvine, CA 92612	
Depth	Sample	PID	USCS	Description	Notes
26.0	B-5-GW	0.0	SM	Sand, fine to coarse-grained, silty with trace gravel, wet, tan	 <p>Groundwater encountered at 26.0 feet bgs</p>     <p>Total depth = 30.0 feet below ground surface</p>
27.0		0.0			
28.0		0.0			
28.0		0.0			
28.0		0.0			
28.0		0.0			
41.0					After completion of sampling, backfilled boring to grade
32.0					
33.0					
34.0					
35.0					
36.0					
37.0					
38.0					
39.0					
40.0					
41.0					
42.0					
43.0					
44.0					
45.0					
46.0					
47.0					
48.0					
49.0					
50.0					
51.0					

## SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS  MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVEL AND GRAVELLY SOILS  MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GC</b>	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS  MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SC</b>	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS  MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS  LIQUID LIMIT LESS THAN 50	SILTS AND CLAYS		<b>ML</b>	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
		SILTS AND CLAYS		<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		SILTS AND CLAYS		<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS  LIQUID LIMIT GREATER THAN 50	SILTS AND CLAYS		<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
		SILTS AND CLAYS		<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY
		SILTS AND CLAYS		<b>OH</b>	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

### Sampler Symbol Descriptions

- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

## ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	<b>CC</b>	Cement Concrete
	<b>AC</b>	Asphalt Concrete
	<b>CR</b>	Crushed Rock/ Quarry Spalls
	<b>TS</b>	Topsoil/ Forest Duff/Sod



Measured groundwater level in exploration, well, or piezometer



Groundwater observed at time of exploration



Perched water observed at time of exploration

### Graphic Log Contact



Distinct contact between soil strata or geologic units



Approximate location of soil strata change within a geologic soil unit

### Material Description Contact



Distinct contact between soil strata or geologic units



Approximate location of soil strata change within a geologic soil unit

### Laboratory / Field Tests

- %F Percent fines
- AL Atterberg limits
- CA Chemical analysis
- CP Laboratory compaction test
- CS Consolidation test
- DS Direct shear
- HA Hydrometer analysis
- MC Moisture content
- MD Moisture content and dry density
- OC Organic content
- PM Permeability or hydraulic conductivity
- PP Pocket penetrometer
- SA Sieve analysis
- TX Triaxial compression
- UC Unconfined compression
- VS Vane shear

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

## KEY TO EXPLORATION LOGS

# **APPENDIX B: LABORATORY** **ANALYTICAL REPORTS**

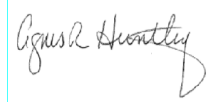
## ANALYTICAL REPORT

Eurofins Environment Testing New England  
646 Camp Ave  
North Kingstown, RI 02852  
Tel: (413)789-9018

Laboratory Job ID: 620-1378-1  
Client Project/Site: Mula Group RI Samples

For:  
Earth Science LLC  
5319 University Dr  
Suite 20  
Irvine, California 92612

Attn: Sean Rakhshani



Authorized for release by:  
10/13/2021 4:42:39 PM

Agnes Huntley, Project Manager  
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[agnes.huntley@eurofinset.com](mailto:agnes.huntley@eurofinset.com)

### LINKS

Review your project  
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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	5
Detection Summary . . . . .	8
Client Sample Results . . . . .	11
Surrogate Summary . . . . .	37
QC Sample Results . . . . .	40
QC Association Summary . . . . .	75
Lab Chronicle . . . . .	81
Certification Summary . . . . .	85
Method Summary . . . . .	92
Sample Summary . . . . .	93
Chain of Custody . . . . .	94
Receipt Checklists . . . . .	95

# Definitions/Glossary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

### GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

### GC VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.

### GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

### Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F3	Duplicate RPD exceeds the control limit

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit



# Definitions/Glossary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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# Case Narrative

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Job ID: 620-1378-1**

**Laboratory: Eurofins Environment Testing New England**

## Narrative

### Job Narrative 620-1378-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/5/2021 3:41 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.6° C.

#### GC/MS VOA

Method 8260C: The large number of analytes included in the continuing calibration verification (CCV) gives a high probability that one or more analytes will be outside acceptance criteria. As indicated in the reference method, analysis may proceed as long as no more than 20% of the analytes of interest are outside the method-defined %D criteria. Analyte(s) out of range: Bromomethane. Samples affected B-5-GW (620-1378-6) and (CCVIS 620-4445/3)

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 620-4445 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: Internal standard responses were outside of acceptance limits for the following sample: B-4-2 (620-1378-4). The sample(s) shows evidence of matrix interference. Reanalysis performed to confirm.

Method 8260C: Internal standard (ISTD) response for the following sample was outside control limits: B-4-2 (620-1378-4). The sample(s) was re-extracted and/or re-analyzed and ISTD response was outside control limits.

Method 8260C: Internal standard (ISTD) response for the following samples were outside of acceptance limits: B-1-2 (620-1378-1) and B-2-2 (620-1378-2). The sample(s) was not re-analyzed due to insufficient volume.

Method 8260C: Internal recoveries came back low, which would result in high analyte recovery. Samples came back as non detects, sample reported as is.

B-2-2 (620-1378-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) associated with batch 620-4493 recovered above the upper control limit for Nitrobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: B-1-2 (620-1378-1), B-2-2 (620-1378-2), B-3-2 (620-1378-3), B-4-2 (620-1378-4), B-5-2 (620-1378-5), B-5-GW (620-1378-6) and (CCVIS 620-4493/6).

Method 8270D: The continuing calibration verification (CCV) analyzed in 620-4493 was outside the method criteria for the following analyte(s): 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, Benzidine, Benzoic acid, Di-n-butyl phthalate and Hexachlorocyclopentadiene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The laboratory control sample (LCS) for preparation batch 620-4462 and analytical batch 620-4493 recovered outside control limits for the following analytes: 4-Chloroaniline and Phenol. The affected target analytes recovered within acceptance limits, >10%; therefore, demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method 8270D: The laboratory control sample (LCS) for preparation batch 620-4461 and analytical batch 620-4493 recovered outside control limits for the following analytes: <Affect 3-Nitroaniline, 4-Chloroaniline, Aniline and Pyridine edAnalytes>. The affected target analytes recovered within acceptance limits>10%; therefore, demonstrates the analytical system had sufficient sensitivity to detect the

# Case Narrative

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Job ID: 620-1378-1 (Continued)

### Laboratory: Eurofins Environment Testing New England (Coni

compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 620-4461 and analytical batch 620-4493 recovered outside control limits for the following analytes: Hexachlorocyclopentadiene, Benzo[k]fluoranthene, Aniline, 1-Methylnaphthalene and 2-Methylnaphthalene.

Method 8270D: The laboratory control sample (LCS) for preparation batch 620-4461 and analytical batch 620-4493 recovered outside control limits for the following analytes: 1,2,4,5-Tetrachlorobenzene, 1,2,4-Trichlorobenzene, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, Isophorone, Nitrobenzene and Pyridine. The affected target analytes recovered within acceptance limits >10%; therefore, demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

This control sample failure is an isolated anomaly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### GC VOA

Method 8015D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 620-4450 and analytical batch 620-4456 recovered outside control limits for the following analytes: C6-C10, however the values for the analytes fall within the acceptable range for both LCS/LCSD.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### GC Semi VOA

Method 8015D: Surrogate recovery for the following sample was outside control limits: B-1-2 (620-1378-1). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Metals

Method 6010D: The low level check standard recovery associated with batch 620-4454 is outside the acceptance criteria for the following analyte(s): The water CRI was low but the soil CRI passed and the sample is above the SCRI level.

Method 6010D: The low level was high but sample is non detect, high bias non detect.

Method 6010D: The low level check standard recovery associated with batch 620-4455 is outside the acceptance criteria for the following analyte(s): Ag and Se. QC is high but non detect in the samples, high bias non detect.

Method 6010D: The values for As with each repetition do decrease but not by a significant amount to indicate carryover, in addition their RSD is under 20%.

B-1-2 (620-1378-1) and B-2-2 (620-1378-2)

Method 6010D: The low level check standard recovery associated with batch 620-4496 is outside the acceptance criteria for the following analyte(s): As, it passed the soil CRI however the sample concentration is above that level so there is no need to change the RL, this is acceptable data.

Method 6010D: low level was high for Sb but sample is non detect.

Method 6010D: low level was low for TI so the RL was raised to the soil RL level since the soil CRI passed.

Method 6010D: The following sample was diluted because the initial analysis produced a significant negative result - the absolute value exceeded the reporting limit (RL): B-5-GW (620-1378-6). Reporting limits (RLs) are elevated as a result.

# Case Narrative

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

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## Job ID: 620-1378-1 (Continued)

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### Laboratory: Eurofins Environment Testing New England (Con

Methods 245.1, 7470A: The continuing calibration verification (CCV) associated with batch 620-4533 recovered above the upper control limit for mercury. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: B-5-GW (620-1378-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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# Detection Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Client Sample ID: B-1-2

## Lab Sample ID: 620-1378-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	1.16		0.353	mg/Kg	5	✳	8270D	Total/NA
Benzo[a]anthracene	2.86		0.353	mg/Kg	5	✳	8270D	Total/NA
Benzo[a]pyrene	2.63		0.353	mg/Kg	5	✳	8270D	Total/NA
Benzo[b]fluoranthene	2.26		0.353	mg/Kg	5	✳	8270D	Total/NA
Benzo[g,h,i]perylene	1.75		0.353	mg/Kg	5	✳	8270D	Total/NA
Benzo[k]fluoranthene	2.20	*1	0.353	mg/Kg	5	✳	8270D	Total/NA
Chrysene	2.69		0.353	mg/Kg	5	✳	8270D	Total/NA
Dibenz(a,h)anthracene	0.850		0.353	mg/Kg	5	✳	8270D	Total/NA
Fluoranthene	5.79		0.353	mg/Kg	5	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1.71		0.353	mg/Kg	5	✳	8270D	Total/NA
Phenanthrene	3.84		0.353	mg/Kg	5	✳	8270D	Total/NA
Pyrene	5.73		0.353	mg/Kg	5	✳	8270D	Total/NA
C10-C28	818		136	mg/Kg	5	✳	8015D	Total/NA
Arsenic	5.00		1.60	mg/Kg	1	✳	6010D	Total/NA
Barium	33.2		1.06	mg/Kg	1	✳	6010D	Total/NA
Chromium	15.1		1.06	mg/Kg	1	✳	6010D	Total/NA
Lead	123		1.60	mg/Kg	1	✳	6010D	Total/NA
Mercury	0.427		0.0321	mg/Kg	1	✳	7471B	Total/NA

## Client Sample ID: B-2-2

## Lab Sample ID: 620-1378-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.363		0.0701	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	0.382		0.0701	mg/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.430		0.0701	mg/Kg	1	✳	8270D	Total/NA
Benzo[g,h,i]perylene	0.334		0.0701	mg/Kg	1	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.344	*1	0.0701	mg/Kg	1	✳	8270D	Total/NA
Chrysene	0.388		0.0701	mg/Kg	1	✳	8270D	Total/NA
Dibenz(a,h)anthracene	0.144		0.0701	mg/Kg	1	✳	8270D	Total/NA
Fluoranthene	0.566		0.0701	mg/Kg	1	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.322		0.0701	mg/Kg	1	✳	8270D	Total/NA
Phenanthrene	0.236		0.0701	mg/Kg	1	✳	8270D	Total/NA
Pyrene	0.571		0.0701	mg/Kg	1	✳	8270D	Total/NA
C10-C28	45.9		14.2	mg/Kg	1	✳	8015D	Total/NA
Arsenic	6.39		1.57	mg/Kg	1	✳	6010D	Total/NA
Barium	64.7		1.04	mg/Kg	1	✳	6010D	Total/NA
Chromium	13.2		1.04	mg/Kg	1	✳	6010D	Total/NA
Lead	356		1.57	mg/Kg	1	✳	6010D	Total/NA
Mercury	0.318		0.0311	mg/Kg	1	✳	7471B	Total/NA

## Client Sample ID: B-3-2

## Lab Sample ID: 620-1378-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.858		0.364	mg/Kg	5	✳	8270D	Total/NA
Benzo[a]pyrene	0.850		0.364	mg/Kg	5	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.920		0.364	mg/Kg	5	✳	8270D	Total/NA
Benzo[g,h,i]perylene	0.703		0.364	mg/Kg	5	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.820	*1	0.364	mg/Kg	5	✳	8270D	Total/NA
Chrysene	0.949		0.364	mg/Kg	5	✳	8270D	Total/NA
Fluoranthene	1.80		0.364	mg/Kg	5	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.707		0.364	mg/Kg	5	✳	8270D	Total/NA
Phenanthrene	0.987		0.364	mg/Kg	5	✳	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Client Sample ID: B-3-2 (Continued)

## Lab Sample ID: 620-1378-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	1.54		0.364	mg/Kg	5	✳	8270D	Total/NA
C10-C28	61.6		14.3	mg/Kg	1	✳	8015D	Total/NA
Arsenic	8.12		1.55	mg/Kg	1	✳	6010D	Total/NA
Barium	18.5		1.03	mg/Kg	1	✳	6010D	Total/NA
Chromium	17.1		1.03	mg/Kg	1	✳	6010D	Total/NA
Lead	31.7		1.55	mg/Kg	1	✳	6010D	Total/NA
Mercury	0.130		0.0319	mg/Kg	1	✳	7471B	Total/NA

## Client Sample ID: B-4-2

## Lab Sample ID: 620-1378-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.664		0.357	mg/Kg	5	✳	8270D	Total/NA
Benzo[a]pyrene	0.611		0.357	mg/Kg	5	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.597		0.357	mg/Kg	5	✳	8270D	Total/NA
Benzo[g,h,i]perylene	0.480		0.357	mg/Kg	5	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.653	*1	0.357	mg/Kg	5	✳	8270D	Total/NA
Chrysene	0.720		0.357	mg/Kg	5	✳	8270D	Total/NA
Fluoranthene	1.28		0.357	mg/Kg	5	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.486		0.357	mg/Kg	5	✳	8270D	Total/NA
Phenanthrene	0.652		0.357	mg/Kg	5	✳	8270D	Total/NA
Pyrene	1.06		0.357	mg/Kg	5	✳	8270D	Total/NA
C10-C28	97.8		28.1	mg/Kg	1	✳	8015D	Total/NA
Arsenic	3.80		1.56	mg/Kg	1	✳	6010D	Total/NA
Barium	31.1		1.04	mg/Kg	1	✳	6010D	Total/NA
Chromium	7.52		1.04	mg/Kg	1	✳	6010D	Total/NA
Lead	98.0		1.56	mg/Kg	1	✳	6010D	Total/NA
Mercury	0.176		0.0307	mg/Kg	1	✳	7471B	Total/NA

## Client Sample ID: B-5-2

## Lab Sample ID: 620-1378-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.123		0.0689	mg/Kg	1	✳	8270D	Total/NA
Anthracene	0.332		0.0689	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	0.969		0.0689	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	0.856		0.0689	mg/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.963		0.0689	mg/Kg	1	✳	8270D	Total/NA
Benzo[g,h,i]perylene	0.609		0.0689	mg/Kg	1	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.683	*1	0.0689	mg/Kg	1	✳	8270D	Total/NA
Carbazole	0.180		0.173	mg/Kg	1	✳	8270D	Total/NA
Chrysene	0.954		0.0689	mg/Kg	1	✳	8270D	Total/NA
Dibenz(a,h)anthracene	0.299		0.0689	mg/Kg	1	✳	8270D	Total/NA
Fluoranthene	1.93		0.0689	mg/Kg	1	✳	8270D	Total/NA
Fluorene	0.117		0.0689	mg/Kg	1	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.605		0.0689	mg/Kg	1	✳	8270D	Total/NA
Naphthalene	0.0757		0.0689	mg/Kg	1	✳	8270D	Total/NA
Phenanthrene	1.50		0.0689	mg/Kg	1	✳	8270D	Total/NA
Pyrene	1.73		0.0689	mg/Kg	1	✳	8270D	Total/NA
C10-C28	41.6		13.5	mg/Kg	1	✳	8015D	Total/NA
Arsenic	2.06		1.50	mg/Kg	1	✳	6010D	Total/NA
Barium	19.8		0.998	mg/Kg	1	✳	6010D	Total/NA
Chromium	4.08		0.998	mg/Kg	1	✳	6010D	Total/NA
Lead	35.8		1.50	mg/Kg	1	✳	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Client Sample ID: B-5-2 (Continued)

## Lab Sample ID: 620-1378-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.0428		0.0304	mg/Kg	1	☼	7471B	Total/NA

## Client Sample ID: B-5-GW

## Lab Sample ID: 620-1378-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Hexanone (MBK)	0.00597		0.00200	mg/L	1		8260C	Total/NA
Arsenic	0.0800	^3+	0.00800	mg/L	1		6010D	Total/NA
Barium	0.311		0.0100	mg/L	1		6010D	Total/NA
Chromium	0.0982		0.0100	mg/L	1		6010D	Total/NA
Lead	0.108		0.0150	mg/L	1		6010D	Total/NA

This Detection Summary does not include radiochemical test results.



# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.5**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Acetone	ND		0.0469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Acrylonitrile	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Benzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Bromobenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Bromochloromethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Bromodichloromethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Bromoform	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Bromomethane	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
2-Butanone (MEK)	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
n-Butylbenzene	ND	*3	0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
sec-Butylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
tert-Butylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Carbon disulfide	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Carbon tetrachloride	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Chlorobenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Chloroethane	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Chloroform	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Chloromethane	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
2-Chlorotoluene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
4-Chlorotoluene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2-Dibromo-3-Chloropropane	ND	*3	0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Dibromochloromethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2-Dibromoethane (EDB)	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Dibromomethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2-Dichlorobenzene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,3-Dichlorobenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,4-Dichlorobenzene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Dichlorodifluoromethane (Freon 12)	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1-Dichloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2-Dichloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1-Dichloroethene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
cis-1,2-Dichloroethene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
trans-1,2-Dichloroethene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2-Dichloropropane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,3-Dichloropropane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
2,2-Dichloropropane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1-Dichloropropene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
cis-1,3-Dichloropropene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
trans-1,3-Dichloropropene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Ethylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Hexachlorobutadiene	ND	*3	0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
2-Hexanone (MBK)	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Isopropylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
4-Isopropyltoluene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Methyl tert-butyl ether	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Methylene Chloride	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Naphthalene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.5**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Styrene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1,1,2-Tetrachloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1,2,2-Tetrachloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Tetrachloroethene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Toluene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2,3-Trichlorobenzene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2,4-Trichlorobenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,3,5-Trichlorobenzene	ND	*3	0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1,1-Trichloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,1,2-Trichloroethane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Trichloroethene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Trichlorofluoromethane (Freon 11)	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2,3-Trichloropropane	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,2,4-Trimethylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,3,5-Trimethylbenzene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Vinyl chloride	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
m,p-Xylene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
o-Xylene	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Tetrahydrofuran	ND		0.00938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Ethyl ether	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Tert-amyl methyl ether	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Ethyl tert-butyl ether	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
di-Isopropyl ether	ND		0.00469	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
tert-Butanol	ND		0.0938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
1,4-Dioxane	ND		0.0938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
trans-1,4-Dichloro-2-butene	ND		0.0234	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1
Ethanol	ND		0.938	mg/Kg	☼	10/12/21 08:35	10/12/21 12:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	10/12/21 08:35	10/12/21 12:42	1
Toluene-d8 (Surr)	96		70 - 130	10/12/21 08:35	10/12/21 12:42	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130	10/12/21 08:35	10/12/21 12:42	1
Dibromofluoromethane (Surr)	98		70 - 130	10/12/21 08:35	10/12/21 12:42	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND	*-	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
1,2,4-Trichlorobenzene	ND	*-	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
1,2-Dichlorobenzene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
1,3-Dichlorobenzene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
1,4-Dichlorobenzene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
1-Methylnaphthalene	ND	*1	0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4,5-Trichlorophenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4,6-Trichlorophenol	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4-Dichlorophenol	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4-Dimethylphenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4-Dinitrophenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,4-Dinitrotoluene	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2,6-Dinitrotoluene	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5

Eurofins Environment Testing New England

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2-Chlorophenol	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2-Methylnaphthalene	ND	*1	0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2-Methylphenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2-Nitroaniline	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
2-Nitrophenol	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
3 & 4 Methylphenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
3,3'-Dichlorobenzidine	ND	*-	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
3-Nitroaniline	ND	*-	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4,6-Dinitro-2-methylphenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Bromophenyl phenyl ether	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Chloro-3-methylphenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Chloroaniline	ND	*-	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Chlorophenyl phenyl ether	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Nitroaniline	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
4-Nitrophenol	ND		6.99	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Acenaphthene	ND		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Acenaphthylene	ND		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Aniline	ND	*- *1	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Anthracene</b>	<b>1.16</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Azobenzene/Diphenyldiazene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Benzidine	ND	*- *1	3.49	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Benzo[a]anthracene</b>	<b>2.86</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Benzo[a]pyrene</b>	<b>2.63</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Benzo[b]fluoranthene</b>	<b>2.26</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Benzo[g,h,i]perylene</b>	<b>1.75</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Benzo[k]fluoranthene</b>	<b>2.20</b>	*1	0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Benzoic acid	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Benzyl alcohol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Bis(2-chloroethoxy)methane	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Bis(2-chloroethyl)ether	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
bis (2-chloroisopropyl) ether	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Bis(2-ethylhexyl) phthalate	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Butyl benzyl phthalate	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Carbazole	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Chrysene</b>	<b>2.69</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Dibenz(a,h)anthracene</b>	<b>0.850</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Dibenzofuran	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Diethyl phthalate	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Dimethyl phthalate	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Di-n-butyl phthalate	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Di-n-octyl phthalate	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Fluoranthene</b>	<b>5.79</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Fluorene	ND		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Hexachlorobenzene	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Hexachlorobutadiene	ND	*-	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Hexachlorocyclopentadiene	ND	*- *1	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Hexachloroethane	ND	*-	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Indeno[1,2,3-cd]pyrene</b>	<b>1.71</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.5**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND	*-	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Naphthalene	ND		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Nitrobenzene	ND	*-	0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
N-Nitrosodimethylamine	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
N-Nitrosodi-n-propylamine	ND		0.884	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
N-Nitrosodiphenylamine	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Pentachloronitrobenzene	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Pentachlorophenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Phenanthrene</b>	<b>3.84</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Phenol	ND		1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
<b>Pyrene</b>	<b>5.73</b>		0.353	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5
Pyridine	ND	*-	1.75	mg/Kg	☼	10/07/21 11:02	10/08/21 20:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	37		30 - 130	10/07/21 11:02	10/08/21 20:57	5
2-Fluorophenol (Surr)	46		30 - 130	10/07/21 11:02	10/08/21 20:57	5
Nitrobenzene-d5 (Surr)	35		30 - 130	10/07/21 11:02	10/08/21 20:57	5
Phenol-d5 (Surr)	42		30 - 130	10/07/21 11:02	10/08/21 20:57	5
2,4,6-Tribromophenol (Surr)	39		30 - 130	10/07/21 11:02	10/08/21 20:57	5
Terphenyl-d14 (Surr)	46		30 - 130	10/07/21 11:02	10/08/21 20:57	5

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND	*1	4.86	mg/Kg	☼	10/07/21 09:43	10/07/21 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	51	S1-	70 - 130	10/07/21 09:43	10/07/21 14:29	1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C10-C28</b>	<b>818</b>		136	mg/Kg	☼	10/06/21 12:10	10/07/21 19:43	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		40 - 140	10/06/21 12:10	10/07/21 19:43	5
1-Chlorooctadecane	0	S1-	40 - 140	10/06/21 12:10	10/07/21 19:43	5

## Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>5.00</b>		1.60	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
<b>Barium</b>	<b>33.2</b>		1.06	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
Cadmium	ND		0.532	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
<b>Chromium</b>	<b>15.1</b>		1.06	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
<b>Lead</b>	<b>123</b>		1.60	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
Selenium	ND	^3+	1.60	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1
Silver	ND	^+ ^3+	1.60	mg/Kg	☼	10/06/21 09:57	10/07/21 13:23	1

## Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.427</b>		0.0321	mg/Kg	☼	10/06/21 10:03	10/12/21 11:16	1

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

**Date Collected: 10/05/21 11:20**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.0**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Acetone	ND	*3	0.0462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Acrylonitrile	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Benzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Bromobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Bromochloromethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Bromodichloromethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Bromoform	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Bromomethane	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
2-Butanone (MEK)	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
n-Butylbenzene	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
sec-Butylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
tert-Butylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Carbon disulfide	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Carbon tetrachloride	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Chlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Chloroethane	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Chloroform	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Chloromethane	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
2-Chlorotoluene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
4-Chlorotoluene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2-Dibromo-3-Chloropropane	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Dibromochloromethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2-Dibromoethane (EDB)	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Dibromomethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2-Dichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,3-Dichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,4-Dichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Dichlorodifluoromethane (Freon 12)	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1-Dichloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2-Dichloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1-Dichloroethene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
cis-1,2-Dichloroethene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
trans-1,2-Dichloroethene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2-Dichloropropane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,3-Dichloropropane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
2,2-Dichloropropane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1-Dichloropropene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
cis-1,3-Dichloropropene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
trans-1,3-Dichloropropene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Ethylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Hexachlorobutadiene	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
2-Hexanone (MBK)	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Isopropylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
4-Isopropyltoluene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Methyl tert-butyl ether	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
4-Methyl-2-pentanone (MIBK)	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Methylene Chloride	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Naphthalene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

**Date Collected: 10/05/21 11:20**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.0**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Styrene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1,1,2-Tetrachloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1,1,2,2-Tetrachloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Tetrachloroethene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Toluene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2,3-Trichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2,4-Trichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,3,5-Trichlorobenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1,1-Trichloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,1,2-Trichloroethane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Trichloroethene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Trichlorofluoromethane (Freon 11)	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2,3-Trichloropropane	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,2,4-Trimethylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,3,5-Trimethylbenzene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Vinyl chloride	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
m,p-Xylene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
o-Xylene	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Tetrahydrofuran	ND	*3	0.00924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Ethyl ether	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Tert-amyl methyl ether	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Ethyl tert-butyl ether	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
di-Isopropyl ether	ND	*3	0.00462	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
tert-Butanol	ND	*3	0.0924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
1,4-Dioxane	ND	*3	0.0924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
trans-1,4-Dichloro-2-butene	ND	*3	0.0231	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1
Ethanol	ND	*3	0.924	mg/Kg	☼	10/12/21 08:35	10/12/21 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104	*3	70 - 130	10/12/21 08:35	10/12/21 13:08	1
Toluene-d8 (Surr)	97	*3	70 - 130	10/12/21 08:35	10/12/21 13:08	1
1,2-Dichloroethane-d4 (Surr)	141	*3 S1+	70 - 130	10/12/21 08:35	10/12/21 13:08	1
Dibromofluoromethane (Surr)	105	*3	70 - 130	10/12/21 08:35	10/12/21 13:08	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND	*-	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
1,2,4-Trichlorobenzene	ND	*-	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
1,2-Dichlorobenzene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
1,3-Dichlorobenzene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
1,4-Dichlorobenzene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
1-Methylnaphthalene	ND	*1	0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4,5-Trichlorophenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4,6-Trichlorophenol	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4-Dichlorophenol	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4-Dimethylphenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4-Dinitrophenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,4-Dinitrotoluene	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2,6-Dinitrotoluene	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1

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# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

**Date Collected: 10/05/21 11:20**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.0**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2-Chlorophenol	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2-Methylnaphthalene	ND	*1	0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2-Methylphenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2-Nitroaniline	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
2-Nitrophenol	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
3 & 4 Methylphenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
3,3'-Dichlorobenzidine	ND	*-	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
3-Nitroaniline	ND	*-	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4,6-Dinitro-2-methylphenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Bromophenyl phenyl ether	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Chloro-3-methylphenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Chloroaniline	ND	*-	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Chlorophenyl phenyl ether	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Nitroaniline	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
4-Nitrophenol	ND		1.39	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Acenaphthene	ND		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Acenaphthylene	ND		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Aniline	ND	*- *1	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Anthracene	ND		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Azobenzene/Diphenyldiazene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Benzidine	ND	*- *1	0.693	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Benzo[a]anthracene</b>	<b>0.363</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Benzo[a]pyrene</b>	<b>0.382</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Benzo[b]fluoranthene</b>	<b>0.430</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Benzo[g,h,i]perylene</b>	<b>0.334</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Benzo[k]fluoranthene</b>	<b>0.344</b>	<b>*1</b>	0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Benzoic acid	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Benzyl alcohol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Bis(2-chloroethoxy)methane	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Bis(2-chloroethyl)ether	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
bis (2-chloroisopropyl) ether	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Bis(2-ethylhexyl) phthalate	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Butyl benzyl phthalate	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Carbazole	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Chrysene</b>	<b>0.388</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Dibenz(a,h)anthracene</b>	<b>0.144</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Dibenzofuran	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Diethyl phthalate	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Dimethyl phthalate	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Di-n-butyl phthalate	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Di-n-octyl phthalate	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Fluoranthene</b>	<b>0.566</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Fluorene	ND		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Hexachlorobenzene	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Hexachlorobutadiene	ND	*-	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Hexachlorocyclopentadiene	ND	*- *1	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Hexachloroethane	ND	*-	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.322</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

Date Collected: 10/05/21 11:20

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 92.0

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND	*-	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Naphthalene	ND		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Nitrobenzene	ND	*-	0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
N-Nitrosodimethylamine	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
N-Nitrosodi-n-propylamine	ND		0.175	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
N-Nitrosodiphenylamine	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Pentachloronitrobenzene	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Pentachlorophenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Phenanthrene</b>	<b>0.236</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Phenol	ND		0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
<b>Pyrene</b>	<b>0.571</b>		0.0701	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1
Pyridine	ND	*-	0.347	mg/Kg	☼	10/07/21 11:02	10/08/21 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	41		30 - 130	10/07/21 11:02	10/08/21 18:59	1
2-Fluorophenol (Surr)	50		30 - 130	10/07/21 11:02	10/08/21 18:59	1
Nitrobenzene-d5 (Surr)	36		30 - 130	10/07/21 11:02	10/08/21 18:59	1
Phenol-d5 (Surr)	47		30 - 130	10/07/21 11:02	10/08/21 18:59	1
2,4,6-Tribromophenol (Surr)	57		30 - 130	10/07/21 11:02	10/08/21 18:59	1
Terphenyl-d14 (Surr)	53		30 - 130	10/07/21 11:02	10/08/21 18:59	1

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND	*1	4.71	mg/Kg	☼	10/07/21 09:43	10/07/21 15:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	49	S1-	70 - 130	10/07/21 09:43	10/07/21 15:07	1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C10-C28</b>	<b>45.9</b>		14.2	mg/Kg	☼	10/06/21 12:10	10/07/21 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	72		40 - 140	10/06/21 12:10	10/07/21 17:26	1
1-Chlorooctadecane	91		40 - 140	10/06/21 12:10	10/07/21 17:26	1

## Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>6.39</b>		1.57	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
<b>Barium</b>	<b>64.7</b>		1.04	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
Cadmium	ND		0.522	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
<b>Chromium</b>	<b>13.2</b>		1.04	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
<b>Lead</b>	<b>356</b>		1.57	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
Selenium	ND	^3+	1.57	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1
Silver	ND	^+ ^3+	1.57	mg/Kg	☼	10/06/21 09:57	10/07/21 13:29	1

## Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.318</b>		0.0311	mg/Kg	☼	10/06/21 10:03	10/12/21 11:30	1

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-3-2**

**Lab Sample ID: 620-1378-3**

**Date Collected: 10/05/21 11:30**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 90.9**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Acetone	ND		0.0512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Acrylonitrile	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Benzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Bromobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Bromochloromethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Bromodichloromethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Bromoform	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Bromomethane	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
2-Butanone (MEK)	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
n-Butylbenzene	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
sec-Butylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
tert-Butylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Carbon disulfide	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Carbon tetrachloride	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Chlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Chloroethane	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Chloroform	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Chloromethane	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
2-Chlorotoluene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
4-Chlorotoluene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2-Dibromo-3-Chloropropane	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Dibromochloromethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2-Dibromoethane (EDB)	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Dibromomethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2-Dichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,3-Dichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,4-Dichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Dichlorodifluoromethane (Freon 12)	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1-Dichloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2-Dichloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1-Dichloroethene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
cis-1,2-Dichloroethene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
trans-1,2-Dichloroethene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2-Dichloropropane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,3-Dichloropropane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
2,2-Dichloropropane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1-Dichloropropene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
cis-1,3-Dichloropropene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
trans-1,3-Dichloropropene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Ethylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Hexachlorobutadiene	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
2-Hexanone (MBK)	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Isopropylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
4-Isopropyltoluene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Methyl tert-butyl ether	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
4-Methyl-2-pentanone (MIBK)	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Methylene Chloride	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Naphthalene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-3-2**

**Lab Sample ID: 620-1378-3**

**Date Collected: 10/05/21 11:30**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 90.9**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Styrene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1,1,2-Tetrachloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1,2,2-Tetrachloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Tetrachloroethene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Toluene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2,3-Trichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2,4-Trichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,3,5-Trichlorobenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1,1-Trichloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,1,2-Trichloroethane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Trichloroethene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Trichlorofluoromethane (Freon 11)	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2,3-Trichloropropane	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,2,4-Trimethylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,3,5-Trimethylbenzene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Vinyl chloride	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
m,p-Xylene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
o-Xylene	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Tetrahydrofuran	ND		0.0102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Ethyl ether	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Tert-amyl methyl ether	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Ethyl tert-butyl ether	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
di-Isopropyl ether	ND		0.00512	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
tert-Butanol	ND		0.102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
1,4-Dioxane	ND		0.102	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
trans-1,4-Dichloro-2-butene	ND		0.0256	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1
Ethanol	ND		1.02	mg/Kg	☼	10/08/21 08:46	10/11/21 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	10/08/21 08:46	10/11/21 20:48	1
Toluene-d8 (Surr)	99		70 - 130	10/08/21 08:46	10/11/21 20:48	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130	10/08/21 08:46	10/11/21 20:48	1
Dibromofluoromethane (Surr)	99		70 - 130	10/08/21 08:46	10/11/21 20:48	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND	*-	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
1,2,4-Trichlorobenzene	ND	*-	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
1,2-Dichlorobenzene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
1,3-Dichlorobenzene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
1,4-Dichlorobenzene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
1-Methylnaphthalene	ND	*1	0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4,5-Trichlorophenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4,6-Trichlorophenol	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4-Dichlorophenol	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4-Dimethylphenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4-Dinitrophenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,4-Dinitrotoluene	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2,6-Dinitrotoluene	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5

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# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-3-2**

**Lab Sample ID: 620-1378-3**

**Date Collected: 10/05/21 11:30**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 90.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2-Chlorophenol	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2-Methylnaphthalene	ND	*1	0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2-Methylphenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2-Nitroaniline	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
2-Nitrophenol	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
3 & 4 Methylphenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
3,3'-Dichlorobenzidine	ND	*-	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
3-Nitroaniline	ND	*-	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4,6-Dinitro-2-methylphenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Bromophenyl phenyl ether	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Chloro-3-methylphenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Chloroaniline	ND	*-	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Chlorophenyl phenyl ether	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Nitroaniline	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
4-Nitrophenol	ND		7.21	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Acenaphthene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Acenaphthylene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Aniline	ND	*- *1	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Anthracene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Azobenzene/Diphenyldiazene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Benzidine	ND	*- *1	3.61	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Benzo[a]anthracene</b>	<b>0.858</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Benzo[a]pyrene</b>	<b>0.850</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Benzo[b]fluoranthene</b>	<b>0.920</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Benzo[g,h,i]perylene</b>	<b>0.703</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Benzo[k]fluoranthene</b>	<b>0.820</b>	*1	0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Benzoic acid	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Benzyl alcohol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Bis(2-chloroethoxy)methane	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Bis(2-chloroethyl)ether	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
bis (2-chloroisopropyl) ether	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Bis(2-ethylhexyl) phthalate	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Butyl benzyl phthalate	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Carbazole	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Chrysene</b>	<b>0.949</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Dibenz(a,h)anthracene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Dibenzofuran	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Diethyl phthalate	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Dimethyl phthalate	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Di-n-butyl phthalate	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Di-n-octyl phthalate	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Fluoranthene</b>	<b>1.80</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Fluorene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Hexachlorobenzene	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Hexachlorobutadiene	ND	*-	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Hexachlorocyclopentadiene	ND	*- *1	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Hexachloroethane	ND	*-	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.707</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-3-2**

**Lab Sample ID: 620-1378-3**

**Date Collected: 10/05/21 11:30**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 90.9**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND	*-	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Naphthalene	ND		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Nitrobenzene	ND	*-	0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
N-Nitrosodimethylamine	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
N-Nitrosodi-n-propylamine	ND		0.913	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
N-Nitrosodiphenylamine	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Pentachloronitrobenzene	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Pentachlorophenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Phenanthrene</b>	<b>0.987</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Phenol	ND		1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
<b>Pyrene</b>	<b>1.54</b>		0.364	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5
Pyridine	ND	*-	1.80	mg/Kg	☼	10/07/21 11:02	10/08/21 19:58	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	40		30 - 130	10/07/21 11:02	10/08/21 19:58	5
2-Fluorophenol (Surr)	52		30 - 130	10/07/21 11:02	10/08/21 19:58	5
Nitrobenzene-d5 (Surr)	39		30 - 130	10/07/21 11:02	10/08/21 19:58	5
Phenol-d5 (Surr)	46		30 - 130	10/07/21 11:02	10/08/21 19:58	5
2,4,6-Tribromophenol (Surr)	15	S1-	30 - 130	10/07/21 11:02	10/08/21 19:58	5
Terphenyl-d14 (Surr)	47		30 - 130	10/07/21 11:02	10/08/21 19:58	5

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND	*1	5.25	mg/Kg	☼	10/07/21 09:43	10/07/21 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	47	S1-	70 - 130	10/07/21 09:43	10/07/21 15:46	1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C10-C28</b>	<b>61.6</b>		14.3	mg/Kg	☼	10/06/21 12:10	10/07/21 19:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		40 - 140	10/06/21 12:10	10/07/21 19:05	1
1-Chlorooctadecane	128		40 - 140	10/06/21 12:10	10/07/21 19:05	1

## Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>8.12</b>		1.55	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
<b>Barium</b>	<b>18.5</b>		1.03	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
Cadmium	ND		0.516	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
<b>Chromium</b>	<b>17.1</b>		1.03	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
<b>Lead</b>	<b>31.7</b>		1.55	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
Selenium	ND	^3+	1.55	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1
Silver	ND	^+ ^3+	1.55	mg/Kg	☼	10/06/21 09:57	10/07/21 13:34	1

## Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.130</b>		0.0319	mg/Kg	☼	10/06/21 10:03	10/12/21 11:32	1

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Acetone	ND		0.0437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Acrylonitrile	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Benzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Bromobenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Bromochloromethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Bromodichloromethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Bromoform	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Bromomethane	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
2-Butanone (MEK)	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
n-Butylbenzene	ND	*3	0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
sec-Butylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
tert-Butylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Carbon disulfide	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Carbon tetrachloride	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Chlorobenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Chloroethane	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Chloroform	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Chloromethane	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
2-Chlorotoluene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
4-Chlorotoluene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2-Dibromo-3-Chloropropane	ND	*3	0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Dibromochloromethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2-Dibromoethane (EDB)	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Dibromomethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2-Dichlorobenzene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,3-Dichlorobenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,4-Dichlorobenzene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Dichlorodifluoromethane (Freon 12)	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1-Dichloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2-Dichloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1-Dichloroethene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
cis-1,2-Dichloroethene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
trans-1,2-Dichloroethene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2-Dichloropropane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,3-Dichloropropane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
2,2-Dichloropropane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1-Dichloropropene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
cis-1,3-Dichloropropene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
trans-1,3-Dichloropropene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Ethylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Hexachlorobutadiene	ND	*3	0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
2-Hexanone (MBK)	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Isopropylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
4-Isopropyltoluene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Methyl tert-butyl ether	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
4-Methyl-2-pentanone (MIBK)	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Methylene Chloride	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Naphthalene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Styrene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1,1,2-Tetrachloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1,2,2-Tetrachloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Tetrachloroethene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Toluene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2,3-Trichlorobenzene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2,4-Trichlorobenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,3,5-Trichlorobenzene	ND	*3	0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1,1-Trichloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,1,2-Trichloroethane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Trichloroethene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Trichlorofluoromethane (Freon 11)	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2,3-Trichloropropane	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,2,4-Trimethylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,3,5-Trimethylbenzene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Vinyl chloride	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
m,p-Xylene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
o-Xylene	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Tetrahydrofuran	ND		0.00874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Ethyl ether	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Tert-amyl methyl ether	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Ethyl tert-butyl ether	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
di-Isopropyl ether	ND		0.00437	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
tert-Butanol	ND		0.0874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
1,4-Dioxane	ND		0.0874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
trans-1,4-Dichloro-2-butene	ND		0.0218	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1
Ethanol	ND		0.874	mg/Kg	☼	10/08/21 08:46	10/11/21 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	10/08/21 08:46	10/11/21 21:15	1
Toluene-d8 (Surr)	97		70 - 130	10/08/21 08:46	10/11/21 21:15	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 130	10/08/21 08:46	10/11/21 21:15	1
Dibromofluoromethane (Surr)	101		70 - 130	10/08/21 08:46	10/11/21 21:15	1

## Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Acetone	ND		0.0459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Acrylonitrile	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Benzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Bromobenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Bromochloromethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Bromodichloromethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Bromoform	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Bromomethane	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
2-Butanone (MEK)	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
n-Butylbenzene	ND	*3	0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
sec-Butylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1

Eurofins Environment Testing New England

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

**Method: 8260C - Volatile Organic Compounds by GC/MS - RA (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Carbon disulfide	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Carbon tetrachloride	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Chlorobenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Chloroethane	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Chloroform	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Chloromethane	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
2-Chlorotoluene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
4-Chlorotoluene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2-Dibromo-3-Chloropropane	ND	*3	0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Dibromochloromethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2-Dibromoethane (EDB)	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Dibromomethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2-Dichlorobenzene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,3-Dichlorobenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,4-Dichlorobenzene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Dichlorodifluoromethane (Freon 12)	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1-Dichloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2-Dichloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1-Dichloroethene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
cis-1,2-Dichloroethene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
trans-1,2-Dichloroethene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2-Dichloropropane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,3-Dichloropropane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
2,2-Dichloropropane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1-Dichloropropene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
cis-1,3-Dichloropropene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
trans-1,3-Dichloropropene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Ethylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Hexachlorobutadiene	ND	*3	0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
2-Hexanone (MBK)	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Isopropylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
4-Isopropyltoluene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Methyl tert-butyl ether	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
4-Methyl-2-pentanone (MIBK)	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Methylene Chloride	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Naphthalene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
N-Propylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Styrene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1,1,2-Tetrachloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1,2,2-Tetrachloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Tetrachloroethene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Toluene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2,3-Trichlorobenzene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2,4-Trichlorobenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,3,5-Trichlorobenzene	ND	*3	0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1,1-Trichloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,1,2-Trichloroethane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Trichloroethene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

## Method: 8260C - Volatile Organic Compounds by GC/MS - RA (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane (Freon 11)	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2,3-Trichloropropane	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,2,4-Trimethylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,3,5-Trimethylbenzene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Vinyl chloride	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
m,p-Xylene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
o-Xylene	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Tetrahydrofuran	ND		0.00918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Ethyl ether	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Tert-amyl methyl ether	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Ethyl tert-butyl ether	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
di-Isopropyl ether	ND		0.00459	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
tert-Butanol	ND		0.0918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
1,4-Dioxane	ND		0.0918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
trans-1,4-Dichloro-2-butene	ND		0.0229	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1
Ethanol	ND		0.918	mg/Kg	☼	10/12/21 08:35	10/12/21 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	10/12/21 08:35	10/12/21 13:35	1
Toluene-d8 (Surr)	98		70 - 130	10/12/21 08:35	10/12/21 13:35	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 130	10/12/21 08:35	10/12/21 13:35	1
Dibromofluoromethane (Surr)	101		70 - 130	10/12/21 08:35	10/12/21 13:35	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND	*-	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
1,2,4-Trichlorobenzene	ND	*-	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
1,2-Dichlorobenzene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
1,3-Dichlorobenzene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
1,4-Dichlorobenzene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
1-Methylnaphthalene	ND	*1	0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4,5-Trichlorophenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4,6-Trichlorophenol	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4-Dichlorophenol	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4-Dimethylphenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4-Dinitrophenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,4-Dinitrotoluene	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2,6-Dinitrotoluene	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Chloronaphthalene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Chlorophenol	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Methylnaphthalene	ND	*1	0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Methylphenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Nitroaniline	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
2-Nitrophenol	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
3 & 4 Methylphenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
3,3'-Dichlorobenzidine	ND	*-	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
3-Nitroaniline	ND	*-	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4,6-Dinitro-2-methylphenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4-Bromophenyl phenyl ether	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4-Chloro-3-methylphenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5

Eurofins Environment Testing New England

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND	*-	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4-Chlorophenyl phenyl ether	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4-Nitroaniline	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
4-Nitrophenol	ND		7.07	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Acenaphthene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Acenaphthylene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Aniline	ND	*- *1	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Anthracene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Azobenzene/Diphenyldiazene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Benzidine	ND	*- *1	3.54	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Benzo[a]anthracene</b>	<b>0.664</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Benzo[a]pyrene</b>	<b>0.611</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Benzo[b]fluoranthene</b>	<b>0.597</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Benzo[g,h,i]perylene</b>	<b>0.480</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Benzo[k]fluoranthene</b>	<b>0.653</b>	*1	0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Benzoic acid	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Benzyl alcohol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Bis(2-chloroethoxy)methane	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Bis(2-chloroethyl)ether	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
bis (2-chloroisopropyl) ether	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Bis(2-ethylhexyl) phthalate	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Butyl benzyl phthalate	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Carbazole	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Chrysene</b>	<b>0.720</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Dibenz(a,h)anthracene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Dibenzofuran	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Diethyl phthalate	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Dimethyl phthalate	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Di-n-butyl phthalate	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Di-n-octyl phthalate	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Fluoranthene</b>	<b>1.28</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Fluorene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Hexachlorobenzene	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Hexachlorobutadiene	ND	*-	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Hexachlorocyclopentadiene	ND	*- *1	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Hexachloroethane	ND	*-	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.486</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Isophorone	ND	*-	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Naphthalene	ND		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Nitrobenzene	ND	*-	0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
N-Nitrosodimethylamine	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
N-Nitrosodi-n-propylamine	ND		0.895	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
N-Nitrosodiphenylamine	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Pentachloronitrobenzene	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Pentachlorophenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Phenanthrene</b>	<b>0.652</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Phenol	ND		1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
<b>Pyrene</b>	<b>1.06</b>		0.357	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5
Pyridine	ND	*-	1.77	mg/Kg	☼	10/07/21 11:02	10/08/21 20:28	5



# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

**Date Collected: 10/05/21 11:40**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 91.4**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	47		30 - 130	10/07/21 11:02	10/08/21 20:28	5
2-Fluorophenol (Surr)	56		30 - 130	10/07/21 11:02	10/08/21 20:28	5
Nitrobenzene-d5 (Surr)	43		30 - 130	10/07/21 11:02	10/08/21 20:28	5
Phenol-d5 (Surr)	50		30 - 130	10/07/21 11:02	10/08/21 20:28	5
2,4,6-Tribromophenol (Surr)	0	S1-	30 - 130	10/07/21 11:02	10/08/21 20:28	5
Terphenyl-d14 (Surr)	57		30 - 130	10/07/21 11:02	10/08/21 20:28	5

### Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND	*1	4.68	mg/Kg	☼	10/07/21 09:43	10/07/21 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	42	S1-	70 - 130	10/07/21 09:43	10/07/21 16:24	1

### Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	97.8		28.1	mg/Kg	☼	10/06/21 12:10	10/07/21 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		40 - 140	10/06/21 12:10	10/07/21 18:28	1
1-Chlorooctadecane	110		40 - 140	10/06/21 12:10	10/07/21 18:28	1

### Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.80		1.56	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Barium	31.1		1.04	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Cadmium	ND		0.520	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Chromium	7.52		1.04	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Lead	98.0		1.56	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Selenium	ND	^3+	1.56	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1
Silver	ND	^+ ^3+	1.56	mg/Kg	☼	10/06/21 09:57	10/07/21 13:51	1

### Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.176		0.0307	mg/Kg	☼	10/06/21 10:03	10/12/21 11:34	1

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

**Date Collected: 10/05/21 11:50**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 95.4**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Acetone	ND		0.0429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Acrylonitrile	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Benzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Bromobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Bromochloromethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Bromodichloromethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Bromoform	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Bromomethane	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
2-Butanone (MEK)	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
n-Butylbenzene	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
sec-Butylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
tert-Butylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Carbon disulfide	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Carbon tetrachloride	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Chlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Chloroethane	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Chloroform	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Chloromethane	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
2-Chlorotoluene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
4-Chlorotoluene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2-Dibromo-3-Chloropropane	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Dibromochloromethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2-Dibromoethane (EDB)	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Dibromomethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2-Dichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,3-Dichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,4-Dichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Dichlorodifluoromethane (Freon 12)	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1-Dichloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2-Dichloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1-Dichloroethene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
cis-1,2-Dichloroethene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
trans-1,2-Dichloroethene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2-Dichloropropane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,3-Dichloropropane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
2,2-Dichloropropane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1-Dichloropropene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
cis-1,3-Dichloropropene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
trans-1,3-Dichloropropene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Ethylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Hexachlorobutadiene	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
2-Hexanone (MBK)	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Isopropylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
4-Isopropyltoluene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Methyl tert-butyl ether	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Methylene Chloride	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Naphthalene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

**Date Collected: 10/05/21 11:50**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 95.4**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Styrene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1,1,2-Tetrachloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1,2,2-Tetrachloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Tetrachloroethene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Toluene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2,3-Trichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2,4-Trichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,3,5-Trichlorobenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1,1-Trichloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,1,2-Trichloroethane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Trichloroethene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Trichlorofluoromethane (Freon 11)	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2,3-Trichloropropane	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,2,4-Trimethylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,3,5-Trimethylbenzene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Vinyl chloride	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
m,p-Xylene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
o-Xylene	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Tetrahydrofuran	ND		0.00858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Ethyl ether	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Tert-amyl methyl ether	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Ethyl tert-butyl ether	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
di-Isopropyl ether	ND		0.00429	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
tert-Butanol	ND		0.0858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
1,4-Dioxane	ND		0.0858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
trans-1,4-Dichloro-2-butene	ND		0.0214	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1
Ethanol	ND		0.858	mg/Kg	☼	10/08/21 08:46	10/11/21 21:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	10/08/21 08:46	10/11/21 21:42	1
Toluene-d8 (Surr)	99		70 - 130	10/08/21 08:46	10/11/21 21:42	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130	10/08/21 08:46	10/11/21 21:42	1
Dibromofluoromethane (Surr)	98		70 - 130	10/08/21 08:46	10/11/21 21:42	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND	*-	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
1,2,4-Trichlorobenzene	ND	*-	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
1,2-Dichlorobenzene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
1,3-Dichlorobenzene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
1,4-Dichlorobenzene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
1-Methylnaphthalene	ND	*1	0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4,5-Trichlorophenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4,6-Trichlorophenol	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4-Dichlorophenol	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4-Dimethylphenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4-Dinitrophenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,4-Dinitrotoluene	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2,6-Dinitrotoluene	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1

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# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

**Date Collected: 10/05/21 11:50**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 95.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2-Chlorophenol	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2-Methylnaphthalene	ND	*1	0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2-Methylphenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2-Nitroaniline	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
2-Nitrophenol	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
3 & 4 Methylphenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
3,3'-Dichlorobenzidine	ND	*-	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
3-Nitroaniline	ND	*-	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4,6-Dinitro-2-methylphenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Bromophenyl phenyl ether	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Chloro-3-methylphenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Chloroaniline	ND	*-	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Chlorophenyl phenyl ether	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Nitroaniline	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
4-Nitrophenol	ND		1.36	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Acenaphthene</b>	<b>0.123</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Acenaphthylene	ND		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Aniline	ND	*- *1	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Anthracene</b>	<b>0.332</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Azobenzene/Diphenyldiazene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Benzidine	ND	*- *1	0.682	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Benzo[a]anthracene</b>	<b>0.969</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Benzo[a]pyrene</b>	<b>0.856</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Benzo[b]fluoranthene</b>	<b>0.963</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Benzo[g,h,i]perylene</b>	<b>0.609</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Benzo[k]fluoranthene</b>	<b>0.683</b>	*1	0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Benzoic acid	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Benzyl alcohol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Bis(2-chloroethoxy)methane	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Bis(2-chloroethyl)ether	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
bis (2-chloroisopropyl) ether	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Bis(2-ethylhexyl) phthalate	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Butyl benzyl phthalate	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Carbazole</b>	<b>0.180</b>		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Chrysene</b>	<b>0.954</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Dibenz(a,h)anthracene</b>	<b>0.299</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Dibenzofuran	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Diethyl phthalate	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Dimethyl phthalate	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Di-n-butyl phthalate	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Di-n-octyl phthalate	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Fluoranthene</b>	<b>1.93</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Fluorene</b>	<b>0.117</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Hexachlorobenzene	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Hexachlorobutadiene	ND	*-	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Hexachlorocyclopentadiene	ND	*- *1	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Hexachloroethane	ND	*-	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.605</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

**Date Collected: 10/05/21 11:50**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 95.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND	*-	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Naphthalene</b>	<b>0.0757</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Nitrobenzene	ND	*-	0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
N-Nitrosodimethylamine	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
N-Nitrosodi-n-propylamine	ND		0.173	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
N-Nitrosodiphenylamine	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Pentachloronitrobenzene	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Pentachlorophenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Phenanthrene</b>	<b>1.50</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Phenol	ND		0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
<b>Pyrene</b>	<b>1.73</b>		0.0689	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1
Pyridine	ND	*-	0.341	mg/Kg	☼	10/07/21 11:02	10/08/21 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	50		30 - 130	10/07/21 11:02	10/08/21 19:29	1
2-Fluorophenol (Surr)	65		30 - 130	10/07/21 11:02	10/08/21 19:29	1
Nitrobenzene-d5 (Surr)	43		30 - 130	10/07/21 11:02	10/08/21 19:29	1
Phenol-d5 (Surr)	57		30 - 130	10/07/21 11:02	10/08/21 19:29	1
2,4,6-Tribromophenol (Surr)	60		30 - 130	10/07/21 11:02	10/08/21 19:29	1
Terphenyl-d14 (Surr)	58		30 - 130	10/07/21 11:02	10/08/21 19:29	1

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND	*1	4.42	mg/Kg	☼	10/07/21 09:43	10/07/21 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	43	S1-	70 - 130	10/07/21 09:43	10/07/21 17:03	1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C10-C28</b>	<b>41.6</b>		13.5	mg/Kg	☼	10/06/21 12:10	10/07/21 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		40 - 140	10/06/21 12:10	10/07/21 17:51	1
1-Chlorooctadecane	115		40 - 140	10/06/21 12:10	10/07/21 17:51	1

## Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>2.06</b>		1.50	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
<b>Barium</b>	<b>19.8</b>		0.998	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
Cadmium	ND		0.499	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
<b>Chromium</b>	<b>4.08</b>		0.998	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
<b>Lead</b>	<b>35.8</b>		1.50	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
Selenium	ND	^3+	1.50	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1
Silver	ND	^+ ^3+	1.50	mg/Kg	☼	10/06/21 09:57	10/07/21 13:57	1

## Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0428</b>		0.0304	mg/Kg	☼	10/06/21 10:03	10/12/21 11:36	1

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-GW**

**Lab Sample ID: 620-1378-6**

**Date Collected: 10/05/21 14:00**

**Matrix: Water**

**Date Received: 10/05/21 15:41**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00100	mg/L			10/07/21 13:59	1
Acetone	ND		0.0100	mg/L			10/07/21 13:59	1
Acrylonitrile	ND		0.000500	mg/L			10/07/21 13:59	1
Benzene	ND		0.00100	mg/L			10/07/21 13:59	1
Bromobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Bromochloromethane	ND		0.00100	mg/L			10/07/21 13:59	1
Bromodichloromethane	ND		0.000500	mg/L			10/07/21 13:59	1
Bromoform	ND		0.00100	mg/L			10/07/21 13:59	1
Bromomethane	ND	*+	0.00200	mg/L			10/07/21 13:59	1
2-Butanone (MEK)	ND		0.00200	mg/L			10/07/21 13:59	1
n-Butylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
sec-Butylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
tert-Butylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Carbon disulfide	ND		0.00200	mg/L			10/07/21 13:59	1
Carbon tetrachloride	ND		0.00100	mg/L			10/07/21 13:59	1
Chlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Chloroethane	ND	*+	0.00200	mg/L			10/07/21 13:59	1
Chloroform	ND		0.00100	mg/L			10/07/21 13:59	1
Chloromethane	ND		0.00200	mg/L			10/07/21 13:59	1
2-Chlorotoluene	ND		0.00100	mg/L			10/07/21 13:59	1
4-Chlorotoluene	ND		0.00100	mg/L			10/07/21 13:59	1
1,2-Dibromo-3-Chloropropane	ND		0.00200	mg/L			10/07/21 13:59	1
Dibromochloromethane	ND		0.000500	mg/L			10/07/21 13:59	1
1,2-Dibromoethane (EDB)	ND		0.000500	mg/L			10/07/21 13:59	1
Dibromomethane	ND		0.00100	mg/L			10/07/21 13:59	1
1,2-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,3-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,4-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Dichlorodifluoromethane (Freon 12)	ND		0.00200	mg/L			10/07/21 13:59	1
1,1-Dichloroethane	ND		0.00100	mg/L			10/07/21 13:59	1
1,2-Dichloroethane	ND		0.00100	mg/L			10/07/21 13:59	1
1,1-Dichloroethene	ND		0.00100	mg/L			10/07/21 13:59	1
cis-1,2-Dichloroethene	ND		0.00100	mg/L			10/07/21 13:59	1
trans-1,2-Dichloroethene	ND		0.00100	mg/L			10/07/21 13:59	1
1,2-Dichloropropane	ND		0.00100	mg/L			10/07/21 13:59	1
1,3-Dichloropropane	ND		0.00100	mg/L			10/07/21 13:59	1
2,2-Dichloropropane	ND		0.00100	mg/L			10/07/21 13:59	1
1,1-Dichloropropene	ND		0.00100	mg/L			10/07/21 13:59	1
cis-1,3-Dichloropropene	ND		0.000500	mg/L			10/07/21 13:59	1
trans-1,3-Dichloropropene	ND		0.000500	mg/L			10/07/21 13:59	1
Ethylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Hexachlorobutadiene	ND		0.00100	mg/L			10/07/21 13:59	1
<b>2-Hexanone (MBK)</b>	<b>0.00597</b>		0.00200	mg/L			10/07/21 13:59	1
Isopropylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
4-Isopropyltoluene	ND		0.00100	mg/L			10/07/21 13:59	1
Methyl tert-butyl ether	ND		0.00100	mg/L			10/07/21 13:59	1
4-Methyl-2-pentanone (MIBK)	ND		0.00200	mg/L			10/07/21 13:59	1
Methylene Chloride	ND		0.00200	mg/L			10/07/21 13:59	1
Naphthalene	ND		0.00200	mg/L			10/07/21 13:59	1

# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-GW**

**Lab Sample ID: 620-1378-6**

**Date Collected: 10/05/21 14:00**

**Matrix: Water**

**Date Received: 10/05/21 15:41**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Styrene	ND		0.00100	mg/L			10/07/21 13:59	1
1,1,1,2-Tetrachloroethane	ND		0.00100	mg/L			10/07/21 13:59	1
1,1,2,2-Tetrachloroethane	ND		0.000500	mg/L			10/07/21 13:59	1
Tetrachloroethene	ND		0.00100	mg/L			10/07/21 13:59	1
Toluene	ND		0.00100	mg/L			10/07/21 13:59	1
1,2,3-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,2,4-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,3,5-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,1,1-Trichloroethane	ND		0.00100	mg/L			10/07/21 13:59	1
1,1,2-Trichloroethane	ND		0.00100	mg/L			10/07/21 13:59	1
Trichloroethene	ND		0.00100	mg/L			10/07/21 13:59	1
Trichlorofluoromethane (Freon 11)	ND		0.00100	mg/L			10/07/21 13:59	1
1,2,3-Trichloropropane	ND		0.00100	mg/L			10/07/21 13:59	1
1,2,4-Trimethylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
1,3,5-Trimethylbenzene	ND		0.00100	mg/L			10/07/21 13:59	1
Vinyl chloride	ND		0.00100	mg/L			10/07/21 13:59	1
m,p-Xylene	ND		0.00100	mg/L			10/07/21 13:59	1
o-Xylene	ND		0.00100	mg/L			10/07/21 13:59	1
Tetrahydrofuran	ND		0.00200	mg/L			10/07/21 13:59	1
Ethyl ether	ND		0.00100	mg/L			10/07/21 13:59	1
Tert-amyl methyl ether	ND		0.00100	mg/L			10/07/21 13:59	1
Ethyl tert-butyl ether	ND		0.00100	mg/L			10/07/21 13:59	1
di-Isopropyl ether	ND		0.00100	mg/L			10/07/21 13:59	1
tert-Butanol	ND		0.0100	mg/L			10/07/21 13:59	1
1,4-Dioxane	ND		0.0500	mg/L			10/07/21 13:59	1
trans-1,4-Dichloro-2-butene	ND		0.00500	mg/L			10/07/21 13:59	1
Ethanol	ND		0.200	mg/L			10/07/21 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130		10/07/21 13:59	1
Toluene-d8 (Surr)	102		70 - 130		10/07/21 13:59	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 130		10/07/21 13:59	1
Dibromofluoromethane (Surr)	105		70 - 130		10/07/21 13:59	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
1,2,4-Trichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
1,2-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
1,3-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
1,4-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
1-Methylnaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4,5-Trichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4,6-Trichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4-Dichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4-Dimethylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4-Dinitrophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,4-Dinitrotoluene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2,6-Dinitrotoluene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1

Eurofins Environment Testing New England

# Client Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-GW**

**Lab Sample ID: 620-1378-6**

**Date Collected: 10/05/21 14:00**

**Matrix: Water**

**Date Received: 10/05/21 15:41**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2-Chlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2-Methylnaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2-Methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
2-Nitrophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
3 & 4 Methylphenol	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 18:00	1
3,3'-Dichlorobenzidine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
3-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4,6-Dinitro-2-methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Bromophenyl phenyl ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Chloro-3-methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Chloroaniline	ND	*	0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Chlorophenyl phenyl ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
4-Nitrophenol	ND		0.0200	mg/L		10/07/21 11:03	10/08/21 18:00	1
Acenaphthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Acenaphthylene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Aniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Azobenzene/Diphenyldiazene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzidine	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzo[a]anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzo[a]pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzo[b]fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzo[g,h,i]perylene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzo[k]fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzoic acid	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 18:00	1
Benzyl alcohol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Bis(2-chloroethoxy)methane	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Bis(2-chloroethyl)ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
bis (2-chloroisopropyl) ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Bis(2-ethylhexyl) phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Butyl benzyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Carbazole	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Chrysene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Dibenz(a,h)anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Dibenzofuran	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Diethyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Dimethyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Di-n-butyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Di-n-octyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Fluorene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Hexachlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Hexachlorobutadiene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Hexachlorocyclopentadiene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Hexachloroethane	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Indeno[1,2,3-cd]pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1



# Client Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-GW**

**Lab Sample ID: 620-1378-6**

**Date Collected: 10/05/21 14:00**

**Matrix: Water**

**Date Received: 10/05/21 15:41**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Naphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Nitrobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
N-Nitrosodimethylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
N-Nitrosodi-n-propylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
N-Nitrosodiphenylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Pentachloronitrobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Pentachlorophenol	ND		0.0200	mg/L		10/07/21 11:03	10/08/21 18:00	1
Phenanthrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Phenol	ND	*	0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1
Pyridine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		30 - 130	10/07/21 11:03	10/08/21 18:00	1
2-Fluorophenol (Surr)	49		15 - 110	10/07/21 11:03	10/08/21 18:00	1
Nitrobenzene-d5 (Surr)	58		30 - 130	10/07/21 11:03	10/08/21 18:00	1
Phenol-d5 (Surr)	31		15 - 110	10/07/21 11:03	10/08/21 18:00	1
2,4,6-Tribromophenol (Surr)	85		15 - 110	10/07/21 11:03	10/08/21 18:00	1
Terphenyl-d14 (Surr)	61		30 - 130	10/07/21 11:03	10/08/21 18:00	1

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		0.100	mg/L			10/08/21 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	109		70 - 130		10/08/21 13:27	1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.200	mg/L		10/08/21 10:12	10/11/21 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		40 - 140	10/08/21 10:12	10/11/21 16:47	1
1-Chlorooctadecane	48		40 - 140	10/08/21 10:12	10/11/21 16:47	1

## Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0800	^3+	0.00800	mg/L		10/06/21 16:02	10/08/21 13:21	1
Barium	0.311		0.0100	mg/L		10/06/21 16:02	10/07/21 13:34	1
Cadmium	ND		0.00500	mg/L		10/06/21 16:02	10/07/21 13:34	1
Chromium	0.0982		0.0100	mg/L		10/06/21 16:02	10/07/21 13:34	1
Lead	0.108		0.0150	mg/L		10/06/21 16:02	10/07/21 13:34	1
Selenium	ND	^3+	0.0300	mg/L		10/06/21 16:02	10/07/21 13:34	1
Silver	ND	^3+	0.0100	mg/L		10/06/21 16:02	10/07/21 13:34	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	^+	0.000200	mg/L		10/06/21 13:18	10/07/21 17:23	1

# Surrogate Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (70-130)	TOL (70-130)	DCA (70-130)	DBFM (70-130)
620-1378-1	B-1-2	86	96	103	98
620-1378-2	B-2-2	104 *3	97 *3	141 *3	105 *3
620-1378-3	B-3-2	95	99	102	99
620-1378-4	B-4-2	89	97	109	101
620-1378-4 - RA	B-4-2	88	98	114	101
620-1378-5	B-5-2	92	99	101	98
LCS 620-4490/1-A	Lab Control Sample	100	101	100	100
LCS 620-4558/1-A	Lab Control Sample	100	101	99	98
LCSD 620-4490/2-A	Lab Control Sample Dup	100	101	100	100
LCSD 620-4558/2-A	Lab Control Sample Dup	99	100	97	98
MB 620-4490/3-A	Method Blank	100	100	100	98
MB 620-4558/3-A	Method Blank	100	101	100	96

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)  
DCA = 1,2-Dichloroethane-d4 (Surr)  
DBFM = Dibromofluoromethane (Surr)

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (70-130)	TOL (70-130)	DCA (70-130)	DBFM (70-130)
620-1378-6	B-5-GW	93	102	107	105
LCS 620-4445/4	Lab Control Sample	101	102	103	105
LCSD 620-4445/5	Lab Control Sample Dup	101	103	103	104
MB 620-4445/7	Method Blank	95	101	104	102

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)  
DCA = 1,2-Dichloroethane-d4 (Surr)  
DBFM = Dibromofluoromethane (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (30-130)	2FP (30-130)	NBZ (30-130)	PHL (30-130)	TBP (30-130)	TPHL (30-130)
620-1378-1	B-1-2	37	46	35	42	39	46
620-1378-2	B-2-2	41	50	36	47	57	53
620-1378-3	B-3-2	40	52	39	46	15 S1-	47
620-1378-4	B-4-2	47	56	43	50	0 S1-	57
620-1378-5	B-5-2	50	65	43	57	60	58
LCS 620-4461/2-A	Lab Control Sample	43	49	37	43	48	44
LCSD 620-4461/3-A	Lab Control Sample Dup	50	58	46	54	66	59
MB 620-4461/1-A	Method Blank	63	74	54	67	69	65

# Surrogate Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)  
2FP = 2-Fluorophenol (Surr)  
NBZ = Nitrobenzene-d5 (Surr)  
PHL = Phenol-d5 (Surr)  
TBP = 2,4,6-Tribromophenol (Surr)  
TPHL = Terphenyl-d14 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (30-130)	2FP (15-110)	NBZ (30-130)	PHL (15-110)	TBP (15-110)	TPHL (30-130)
620-1378-6	B-5-GW	69	49	58	31	85	61
LCS 620-4462/2-A	Lab Control Sample	56	46	57	28	89	86
LCSD 620-4462/3-A	Lab Control Sample Dup	61	47	61	29	94	87
MB 620-4462/1-A	Method Blank	66	49	58	30	75	67

## Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)  
2FP = 2-Fluorophenol (Surr)  
NBZ = Nitrobenzene-d5 (Surr)  
PHL = Phenol-d5 (Surr)  
TBP = 2,4,6-Tribromophenol (Surr)  
TPHL = Terphenyl-d14 (Surr)

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		25DBTf1 (70-130)
620-1378-1	B-1-2	51 S1-
620-1378-2	B-2-2	49 S1-
620-1378-3	B-3-2	47 S1-
620-1378-4	B-4-2	42 S1-
620-1378-5	B-5-2	43 S1-
LCS 620-4450/1-A	Lab Control Sample	98
LCSD 620-4450/2-A	Lab Control Sample Dup	97
MB 620-4450/3-A	Method Blank	107

## Surrogate Legend

25DBTf = 2,5-Dibromotoluene (fid)

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		25DBTf1 (70-130)
620-1378-6	B-5-GW	109
LCS 620-4484/3	Lab Control Sample	114
LCSD 620-4484/4	Lab Control Sample Dup	114
MB 620-4484/6	Method Blank	107

## Surrogate Legend

25DBTf = 2,5-Dibromotoluene (fid)

# Surrogate Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (40-140)	1COD (40-140)
620-1378-1	B-1-2	84	0 S1-
620-1378-2	B-2-2	72	91
620-1378-3	B-3-2	68	128
620-1378-4	B-4-2	83	110
620-1378-5	B-5-2	76	115
LCS 620-4431/2-A	Lab Control Sample	80	56
LCSD 620-4431/3-A	Lab Control Sample Dup	65	62
MB 620-4431/1-A	Method Blank	59	68

#### Surrogate Legend

OTPH = o-Terphenyl

1COD = 1-Chlorooctadecane

## Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (40-140)	1COD (40-140)
620-1378-6	B-5-GW	74	48
LCS 620-4502/2-A	Lab Control Sample	86	69
LCSD 620-4502/3-A	Lab Control Sample Dup	84	59
MB 620-4502/1-A	Method Blank	77	81

#### Surrogate Legend

OTPH = o-Terphenyl

1COD = 1-Chlorooctadecane

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 620-4445/7**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00100	mg/L			10/07/21 12:21	1
Acetone	ND		0.0100	mg/L			10/07/21 12:21	1
Acrylonitrile	ND		0.000500	mg/L			10/07/21 12:21	1
Benzene	ND		0.00100	mg/L			10/07/21 12:21	1
Bromobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Bromochloromethane	ND		0.00100	mg/L			10/07/21 12:21	1
Bromodichloromethane	ND		0.000500	mg/L			10/07/21 12:21	1
Bromoform	ND		0.00100	mg/L			10/07/21 12:21	1
Bromomethane	ND		0.00200	mg/L			10/07/21 12:21	1
2-Butanone (MEK)	ND		0.00200	mg/L			10/07/21 12:21	1
n-Butylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
sec-Butylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
tert-Butylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Carbon disulfide	ND		0.00200	mg/L			10/07/21 12:21	1
Carbon tetrachloride	ND		0.00100	mg/L			10/07/21 12:21	1
Chlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Chloroethane	ND		0.00200	mg/L			10/07/21 12:21	1
Chloroform	ND		0.00100	mg/L			10/07/21 12:21	1
Chloromethane	ND		0.00200	mg/L			10/07/21 12:21	1
2-Chlorotoluene	ND		0.00100	mg/L			10/07/21 12:21	1
4-Chlorotoluene	ND		0.00100	mg/L			10/07/21 12:21	1
1,2-Dibromo-3-Chloropropane	ND		0.00200	mg/L			10/07/21 12:21	1
Dibromochloromethane	ND		0.000500	mg/L			10/07/21 12:21	1
1,2-Dibromoethane (EDB)	ND		0.000500	mg/L			10/07/21 12:21	1
Dibromomethane	ND		0.00100	mg/L			10/07/21 12:21	1
1,2-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,3-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,4-Dichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Dichlorodifluoromethane (Freon 12)	ND		0.00200	mg/L			10/07/21 12:21	1
1,1-Dichloroethane	ND		0.00100	mg/L			10/07/21 12:21	1
1,2-Dichloroethane	ND		0.00100	mg/L			10/07/21 12:21	1
1,1-Dichloroethene	ND		0.00100	mg/L			10/07/21 12:21	1
cis-1,2-Dichloroethene	ND		0.00100	mg/L			10/07/21 12:21	1
trans-1,2-Dichloroethene	ND		0.00100	mg/L			10/07/21 12:21	1
1,2-Dichloropropane	ND		0.00100	mg/L			10/07/21 12:21	1
1,3-Dichloropropane	ND		0.00100	mg/L			10/07/21 12:21	1
2,2-Dichloropropane	ND		0.00100	mg/L			10/07/21 12:21	1
1,1-Dichloropropene	ND		0.00100	mg/L			10/07/21 12:21	1
cis-1,3-Dichloropropene	ND		0.000500	mg/L			10/07/21 12:21	1
trans-1,3-Dichloropropene	ND		0.000500	mg/L			10/07/21 12:21	1
Ethylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Hexachlorobutadiene	ND		0.00100	mg/L			10/07/21 12:21	1
2-Hexanone (MBK)	ND		0.00200	mg/L			10/07/21 12:21	1
Isopropylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
4-Isopropyltoluene	ND		0.00100	mg/L			10/07/21 12:21	1
Methyl tert-butyl ether	ND		0.00100	mg/L			10/07/21 12:21	1
4-Methyl-2-pentanone (MIBK)	ND		0.00200	mg/L			10/07/21 12:21	1
Methylene Chloride	ND		0.00200	mg/L			10/07/21 12:21	1

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 620-4445/7**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.00200	mg/L			10/07/21 12:21	1
N-Propylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Styrene	ND		0.00100	mg/L			10/07/21 12:21	1
1,1,1,2-Tetrachloroethane	ND		0.00100	mg/L			10/07/21 12:21	1
1,1,1,2,2-Tetrachloroethane	ND		0.000500	mg/L			10/07/21 12:21	1
Tetrachloroethene	ND		0.00100	mg/L			10/07/21 12:21	1
Toluene	ND		0.00100	mg/L			10/07/21 12:21	1
1,2,3-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,2,4-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,3,5-Trichlorobenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,1,1-Trichloroethane	ND		0.00100	mg/L			10/07/21 12:21	1
1,1,2-Trichloroethane	ND		0.00100	mg/L			10/07/21 12:21	1
Trichloroethene	ND		0.00100	mg/L			10/07/21 12:21	1
Trichlorofluoromethane (Freon 11)	ND		0.00100	mg/L			10/07/21 12:21	1
1,2,3-Trichloropropane	ND		0.00100	mg/L			10/07/21 12:21	1
1,2,4-Trimethylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
1,3,5-Trimethylbenzene	ND		0.00100	mg/L			10/07/21 12:21	1
Vinyl chloride	ND		0.00100	mg/L			10/07/21 12:21	1
m,p-Xylene	ND		0.00100	mg/L			10/07/21 12:21	1
o-Xylene	ND		0.00100	mg/L			10/07/21 12:21	1
Tetrahydrofuran	ND		0.00200	mg/L			10/07/21 12:21	1
Ethyl ether	ND		0.00100	mg/L			10/07/21 12:21	1
Tert-amyl methyl ether	ND		0.00100	mg/L			10/07/21 12:21	1
Ethyl tert-butyl ether	ND		0.00100	mg/L			10/07/21 12:21	1
di-Isopropyl ether	ND		0.00100	mg/L			10/07/21 12:21	1
tert-Butanol	ND		0.0100	mg/L			10/07/21 12:21	1
1,4-Dioxane	ND		0.0500	mg/L			10/07/21 12:21	1
trans-1,4-Dichloro-2-butene	ND		0.00500	mg/L			10/07/21 12:21	1
Ethanol	ND		0.200	mg/L			10/07/21 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		10/07/21 12:21	1
Toluene-d8 (Surr)	101		70 - 130		10/07/21 12:21	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		10/07/21 12:21	1
Dibromofluoromethane (Surr)	102		70 - 130		10/07/21 12:21	1

**Lab Sample ID: LCS 620-4445/4**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.02081		mg/L		104	70 - 130
Acetone	0.0200	0.01747		mg/L		87	70 - 130
Acrylonitrile	0.0200	0.02117		mg/L		106	70 - 130
Benzene	0.0200	0.02196		mg/L		110	70 - 130
Bromobenzene	0.0200	0.02021		mg/L		101	70 - 130
Bromochloromethane	0.0200	0.02193		mg/L		110	70 - 130
Bromodichloromethane	0.0200	0.02027		mg/L		101	70 - 130

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4445/4**

**Matrix: Water**

**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	0.0200	0.01884		mg/L		94	70 - 130
Bromomethane	0.0200	0.02845	*+	mg/L		142	70 - 130
2-Butanone (MEK)	0.0200	0.02091		mg/L		105	70 - 130
n-Butylbenzene	0.0200	0.02031		mg/L		102	70 - 130
sec-Butylbenzene	0.0200	0.02554		mg/L		128	70 - 130
tert-Butylbenzene	0.0200	0.02053		mg/L		103	70 - 130
Carbon disulfide	0.0200	0.02349		mg/L		117	70 - 130
Carbon tetrachloride	0.0200	0.02219		mg/L		111	70 - 130
Chlorobenzene	0.0200	0.01903		mg/L		95	70 - 130
Chloroethane	0.0200	0.02843	*+	mg/L		142	70 - 130
Chloroform	0.0200	0.02078		mg/L		104	70 - 130
Chloromethane	0.0200	0.02430		mg/L		121	70 - 130
2-Chlorotoluene	0.0200	0.02092		mg/L		105	70 - 130
4-Chlorotoluene	0.0200	0.02098		mg/L		105	70 - 130
1,2-Dibromo-3-Chloropropane	0.0200	0.01971		mg/L		99	70 - 130
Dibromochloromethane	0.0200	0.02085		mg/L		104	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.02130		mg/L		107	70 - 130
Dibromomethane	0.0200	0.02093		mg/L		105	70 - 130
1,2-Dichlorobenzene	0.0200	0.01968		mg/L		98	70 - 130
1,3-Dichlorobenzene	0.0200	0.02103		mg/L		105	70 - 130
1,4-Dichlorobenzene	0.0200	0.01914		mg/L		96	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.02192		mg/L		110	70 - 130
1,1-Dichloroethane	0.0200	0.02102		mg/L		105	70 - 130
1,2-Dichloroethane	0.0200	0.02138		mg/L		107	70 - 130
1,1-Dichloroethene	0.0200	0.02178		mg/L		109	70 - 130
cis-1,2-Dichloroethene	0.0200	0.01946		mg/L		97	70 - 130
trans-1,2-Dichloroethene	0.0200	0.01984		mg/L		99	70 - 130
1,2-Dichloropropane	0.0200	0.02025		mg/L		101	70 - 130
1,3-Dichloropropane	0.0200	0.02157		mg/L		108	70 - 130
2,2-Dichloropropane	0.0200	0.02351		mg/L		118	70 - 130
1,1-Dichloropropene	0.0200	0.02198		mg/L		110	70 - 130
cis-1,3-Dichloropropene	0.0200	0.02173		mg/L		109	70 - 130
trans-1,3-Dichloropropene	0.0200	0.02353		mg/L		118	70 - 130
Ethylbenzene	0.0200	0.02134		mg/L		107	70 - 130
Hexachlorobutadiene	0.0200	0.02022		mg/L		101	70 - 130
2-Hexanone (MBK)	0.0200	0.01890		mg/L		94	70 - 130
Isopropylbenzene	0.0200	0.02242		mg/L		112	70 - 130
4-Isopropyltoluene	0.0200	0.02073		mg/L		104	70 - 130
Methyl tert-butyl ether	0.0200	0.02366		mg/L		118	70 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.02048		mg/L		102	70 - 130
Methylene Chloride	0.0200	0.02080		mg/L		104	70 - 130
Naphthalene	0.0200	0.01942		mg/L		97	70 - 130
N-Propylbenzene	0.0200	0.02209		mg/L		110	70 - 130
Styrene	0.0200	0.02199		mg/L		110	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.02069		mg/L		103	70 - 130
1,1,1,2,2-Tetrachloroethane	0.0200	0.02130		mg/L		107	70 - 130
Tetrachloroethene	0.0200	0.02063		mg/L		103	70 - 130
Toluene	0.0200	0.02162		mg/L		108	70 - 130

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4445/4**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichlorobenzene	0.0200	0.02080		mg/L		104	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.01976		mg/L		99	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.01888		mg/L		94	70 - 130
1,1,1-Trichloroethane	0.0200	0.02082		mg/L		104	70 - 130
1,1,2-Trichloroethane	0.0200	0.01967		mg/L		98	70 - 130
Trichloroethene	0.0200	0.02245		mg/L		112	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.02128		mg/L		106	70 - 130
1,2,3-Trichloropropane	0.0200	0.02187		mg/L		109	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.02015		mg/L		101	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.02240		mg/L		112	70 - 130
Vinyl chloride	0.0200	0.02210		mg/L		111	70 - 130
m,p-Xylene	0.0200	0.02106		mg/L		105	70 - 130
o-Xylene	0.0200	0.02158		mg/L		108	70 - 130
Tetrahydrofuran	0.0200	0.02344		mg/L		117	70 - 130
Ethyl ether	0.0200	0.02458		mg/L		123	70 - 130
Tert-amyl methyl ether	0.0200	0.02515		mg/L		126	70 - 130
Ethyl tert-butyl ether	0.0200	0.02384		mg/L		119	70 - 130
di-Isopropyl ether	0.0200	0.02293		mg/L		115	70 - 130
tert-Butanol	0.200	0.2241		mg/L		112	70 - 130
1,4-Dioxane	0.200	0.1978		mg/L		99	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.02245		mg/L		112	70 - 130
Ethanol	0.400	0.4304		mg/L		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	102		70 - 130
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130

**Lab Sample ID: LCSD 620-4445/5**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.02101		mg/L		105	70 - 130	1	20
Acetone	0.0200	0.01536		mg/L		77	70 - 130	13	20
Acrylonitrile	0.0200	0.02063		mg/L		103	70 - 130	3	20
Benzene	0.0200	0.02186		mg/L		109	70 - 130	0	20
Bromobenzene	0.0200	0.02001		mg/L		100	70 - 130	1	20
Bromochloromethane	0.0200	0.02118		mg/L		106	70 - 130	4	20
Bromodichloromethane	0.0200	0.02055		mg/L		103	70 - 130	1	20
Bromoform	0.0200	0.01822		mg/L		91	70 - 130	3	20
Bromomethane	0.0200	0.02892	*+	mg/L		145	70 - 130	2	20
2-Butanone (MEK)	0.0200	0.01963		mg/L		98	70 - 130	6	20
n-Butylbenzene	0.0200	0.02033		mg/L		102	70 - 130	0	20
sec-Butylbenzene	0.0200	0.02537		mg/L		127	70 - 130	1	20
tert-Butylbenzene	0.0200	0.02118		mg/L		106	70 - 130	3	20

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4445/5**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide	0.0200	0.02360		mg/L		118	70 - 130	0	20
Carbon tetrachloride	0.0200	0.02306		mg/L		115	70 - 130	4	20
Chlorobenzene	0.0200	0.01912		mg/L		96	70 - 130	0	20
Chloroethane	0.0200	0.02593		mg/L		130	70 - 130	9	20
Chloroform	0.0200	0.02130		mg/L		106	70 - 130	2	20
Chloromethane	0.0200	0.02508		mg/L		125	70 - 130	3	20
2-Chlorotoluene	0.0200	0.02069		mg/L		103	70 - 130	1	20
4-Chlorotoluene	0.0200	0.02075		mg/L		104	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	0.0200	0.02044		mg/L		102	70 - 130	4	20
Dibromochloromethane	0.0200	0.02081		mg/L		104	70 - 130	0	20
1,2-Dibromoethane (EDB)	0.0200	0.02130		mg/L		106	70 - 130	0	20
Dibromomethane	0.0200	0.02065		mg/L		103	70 - 130	1	20
1,2-Dichlorobenzene	0.0200	0.01978		mg/L		99	70 - 130	0	20
1,3-Dichlorobenzene	0.0200	0.02088		mg/L		104	70 - 130	1	20
1,4-Dichlorobenzene	0.0200	0.01893		mg/L		95	70 - 130	1	20
Dichlorodifluoromethane (Freon 12)	0.0200	0.02556		mg/L		128	70 - 130	15	20
1,1-Dichloroethane	0.0200	0.02106		mg/L		105	70 - 130	0	20
1,2-Dichloroethane	0.0200	0.02173		mg/L		109	70 - 130	2	20
1,1-Dichloroethene	0.0200	0.02141		mg/L		107	70 - 130	2	20
cis-1,2-Dichloroethene	0.0200	0.01979		mg/L		99	70 - 130	2	20
trans-1,2-Dichloroethene	0.0200	0.01981		mg/L		99	70 - 130	0	20
1,2-Dichloropropane	0.0200	0.01945		mg/L		97	70 - 130	4	20
1,3-Dichloropropane	0.0200	0.02141		mg/L		107	70 - 130	1	20
2,2-Dichloropropane	0.0200	0.02339		mg/L		117	70 - 130	1	20
1,1-Dichloropropene	0.0200	0.02302		mg/L		115	70 - 130	5	20
cis-1,3-Dichloropropene	0.0200	0.02177		mg/L		109	70 - 130	0	20
trans-1,3-Dichloropropene	0.0200	0.02365		mg/L		118	70 - 130	1	20
Ethylbenzene	0.0200	0.02168		mg/L		108	70 - 130	2	20
Hexachlorobutadiene	0.0200	0.01954		mg/L		98	70 - 130	3	20
2-Hexanone (MBK)	0.0200	0.01794		mg/L		90	70 - 130	5	20
Isopropylbenzene	0.0200	0.02280		mg/L		114	70 - 130	2	20
4-Isopropyltoluene	0.0200	0.02092		mg/L		105	70 - 130	1	20
Methyl tert-butyl ether	0.0200	0.02360		mg/L		118	70 - 130	0	20
4-Methyl-2-pentanone (MIBK)	0.0200	0.02003		mg/L		100	70 - 130	2	20
Methylene Chloride	0.0200	0.02049		mg/L		102	70 - 130	2	20
Naphthalene	0.0200	0.02011		mg/L		101	70 - 130	3	20
N-Propylbenzene	0.0200	0.02193		mg/L		110	70 - 130	1	20
Styrene	0.0200	0.02211		mg/L		111	70 - 130	1	20
1,1,1,2-Tetrachloroethane	0.0200	0.01990		mg/L		100	70 - 130	4	20
1,1,2,2-Tetrachloroethane	0.0200	0.02108		mg/L		105	70 - 130	1	20
Tetrachloroethene	0.0200	0.02135		mg/L		107	70 - 130	3	20
Toluene	0.0200	0.02154		mg/L		108	70 - 130	0	20
1,2,3-Trichlorobenzene	0.0200	0.02026		mg/L		101	70 - 130	3	20
1,2,4-Trichlorobenzene	0.0200	0.01911		mg/L		96	70 - 130	3	20
1,3,5-Trichlorobenzene	0.0200	0.01854		mg/L		93	70 - 130	2	20
1,1,1-Trichloroethane	0.0200	0.02178		mg/L		109	70 - 130	5	20
1,1,2-Trichloroethane	0.0200	0.01898		mg/L		95	70 - 130	4	20
Trichloroethene	0.0200	0.02176		mg/L		109	70 - 130	3	20

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4445/5**  
**Matrix: Water**  
**Analysis Batch: 4445**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane (Freon 11)	0.0200	0.02095		mg/L		105	70 - 130	2	20
1,2,3-Trichloropropane	0.0200	0.02121		mg/L		106	70 - 130	3	20
1,2,4-Trimethylbenzene	0.0200	0.02069		mg/L		103	70 - 130	3	20
1,3,5-Trimethylbenzene	0.0200	0.02262		mg/L		113	70 - 130	1	20
Vinyl chloride	0.0200	0.02441		mg/L		122	70 - 130	10	20
m,p-Xylene	0.0200	0.02048		mg/L		102	70 - 130	3	20
o-Xylene	0.0200	0.02187		mg/L		109	70 - 130	1	20
Tetrahydrofuran	0.0200	0.02228		mg/L		111	70 - 130	5	20
Ethyl ether	0.0200	0.02424		mg/L		121	70 - 130	1	20
Tert-amyl methyl ether	0.0200	0.02460		mg/L		123	70 - 130	2	20
Ethyl tert-butyl ether	0.0200	0.02395		mg/L		120	70 - 130	0	20
di-Isopropyl ether	0.0200	0.02302		mg/L		115	70 - 130	0	20
tert-Butanol	0.200	0.2268		mg/L		113	70 - 130	1	20
1,4-Dioxane	0.200	0.1856		mg/L		93	70 - 130	6	20
trans-1,4-Dichloro-2-butene	0.0200	0.02264		mg/L		113	70 - 130	1	20
Ethanol	0.400	0.4200		mg/L		105	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130

**Lab Sample ID: MB 620-4490/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Acetone	ND		0.0500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Acrylonitrile	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Benzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Bromobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Bromochloromethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Bromodichloromethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Bromoform	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Bromomethane	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
2-Butanone (MEK)	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
n-Butylbenzene	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
sec-Butylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
tert-Butylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Carbon disulfide	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Carbon tetrachloride	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Chlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Chloroethane	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Chloroform	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Chloromethane	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 620-4490/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
4-Chlorotoluene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2-Dibromo-3-Chloropropane	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Dibromochloromethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2-Dibromoethane (EDB)	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Dibromomethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2-Dichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,3-Dichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,4-Dichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Dichlorodifluoromethane (Freon 12)	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1-Dichloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2-Dichloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1-Dichloroethene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
cis-1,2-Dichloroethene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
trans-1,2-Dichloroethene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2-Dichloropropane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,3-Dichloropropane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
2,2-Dichloropropane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1-Dichloropropene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
cis-1,3-Dichloropropene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
trans-1,3-Dichloropropene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Ethylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Hexachlorobutadiene	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
2-Hexanone (MBK)	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Isopropylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
4-Isopropyltoluene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Methyl tert-butyl ether	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
4-Methyl-2-pentanone (MIBK)	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Methylene Chloride	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Naphthalene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
N-Propylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Styrene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1,1,2-Tetrachloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1,2,2-Tetrachloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Tetrachloroethene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Toluene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2,3-Trichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2,4-Trichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,3,5-Trichlorobenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1,1-Trichloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,1,2-Trichloroethane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Trichloroethene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Trichlorofluoromethane (Freon 11)	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2,3-Trichloropropane	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,2,4-Trimethylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,3,5-Trimethylbenzene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Vinyl chloride	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
m,p-Xylene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
o-Xylene	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 620-4490/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		0.0100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Ethyl ether	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Tert-amyl methyl ether	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Ethyl tert-butyl ether	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
di-Isopropyl ether	ND		0.00500	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
tert-Butanol	ND		0.100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
1,4-Dioxane	ND		0.100	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
trans-1,4-Dichloro-2-butene	ND		0.0250	mg/Kg		10/08/21 08:46	10/11/21 20:21	1
Ethanol	ND		1.00	mg/Kg		10/08/21 08:46	10/11/21 20:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	10/08/21 08:46	10/11/21 20:21	1
Toluene-d8 (Surr)	100		70 - 130	10/08/21 08:46	10/11/21 20:21	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130	10/08/21 08:46	10/11/21 20:21	1
Dibromofluoromethane (Surr)	98		70 - 130	10/08/21 08:46	10/11/21 20:21	1

**Lab Sample ID: LCS 620-4490/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.02000		mg/Kg		100	70 - 130
Acetone	0.0200	0.01946	J	mg/Kg		97	70 - 130
Acrylonitrile	0.0200	0.02074		mg/Kg		104	70 - 130
Benzene	0.0200	0.02114		mg/Kg		106	70 - 130
Bromobenzene	0.0200	0.02088		mg/Kg		104	70 - 130
Bromochloromethane	0.0200	0.02088		mg/Kg		104	70 - 130
Bromodichloromethane	0.0200	0.02088		mg/Kg		104	70 - 130
Bromoform	0.0200	0.02042		mg/Kg		102	70 - 130
Bromomethane	0.0200	0.02190		mg/Kg		109	70 - 130
2-Butanone (MEK)	0.0200	0.01977		mg/Kg		99	70 - 130
n-Butylbenzene	0.0200	0.02078		mg/Kg		104	70 - 130
sec-Butylbenzene	0.0200	0.02133		mg/Kg		107	70 - 130
tert-Butylbenzene	0.0200	0.02120		mg/Kg		106	70 - 130
Carbon disulfide	0.0200	0.02098		mg/Kg		105	70 - 130
Carbon tetrachloride	0.0200	0.02049		mg/Kg		102	70 - 130
Chlorobenzene	0.0200	0.02111		mg/Kg		106	70 - 130
Chloroethane	0.0200	0.02353		mg/Kg		118	70 - 130
Chloroform	0.0200	0.02105		mg/Kg		105	70 - 130
Chloromethane	0.0200	0.02074		mg/Kg		104	70 - 130
2-Chlorotoluene	0.0200	0.02261		mg/Kg		113	70 - 130
4-Chlorotoluene	0.0200	0.02134		mg/Kg		107	70 - 130
1,2-Dibromo-3-Chloropropane	0.0200	0.02033		mg/Kg		102	70 - 130
Dibromochloromethane	0.0200	0.02042		mg/Kg		102	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.02125		mg/Kg		106	70 - 130
Dibromomethane	0.0200	0.02090		mg/Kg		104	70 - 130
1,2-Dichlorobenzene	0.0200	0.02092		mg/Kg		105	70 - 130
1,3-Dichlorobenzene	0.0200	0.02100		mg/Kg		105	70 - 130

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4490/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.0200	0.02106		mg/Kg		105	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.02019		mg/Kg		101	70 - 130
1,1-Dichloroethane	0.0200	0.02073		mg/Kg		104	70 - 130
1,2-Dichloroethane	0.0200	0.02077		mg/Kg		104	70 - 130
1,1-Dichloroethene	0.0200	0.02020		mg/Kg		101	70 - 130
cis-1,2-Dichloroethene	0.0200	0.02065		mg/Kg		103	70 - 130
trans-1,2-Dichloroethene	0.0200	0.02072		mg/Kg		104	70 - 130
1,2-Dichloropropane	0.0200	0.02053		mg/Kg		103	70 - 130
1,3-Dichloropropane	0.0200	0.02115		mg/Kg		106	70 - 130
2,2-Dichloropropane	0.0200	0.02020		mg/Kg		101	70 - 130
1,1-Dichloropropene	0.0200	0.02089		mg/Kg		104	70 - 130
cis-1,3-Dichloropropene	0.0200	0.02067		mg/Kg		103	70 - 130
trans-1,3-Dichloropropene	0.0200	0.02087		mg/Kg		104	70 - 130
Ethylbenzene	0.0200	0.02130		mg/Kg		106	70 - 130
Hexachlorobutadiene	0.0200	0.01945		mg/Kg		97	70 - 130
2-Hexanone (MBK)	0.0200	0.02009		mg/Kg		100	70 - 130
Isopropylbenzene	0.0200	0.02115		mg/Kg		106	70 - 130
4-Isopropyltoluene	0.0200	0.02085		mg/Kg		104	70 - 130
Methyl tert-butyl ether	0.0200	0.02095		mg/Kg		105	70 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.02079		mg/Kg		104	70 - 130
Methylene Chloride	0.0200	0.02082		mg/Kg		104	70 - 130
Naphthalene	0.0200	0.02166		mg/Kg		108	70 - 130
N-Propylbenzene	0.0200	0.02132		mg/Kg		107	70 - 130
Styrene	0.0200	0.02118		mg/Kg		106	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.02113		mg/Kg		106	70 - 130
1,1,1,2,2-Tetrachloroethane	0.0200	0.02139		mg/Kg		107	70 - 130
Tetrachloroethene	0.0200	0.02028		mg/Kg		101	70 - 130
Toluene	0.0200	0.02093		mg/Kg		105	70 - 130
1,2,3-Trichlorobenzene	0.0200	0.02064		mg/Kg		103	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.02070		mg/Kg		104	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.01995		mg/Kg		100	70 - 130
1,1,1-Trichloroethane	0.0200	0.02087		mg/Kg		104	70 - 130
1,1,2-Trichloroethane	0.0200	0.02114		mg/Kg		106	70 - 130
Trichloroethene	0.0200	0.02107		mg/Kg		105	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.02024		mg/Kg		101	70 - 130
1,2,3-Trichloropropane	0.0200	0.02161		mg/Kg		108	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.02118		mg/Kg		106	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.02139		mg/Kg		107	70 - 130
Vinyl chloride	0.0200	0.02126		mg/Kg		106	70 - 130
m,p-Xylene	0.0200	0.02130		mg/Kg		107	70 - 130
o-Xylene	0.0200	0.02117		mg/Kg		106	70 - 130
Tetrahydrofuran	0.0200	0.02152		mg/Kg		108	70 - 130
Ethyl ether	0.0200	0.02025		mg/Kg		101	70 - 130
Tert-amyl methyl ether	0.0200	0.02100		mg/Kg		105	70 - 130
Ethyl tert-butyl ether	0.0200	0.02090		mg/Kg		104	70 - 130
di-Isopropyl ether	0.0200	0.02061		mg/Kg		103	70 - 130
tert-Butanol	0.200	0.2013		mg/Kg		101	70 - 130

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4490/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.200	0.2141		mg/Kg		107	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.02129	J	mg/Kg		106	70 - 130
Ethanol	0.400	0.3746	J	mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	101		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130

**Lab Sample ID: LCSD 620-4490/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.01954		mg/Kg		98	70 - 130	2	30
Acetone	0.0200	0.02013	J	mg/Kg		101	70 - 130	3	30
Acrylonitrile	0.0200	0.01991		mg/Kg		100	70 - 130	4	30
Benzene	0.0200	0.02072		mg/Kg		104	70 - 130	2	30
Bromobenzene	0.0200	0.02034		mg/Kg		102	70 - 130	3	30
Bromochloromethane	0.0200	0.02003		mg/Kg		100	70 - 130	4	30
Bromodichloromethane	0.0200	0.02027		mg/Kg		101	70 - 130	3	30
Bromoform	0.0200	0.02006		mg/Kg		100	70 - 130	2	30
Bromomethane	0.0200	0.02240		mg/Kg		112	70 - 130	2	30
2-Butanone (MEK)	0.0200	0.02055		mg/Kg		103	70 - 130	4	30
n-Butylbenzene	0.0200	0.02021		mg/Kg		101	70 - 130	3	30
sec-Butylbenzene	0.0200	0.02090		mg/Kg		105	70 - 130	2	30
tert-Butylbenzene	0.0200	0.02083		mg/Kg		104	70 - 130	2	30
Carbon disulfide	0.0200	0.02023		mg/Kg		101	70 - 130	4	30
Carbon tetrachloride	0.0200	0.01975		mg/Kg		99	70 - 130	4	30
Chlorobenzene	0.0200	0.02054		mg/Kg		103	70 - 130	3	30
Chloroethane	0.0200	0.02355		mg/Kg		118	70 - 130	0	30
Chloroform	0.0200	0.02054		mg/Kg		103	70 - 130	2	30
Chloromethane	0.0200	0.02018		mg/Kg		101	70 - 130	3	30
2-Chlorotoluene	0.0200	0.02190		mg/Kg		110	70 - 130	3	30
4-Chlorotoluene	0.0200	0.02102		mg/Kg		105	70 - 130	2	30
1,2-Dibromo-3-Chloropropane	0.0200	0.01949		mg/Kg		97	70 - 130	4	30
Dibromochloromethane	0.0200	0.02000		mg/Kg		100	70 - 130	2	30
1,2-Dibromoethane (EDB)	0.0200	0.02041		mg/Kg		102	70 - 130	4	30
Dibromomethane	0.0200	0.02036		mg/Kg		102	70 - 130	3	30
1,2-Dichlorobenzene	0.0200	0.02052		mg/Kg		103	70 - 130	2	30
1,3-Dichlorobenzene	0.0200	0.02052		mg/Kg		103	70 - 130	2	30
1,4-Dichlorobenzene	0.0200	0.02052		mg/Kg		103	70 - 130	3	30
Dichlorodifluoromethane (Freon 12)	0.0200	0.01956		mg/Kg		98	70 - 130	3	30
1,1-Dichloroethane	0.0200	0.01994		mg/Kg		100	70 - 130	4	30
1,2-Dichloroethane	0.0200	0.02028		mg/Kg		101	70 - 130	2	30
1,1-Dichloroethene	0.0200	0.01994		mg/Kg		100	70 - 130	1	30

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# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4490/2-A**

**Matrix: Solid**

**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 4490**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	0.0200	0.02032		mg/Kg		102	70 - 130	2	30
trans-1,2-Dichloroethene	0.0200	0.02003		mg/Kg		100	70 - 130	3	30
1,2-Dichloropropane	0.0200	0.01997		mg/Kg		100	70 - 130	3	30
1,3-Dichloropropane	0.0200	0.02056		mg/Kg		103	70 - 130	3	30
2,2-Dichloropropane	0.0200	0.01943		mg/Kg		97	70 - 130	4	30
1,1-Dichloropropene	0.0200	0.02006		mg/Kg		100	70 - 130	4	30
cis-1,3-Dichloropropene	0.0200	0.02010		mg/Kg		100	70 - 130	3	30
trans-1,3-Dichloropropene	0.0200	0.02018		mg/Kg		101	70 - 130	3	30
Ethylbenzene	0.0200	0.02071		mg/Kg		104	70 - 130	3	30
Hexachlorobutadiene	0.0200	0.01871		mg/Kg		94	70 - 130	4	30
2-Hexanone (MBK)	0.0200	0.02061		mg/Kg		103	70 - 130	3	30
Isopropylbenzene	0.0200	0.02081		mg/Kg		104	70 - 130	2	30
4-Isopropyltoluene	0.0200	0.02006		mg/Kg		100	70 - 130	4	30
Methyl tert-butyl ether	0.0200	0.02034		mg/Kg		102	70 - 130	3	30
4-Methyl-2-pentanone (MIBK)	0.0200	0.02033		mg/Kg		102	70 - 130	2	30
Methylene Chloride	0.0200	0.02048		mg/Kg		102	70 - 130	2	30
Naphthalene	0.0200	0.02116		mg/Kg		106	70 - 130	2	30
N-Propylbenzene	0.0200	0.02089		mg/Kg		104	70 - 130	2	30
Styrene	0.0200	0.02063		mg/Kg		103	70 - 130	3	30
1,1,1,2-Tetrachloroethane	0.0200	0.02036		mg/Kg		102	70 - 130	4	30
1,1,2,2-Tetrachloroethane	0.0200	0.02064		mg/Kg		103	70 - 130	4	30
Tetrachloroethene	0.0200	0.01962		mg/Kg		98	70 - 130	3	30
Toluene	0.0200	0.02068		mg/Kg		103	70 - 130	1	30
1,2,3-Trichlorobenzene	0.0200	0.01978		mg/Kg		99	70 - 130	4	30
1,2,4-Trichlorobenzene	0.0200	0.02013		mg/Kg		101	70 - 130	3	30
1,3,5-Trichlorobenzene	0.0200	0.01955		mg/Kg		98	70 - 130	2	30
1,1,1-Trichloroethane	0.0200	0.02036		mg/Kg		102	70 - 130	2	30
1,1,2-Trichloroethane	0.0200	0.02049		mg/Kg		102	70 - 130	3	30
Trichloroethene	0.0200	0.02066		mg/Kg		103	70 - 130	2	30
Trichlorofluoromethane (Freon 11)	0.0200	0.01964		mg/Kg		98	70 - 130	3	30
1,2,3-Trichloropropane	0.0200	0.02081		mg/Kg		104	70 - 130	4	30
1,2,4-Trimethylbenzene	0.0200	0.02087		mg/Kg		104	70 - 130	1	30
1,3,5-Trimethylbenzene	0.0200	0.02056		mg/Kg		103	70 - 130	4	30
Vinyl chloride	0.0200	0.02056		mg/Kg		103	70 - 130	3	30
m,p-Xylene	0.0200	0.02066		mg/Kg		103	70 - 130	3	30
o-Xylene	0.0200	0.02074		mg/Kg		104	70 - 130	2	30
Tetrahydrofuran	0.0200	0.02003		mg/Kg		100	70 - 130	7	30
Ethyl ether	0.0200	0.02004		mg/Kg		100	70 - 130	1	30
Tert-amyl methyl ether	0.0200	0.02061		mg/Kg		103	70 - 130	2	30
Ethyl tert-butyl ether	0.0200	0.02011		mg/Kg		101	70 - 130	4	30
di-Isopropyl ether	0.0200	0.01998		mg/Kg		100	70 - 130	3	30
tert-Butanol	0.200	0.1972		mg/Kg		99	70 - 130	2	30
1,4-Dioxane	0.200	0.2014		mg/Kg		101	70 - 130	6	30
trans-1,4-Dichloro-2-butene	0.0200	0.02041	J	mg/Kg		102	70 - 130	4	30
Ethanol	0.400	0.3608	J	mg/Kg		90	70 - 130	4	30

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4490/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4546**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4490**

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>LCSD Limits</i>
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	101		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130

**Lab Sample ID: MB 620-4558/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Acetone	ND		0.0500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Acrylonitrile	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Benzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Bromobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Bromochloromethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Bromodichloromethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Bromoform	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Bromomethane	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
2-Butanone (MEK)	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
n-Butylbenzene	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
sec-Butylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
tert-Butylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Carbon disulfide	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Carbon tetrachloride	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Chlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Chloroethane	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Chloroform	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Chloromethane	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
2-Chlorotoluene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
4-Chlorotoluene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2-Dibromo-3-Chloropropane	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Dibromochloromethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2-Dibromoethane (EDB)	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Dibromomethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2-Dichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,3-Dichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,4-Dichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Dichlorodifluoromethane (Freon 12)	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1-Dichloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2-Dichloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1-Dichloroethene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
cis-1,2-Dichloroethene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
trans-1,2-Dichloroethene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2-Dichloropropane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,3-Dichloropropane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
2,2-Dichloropropane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1-Dichloropropene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 620-4558/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
trans-1,3-Dichloropropene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Ethylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Hexachlorobutadiene	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
2-Hexanone (MBK)	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Isopropylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
4-Isopropyltoluene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Methyl tert-butyl ether	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
4-Methyl-2-pentanone (MIBK)	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Methylene Chloride	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Naphthalene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
N-Propylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Styrene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1,1,2-Tetrachloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1,2,2-Tetrachloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Tetrachloroethene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Toluene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2,3-Trichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2,4-Trichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,3,5-Trichlorobenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1,1-Trichloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,1,2-Trichloroethane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Trichloroethene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Trichlorofluoromethane (Freon 11)	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2,3-Trichloropropane	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,2,4-Trimethylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,3,5-Trimethylbenzene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Vinyl chloride	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
m,p-Xylene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
o-Xylene	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Tetrahydrofuran	ND		0.0100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Ethyl ether	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Tert-amyl methyl ether	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Ethyl tert-butyl ether	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
di-Isopropyl ether	ND		0.00500	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
tert-Butanol	ND		0.100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
1,4-Dioxane	ND		0.100	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
trans-1,4-Dichloro-2-butene	ND		0.0250	mg/Kg		10/12/21 08:35	10/12/21 11:49	1
Ethanol	ND		1.00	mg/Kg		10/12/21 08:35	10/12/21 11:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	10/12/21 08:35	10/12/21 11:49	1
Toluene-d8 (Surr)	101		70 - 130	10/12/21 08:35	10/12/21 11:49	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130	10/12/21 08:35	10/12/21 11:49	1
Dibromofluoromethane (Surr)	96		70 - 130	10/12/21 08:35	10/12/21 11:49	1

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4558/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.02138		mg/Kg		107	70 - 130
Acetone	0.0200	0.01994	J	mg/Kg		100	70 - 130
Acrylonitrile	0.0200	0.01892		mg/Kg		95	70 - 130
Benzene	0.0200	0.02173		mg/Kg		109	70 - 130
Bromobenzene	0.0200	0.02118		mg/Kg		106	70 - 130
Bromochloromethane	0.0200	0.02138		mg/Kg		107	70 - 130
Bromodichloromethane	0.0200	0.02157		mg/Kg		108	70 - 130
Bromoform	0.0200	0.02048		mg/Kg		102	70 - 130
Bromomethane	0.0200	0.02251		mg/Kg		113	70 - 130
2-Butanone (MEK)	0.0200	0.02217		mg/Kg		111	70 - 130
n-Butylbenzene	0.0200	0.02114		mg/Kg		106	70 - 130
sec-Butylbenzene	0.0200	0.02198		mg/Kg		110	70 - 130
tert-Butylbenzene	0.0200	0.02213		mg/Kg		111	70 - 130
Carbon disulfide	0.0200	0.02174		mg/Kg		109	70 - 130
Carbon tetrachloride	0.0200	0.02156		mg/Kg		108	70 - 130
Chlorobenzene	0.0200	0.02161		mg/Kg		108	70 - 130
Chloroethane	0.0200	0.02437		mg/Kg		122	70 - 130
Chloroform	0.0200	0.02179		mg/Kg		109	70 - 130
Chloromethane	0.0200	0.01959		mg/Kg		98	70 - 130
2-Chlorotoluene	0.0200	0.02070		mg/Kg		104	70 - 130
4-Chlorotoluene	0.0200	0.02177		mg/Kg		109	70 - 130
1,2-Dibromo-3-Chloropropane	0.0200	0.01965		mg/Kg		98	70 - 130
Dibromochloromethane	0.0200	0.02121		mg/Kg		106	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.02104		mg/Kg		105	70 - 130
Dibromomethane	0.0200	0.02098		mg/Kg		105	70 - 130
1,2-Dichlorobenzene	0.0200	0.02145		mg/Kg		107	70 - 130
1,3-Dichlorobenzene	0.0200	0.02196		mg/Kg		110	70 - 130
1,4-Dichlorobenzene	0.0200	0.02171		mg/Kg		109	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.01995		mg/Kg		100	70 - 130
1,1-Dichloroethane	0.0200	0.02101		mg/Kg		105	70 - 130
1,2-Dichloroethane	0.0200	0.02113		mg/Kg		106	70 - 130
1,1-Dichloroethene	0.0200	0.02128		mg/Kg		106	70 - 130
cis-1,2-Dichloroethene	0.0200	0.02112		mg/Kg		106	70 - 130
trans-1,2-Dichloroethene	0.0200	0.02135		mg/Kg		107	70 - 130
1,2-Dichloropropane	0.0200	0.02068		mg/Kg		103	70 - 130
1,3-Dichloropropane	0.0200	0.02124		mg/Kg		106	70 - 130
2,2-Dichloropropane	0.0200	0.02168		mg/Kg		108	70 - 130
1,1-Dichloropropene	0.0200	0.02149		mg/Kg		107	70 - 130
cis-1,3-Dichloropropene	0.0200	0.02110		mg/Kg		106	70 - 130
trans-1,3-Dichloropropene	0.0200	0.02154		mg/Kg		108	70 - 130
Ethylbenzene	0.0200	0.02157		mg/Kg		108	70 - 130
Hexachlorobutadiene	0.0200	0.01946		mg/Kg		97	70 - 130
2-Hexanone (MBK)	0.0200	0.02167		mg/Kg		108	70 - 130
Isopropylbenzene	0.0200	0.02166		mg/Kg		108	70 - 130
4-Isopropyltoluene	0.0200	0.02119		mg/Kg		106	70 - 130
Methyl tert-butyl ether	0.0200	0.02150		mg/Kg		108	70 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.02132		mg/Kg		107	70 - 130

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# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 620-4558/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	0.0200	0.02107		mg/Kg		105	70 - 130
Naphthalene	0.0200	0.02154		mg/Kg		108	70 - 130
N-Propylbenzene	0.0200	0.02186		mg/Kg		109	70 - 130
Styrene	0.0200	0.02171		mg/Kg		109	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.02107		mg/Kg		105	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.02112		mg/Kg		106	70 - 130
Tetrachloroethene	0.0200	0.02116		mg/Kg		106	70 - 130
Toluene	0.0200	0.02159		mg/Kg		108	70 - 130
1,2,3-Trichlorobenzene	0.0200	0.02077		mg/Kg		104	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.02083		mg/Kg		104	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.02036		mg/Kg		102	70 - 130
1,1,1-Trichloroethane	0.0200	0.02199		mg/Kg		110	70 - 130
1,1,2-Trichloroethane	0.0200	0.02142		mg/Kg		107	70 - 130
Trichloroethene	0.0200	0.02142		mg/Kg		107	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.02229		mg/Kg		111	70 - 130
1,2,3-Trichloropropane	0.0200	0.02146		mg/Kg		107	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.02192		mg/Kg		110	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.02211		mg/Kg		111	70 - 130
Vinyl chloride	0.0200	0.02193		mg/Kg		110	70 - 130
m,p-Xylene	0.0200	0.02164		mg/Kg		108	70 - 130
o-Xylene	0.0200	0.02161		mg/Kg		108	70 - 130
Tetrahydrofuran	0.0200	0.01859		mg/Kg		93	70 - 130
Ethyl ether	0.0200	0.02070		mg/Kg		103	70 - 130
Tert-amyl methyl ether	0.0200	0.02163		mg/Kg		108	70 - 130
Ethyl tert-butyl ether	0.0200	0.02122		mg/Kg		106	70 - 130
di-Isopropyl ether	0.0200	0.02074		mg/Kg		104	70 - 130
tert-Butanol	0.200	0.1873		mg/Kg		94	70 - 130
1,4-Dioxane	0.200	0.2028		mg/Kg		101	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.02169	J	mg/Kg		108	70 - 130
Ethanol	0.400	0.3309	J	mg/Kg		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	101		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130

**Lab Sample ID: LCSD 620-4558/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0200	0.02116		mg/Kg		106	70 - 130	1	30
Acetone	0.0200	0.01951	J	mg/Kg		98	70 - 130	2	30
Acrylonitrile	0.0200	0.01841		mg/Kg		92	70 - 130	3	30
Benzene	0.0200	0.02168		mg/Kg		108	70 - 130	0	30
Bromobenzene	0.0200	0.02128		mg/Kg		106	70 - 130	0	30

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4558/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Bromochloromethane	0.0200	0.02100		mg/Kg		105	70 - 130	2	30
Bromodichloromethane	0.0200	0.02128		mg/Kg		106	70 - 130	1	30
Bromoform	0.0200	0.02065		mg/Kg		103	70 - 130	1	30
Bromomethane	0.0200	0.02211		mg/Kg		111	70 - 130	2	30
2-Butanone (MEK)	0.0200	0.01948		mg/Kg		97	70 - 130	13	30
n-Butylbenzene	0.0200	0.02088		mg/Kg		104	70 - 130	1	30
sec-Butylbenzene	0.0200	0.02177		mg/Kg		109	70 - 130	1	30
tert-Butylbenzene	0.0200	0.02169		mg/Kg		108	70 - 130	2	30
Carbon disulfide	0.0200	0.02160		mg/Kg		108	70 - 130	1	30
Carbon tetrachloride	0.0200	0.02105		mg/Kg		105	70 - 130	2	30
Chlorobenzene	0.0200	0.02145		mg/Kg		107	70 - 130	1	30
Chloroethane	0.0200	0.02455		mg/Kg		123	70 - 130	1	30
Chloroform	0.0200	0.02161		mg/Kg		108	70 - 130	1	30
Chloromethane	0.0200	0.01887		mg/Kg		94	70 - 130	4	30
2-Chlorotoluene	0.0200	0.02046		mg/Kg		102	70 - 130	1	30
4-Chlorotoluene	0.0200	0.02180		mg/Kg		109	70 - 130	0	30
1,2-Dibromo-3-Chloropropane	0.0200	0.01910		mg/Kg		96	70 - 130	3	30
Dibromochloromethane	0.0200	0.02085		mg/Kg		104	70 - 130	2	30
1,2-Dibromoethane (EDB)	0.0200	0.02098		mg/Kg		105	70 - 130	0	30
Dibromomethane	0.0200	0.02045		mg/Kg		102	70 - 130	3	30
1,2-Dichlorobenzene	0.0200	0.02116		mg/Kg		106	70 - 130	1	30
1,3-Dichlorobenzene	0.0200	0.02160		mg/Kg		108	70 - 130	2	30
1,4-Dichlorobenzene	0.0200	0.02158		mg/Kg		108	70 - 130	1	30
Dichlorodifluoromethane (Freon 12)	0.0200	0.01948		mg/Kg		97	70 - 130	2	30
1,1-Dichloroethane	0.0200	0.02086		mg/Kg		104	70 - 130	1	30
1,2-Dichloroethane	0.0200	0.02110		mg/Kg		106	70 - 130	0	30
1,1-Dichloroethene	0.0200	0.02136		mg/Kg		107	70 - 130	0	30
cis-1,2-Dichloroethene	0.0200	0.02088		mg/Kg		104	70 - 130	1	30
trans-1,2-Dichloroethene	0.0200	0.02108		mg/Kg		105	70 - 130	1	30
1,2-Dichloropropane	0.0200	0.02057		mg/Kg		103	70 - 130	1	30
1,3-Dichloropropane	0.0200	0.02107		mg/Kg		105	70 - 130	1	30
2,2-Dichloropropane	0.0200	0.02131		mg/Kg		107	70 - 130	2	30
1,1-Dichloropropene	0.0200	0.02138		mg/Kg		107	70 - 130	1	30
cis-1,3-Dichloropropene	0.0200	0.02124		mg/Kg		106	70 - 130	1	30
trans-1,3-Dichloropropene	0.0200	0.02143		mg/Kg		107	70 - 130	0	30
Ethylbenzene	0.0200	0.02169		mg/Kg		108	70 - 130	1	30
Hexachlorobutadiene	0.0200	0.01896		mg/Kg		95	70 - 130	3	30
2-Hexanone (MBK)	0.0200	0.02019		mg/Kg		101	70 - 130	7	30
Isopropylbenzene	0.0200	0.02163		mg/Kg		108	70 - 130	0	30
4-Isopropyltoluene	0.0200	0.02105		mg/Kg		105	70 - 130	1	30
Methyl tert-butyl ether	0.0200	0.02115		mg/Kg		106	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)	0.0200	0.01985		mg/Kg		99	70 - 130	7	30
Methylene Chloride	0.0200	0.02089		mg/Kg		104	70 - 130	1	30
Naphthalene	0.0200	0.02072		mg/Kg		104	70 - 130	4	30
N-Propylbenzene	0.0200	0.02160		mg/Kg		108	70 - 130	1	30
Styrene	0.0200	0.02154		mg/Kg		108	70 - 130	1	30
1,1,1,2-Tetrachloroethane	0.0200	0.02150		mg/Kg		108	70 - 130	2	30
1,1,2,2-Tetrachloroethane	0.0200	0.02058		mg/Kg		103	70 - 130	3	30

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# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 620-4558/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4561**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4558**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	0.0200	0.02095		mg/Kg		105	70 - 130	1	30
Toluene	0.0200	0.02150		mg/Kg		108	70 - 130	0	30
1,2,3-Trichlorobenzene	0.0200	0.02007		mg/Kg		100	70 - 130	3	30
1,2,4-Trichlorobenzene	0.0200	0.02033		mg/Kg		102	70 - 130	2	30
1,3,5-Trichlorobenzene	0.0200	0.01996		mg/Kg		100	70 - 130	2	30
1,1,1-Trichloroethane	0.0200	0.02187		mg/Kg		109	70 - 130	1	30
1,1,2-Trichloroethane	0.0200	0.02113		mg/Kg		106	70 - 130	1	30
Trichloroethene	0.0200	0.02171		mg/Kg		109	70 - 130	1	30
Trichlorofluoromethane (Freon 11)	0.0200	0.02162		mg/Kg		108	70 - 130	3	30
1,2,3-Trichloropropane	0.0200	0.02112		mg/Kg		106	70 - 130	2	30
1,2,4-Trimethylbenzene	0.0200	0.02169		mg/Kg		108	70 - 130	1	30
1,3,5-Trimethylbenzene	0.0200	0.02180		mg/Kg		109	70 - 130	1	30
Vinyl chloride	0.0200	0.02187		mg/Kg		109	70 - 130	0	30
m,p-Xylene	0.0200	0.02163		mg/Kg		108	70 - 130	0	30
o-Xylene	0.0200	0.02154		mg/Kg		108	70 - 130	0	30
Tetrahydrofuran	0.0200	0.01863		mg/Kg		93	70 - 130	0	30
Ethyl ether	0.0200	0.02033		mg/Kg		102	70 - 130	2	30
Tert-amyl methyl ether	0.0200	0.02138		mg/Kg		107	70 - 130	1	30
Ethyl tert-butyl ether	0.0200	0.02102		mg/Kg		105	70 - 130	1	30
di-Isopropyl ether	0.0200	0.02053		mg/Kg		103	70 - 130	1	30
tert-Butanol	0.200	0.1799		mg/Kg		90	70 - 130	4	30
1,4-Dioxane	0.200	0.1990		mg/Kg		99	70 - 130	2	30
trans-1,4-Dichloro-2-butene	0.0200	0.02071	J	mg/Kg		104	70 - 130	5	30
Ethanol	0.400	0.3610	J	mg/Kg		90	70 - 130	9	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 620-4461/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
1,2,4-Trichlorobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
1,2-Dichlorobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
1,3-Dichlorobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
1,4-Dichlorobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
1-Methylnaphthalene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,4,5-Trichlorophenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,4,6-Trichlorophenol	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,4-Dichlorophenol	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,4-Dimethylphenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 620-4461/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,4-Dinitrotoluene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2,6-Dinitrotoluene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Chloronaphthalene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Chlorophenol	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Methylnaphthalene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Methylphenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Nitroaniline	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
2-Nitrophenol	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
3 & 4 Methylphenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
3,3'-Dichlorobenzidine	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
3-Nitroaniline	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4,6-Dinitro-2-methylphenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Bromophenyl phenyl ether	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Chloro-3-methylphenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Chloroaniline	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Chlorophenyl phenyl ether	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Nitroaniline	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
4-Nitrophenol	ND		1.32	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Acenaphthene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Acenaphthylene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Aniline	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Anthracene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Azobenzene/Diphenyldiazene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzidine	ND		0.660	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzo[a]anthracene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzo[a]pyrene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzo[b]fluoranthene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzo[g,h,i]perylene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzo[k]fluoranthene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzoic acid	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Benzyl alcohol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Bis(2-chloroethoxy)methane	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Bis(2-chloroethyl)ether	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
bis (2-chloroisopropyl) ether	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Bis(2-ethylhexyl) phthalate	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Butyl benzyl phthalate	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Carbazole	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Chrysene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Dibenz(a,h)anthracene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Dibenzofuran	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Diethyl phthalate	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Dimethyl phthalate	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Di-n-butyl phthalate	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Di-n-octyl phthalate	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Fluoranthene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Fluorene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Hexachlorobenzene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Hexachlorobutadiene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 620-4461/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Hexachloroethane	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Indeno[1,2,3-cd]pyrene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Isophorone	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Naphthalene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Nitrobenzene	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
N-Nitrosodimethylamine	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
N-Nitrosodi-n-propylamine	ND		0.167	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
N-Nitrosodiphenylamine	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Pentachloronitrobenzene	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Pentachlorophenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Phenanthrene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Phenol	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Pyrene	ND		0.0667	mg/Kg		10/07/21 11:02	10/08/21 16:31	1
Pyridine	ND		0.330	mg/Kg		10/07/21 11:02	10/08/21 16:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		30 - 130	10/07/21 11:02	10/08/21 16:31	1
2-Fluorophenol (Surr)	74		30 - 130	10/07/21 11:02	10/08/21 16:31	1
Nitrobenzene-d5 (Surr)	54		30 - 130	10/07/21 11:02	10/08/21 16:31	1
Phenol-d5 (Surr)	67		30 - 130	10/07/21 11:02	10/08/21 16:31	1
2,4,6-Tribromophenol (Surr)	69		30 - 130	10/07/21 11:02	10/08/21 16:31	1
Terphenyl-d14 (Surr)	65		30 - 130	10/07/21 11:02	10/08/21 16:31	1

**Lab Sample ID: LCS 620-4461/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4,5-Tetrachlorobenzene	1.67	0.6220	*-	mg/Kg		37	40 - 140
1,2,4-Trichlorobenzene	1.67	0.6477	*-	mg/Kg		39	40 - 140
1,2-Dichlorobenzene	1.67	0.6736		mg/Kg		40	40 - 140
1,3-Dichlorobenzene	1.67	0.6790		mg/Kg		41	40 - 140
1,4-Dichlorobenzene	1.67	0.6735		mg/Kg		40	40 - 140
1-Methylnaphthalene	1.67	0.6733		mg/Kg		40	40 - 140
2,4,5-Trichlorophenol	1.67	0.8031		mg/Kg		48	30 - 130
2,4,6-Trichlorophenol	1.67	0.8047		mg/Kg		48	30 - 130
2,4-Dichlorophenol	1.67	0.7019		mg/Kg		42	30 - 130
2,4-Dimethylphenol	1.67	0.6911		mg/Kg		41	30 - 130
2,4-Dinitrophenol	1.67	0.7108		mg/Kg		43	30 - 130
2,4-Dinitrotoluene	1.67	0.8341		mg/Kg		50	40 - 140
2,6-Dinitrotoluene	1.67	0.7679		mg/Kg		46	40 - 140
2-Chloronaphthalene	1.67	0.7164		mg/Kg		43	40 - 140
2-Chlorophenol	1.67	0.7130		mg/Kg		43	30 - 130
2-Methylnaphthalene	1.67	0.7662		mg/Kg		46	40 - 140
2-Methylphenol	1.67	0.7836		mg/Kg		47	30 - 130
2-Nitroaniline	1.67	0.7868		mg/Kg		47	40 - 140
2-Nitrophenol	1.67	0.6796		mg/Kg		41	30 - 130

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 620-4461/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	1.67	0.6945		mg/Kg		42	30 - 130
3,3'-Dichlorobenzidine	1.67	0.4958	*-	mg/Kg		30	40 - 140
3-Nitroaniline	1.67	0.4754	*-	mg/Kg		29	40 - 140
4,6-Dinitro-2-methylphenol	1.67	0.6074		mg/Kg		36	30 - 130
4-Bromophenyl phenyl ether	1.67	0.7358		mg/Kg		44	40 - 140
4-Chloroaniline	1.67	0.2465	*-	mg/Kg		15	40 - 140
4-Chlorophenyl phenyl ether	1.67	0.7705		mg/Kg		46	40 - 140
4-Nitroaniline	1.67	0.7411		mg/Kg		44	40 - 140
4-Nitrophenol	1.67	0.7014	J	mg/Kg		42	30 - 130
Acenaphthene	1.67	0.6715		mg/Kg		40	40 - 140
Acenaphthylene	1.67	0.7147		mg/Kg		43	40 - 140
Aniline	1.67	0.8700		mg/Kg		52	40 - 140
Anthracene	1.67	0.7556		mg/Kg		45	40 - 140
Azobenzene/Diphenyldiazene	1.67	0.7011		mg/Kg		42	40 - 140
Benzidine	1.67	ND	*-	mg/Kg		0.1	40 - 140
Benzo[a]anthracene	1.67	0.7949		mg/Kg		48	40 - 140
Benzo[a]pyrene	1.67	0.7613		mg/Kg		46	40 - 140
Benzo[b]fluoranthene	1.67	0.7592		mg/Kg		46	40 - 140
Benzo[g,h,i]perylene	1.67	0.8620		mg/Kg		52	40 - 140
Benzo[k]fluoranthene	1.67	0.7121		mg/Kg		43	40 - 140
Benzoic acid	1.67	0.6882		mg/Kg		41	30 - 130
Benzyl alcohol	1.67	1.065		mg/Kg		64	40 - 140
Bis(2-chloroethoxy)methane	1.67	0.6705		mg/Kg		40	40 - 140
Bis(2-chloroethyl)ether	1.67	0.7177		mg/Kg		43	40 - 140
bis (2-chloroisopropyl) ether	1.67	0.7503		mg/Kg		45	40 - 140
Bis(2-ethylhexyl) phthalate	1.67	0.7756		mg/Kg		47	40 - 140
Butyl benzyl phthalate	1.67	0.7600		mg/Kg		46	40 - 140
Carbazole	1.67	0.7161		mg/Kg		43	40 - 140
Chrysene	1.67	0.7287		mg/Kg		44	40 - 140
Dibenz(a,h)anthracene	1.67	0.7867		mg/Kg		47	40 - 140
Dibenzofuran	1.67	0.7290		mg/Kg		44	40 - 140
Diethyl phthalate	1.67	0.8086		mg/Kg		49	40 - 140
Dimethyl phthalate	1.67	0.7193		mg/Kg		43	40 - 140
Di-n-butyl phthalate	1.67	0.8055		mg/Kg		48	40 - 140
Di-n-octyl phthalate	1.67	0.8401		mg/Kg		50	40 - 140
Fluoranthene	1.67	0.7514		mg/Kg		45	40 - 140
Fluorene	1.67	0.7306		mg/Kg		44	40 - 140
Hexachlorobenzene	1.67	0.7209		mg/Kg		43	40 - 140
Hexachlorobutadiene	1.67	0.5980	*-	mg/Kg		36	40 - 140
Hexachlorocyclopentadiene	1.67	0.6297	*-	mg/Kg		38	40 - 140
Hexachloroethane	1.67	0.6221	*-	mg/Kg		37	40 - 140
Indeno[1,2,3-cd]pyrene	1.67	0.8699		mg/Kg		52	40 - 140
Isophorone	1.67	0.5492	*-	mg/Kg		33	40 - 140
Naphthalene	1.67	0.6832		mg/Kg		41	40 - 140
Nitrobenzene	1.67	0.5842	*-	mg/Kg		35	40 - 140
N-Nitrosodimethylamine	1.67	0.7302		mg/Kg		44	40 - 140
N-Nitrosodi-n-propylamine	1.67	0.7956		mg/Kg		48	40 - 140
N-Nitrosodiphenylamine	1.67	0.8425		mg/Kg		51	40 - 140
Pentachloronitrobenzene	1.67	0.7571		mg/Kg		45	40 - 140

Eurofins Environment Testing New England



# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 620-4461/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	1.67	1.060		mg/Kg		64	30 - 130
Phenanthrene	1.67	0.7144		mg/Kg		43	40 - 140
Phenol	1.67	0.7128		mg/Kg		43	40 - 140
Pyrene	1.67	0.7489		mg/Kg		45	40 - 140
Pyridine	1.67	0.4020	*-	mg/Kg		24	40 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	43		30 - 130
2-Fluorophenol (Surr)	49		30 - 130
Nitrobenzene-d5 (Surr)	37		30 - 130
Phenol-d5 (Surr)	43		30 - 130
2,4,6-Tribromophenol (Surr)	48		30 - 130
Terphenyl-d14 (Surr)	44		30 - 130

**Lab Sample ID: LCSD 620-4461/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	1.67	0.8232		mg/Kg		49	40 - 140	28	30
1,2,4-Trichlorobenzene	1.67	0.8034		mg/Kg		48	40 - 140	21	30
1,2-Dichlorobenzene	1.67	0.8839		mg/Kg		53	40 - 140	27	30
1,3-Dichlorobenzene	1.67	0.8091		mg/Kg		49	40 - 140	17	30
1,4-Dichlorobenzene	1.67	0.8644		mg/Kg		52	40 - 140	25	30
1-Methylnaphthalene	1.67	0.9423	*1	mg/Kg		57	40 - 140	33	30
2,4,5-Trichlorophenol	1.67	1.034		mg/Kg		62	30 - 130	25	30
2,4,6-Trichlorophenol	1.67	0.8416		mg/Kg		50	30 - 130	4	30
2,4-Dichlorophenol	1.67	0.8708		mg/Kg		52	30 - 130	21	30
2,4-Dimethylphenol	1.67	0.8105		mg/Kg		49	30 - 130	16	30
2,4-Dinitrophenol	1.67	0.8166		mg/Kg		49	30 - 130	14	30
2,4-Dinitrotoluene	1.67	0.9988		mg/Kg		60	40 - 140	18	30
2,6-Dinitrotoluene	1.67	0.9276		mg/Kg		56	40 - 140	19	30
2-Chloronaphthalene	1.67	0.8493		mg/Kg		51	40 - 140	17	30
2-Chlorophenol	1.67	0.9181		mg/Kg		55	30 - 130	25	30
2-Methylnaphthalene	1.67	1.217	*1	mg/Kg		73	40 - 140	45	30
2-Methylphenol	1.67	0.9100		mg/Kg		55	30 - 130	15	30
2-Nitroaniline	1.67	0.8939		mg/Kg		54	40 - 140	13	30
2-Nitrophenol	1.67	0.8855		mg/Kg		53	30 - 130	26	30
3 & 4 Methylphenol	1.67	0.9208		mg/Kg		55	30 - 130	28	30
3,3'-Dichlorobenzidine	1.67	0.6737		mg/Kg		40	40 - 140	30	30
3-Nitroaniline	1.67	0.5682	*-	mg/Kg		34	40 - 140	18	30
4,6-Dinitro-2-methylphenol	1.67	0.7569		mg/Kg		45	30 - 130	22	30
4-Bromophenyl phenyl ether	1.67	0.9705		mg/Kg		58	40 - 140	28	30
4-Chloroaniline	1.67	0.2605	*-	mg/Kg		16	40 - 140	6	30
4-Chlorophenyl phenyl ether	1.67	0.9383		mg/Kg		56	40 - 140	20	30
4-Nitroaniline	1.67	0.8973		mg/Kg		54	40 - 140	19	30
4-Nitrophenol	1.67	0.6857	J	mg/Kg		41	30 - 130	2	30
Acenaphthene	1.67	0.8104		mg/Kg		49	40 - 140	19	30

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 620-4461/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthylene	1.67	0.8769		mg/Kg		53	40 - 140	20	30
Aniline	1.67	0.4759	*- *1	mg/Kg		29	40 - 140	59	30
Anthracene	1.67	0.9932		mg/Kg		60	40 - 140	27	30
Azobenzene/Diphenyldiazene	1.67	0.8878		mg/Kg		53	40 - 140	23	30
Benzidine	1.67	ND	*- *1	mg/Kg		0.2	40 - 140	33	30
Benzo[a]anthracene	1.67	1.037		mg/Kg		62	40 - 140	26	30
Benzo[a]pyrene	1.67	1.003		mg/Kg		60	40 - 140	27	30
Benzo[b]fluoranthene	1.67	0.9216		mg/Kg		55	40 - 140	19	30
Benzo[g,h,i]perylene	1.67	1.144		mg/Kg		69	40 - 140	28	30
Benzo[k]fluoranthene	1.67	1.048	*1	mg/Kg		63	40 - 140	38	30
Benzoic acid	1.67	0.8925		mg/Kg		54	30 - 130	26	30
Benzyl alcohol	1.67	1.417		mg/Kg		85	40 - 140	28	30
Bis(2-chloroethoxy)methane	1.67	0.8479		mg/Kg		51	40 - 140	23	30
Bis(2-chloroethyl)ether	1.67	0.8679		mg/Kg		52	40 - 140	19	30
bis (2-chloroisopropyl) ether	1.67	0.9504		mg/Kg		57	40 - 140	24	30
Bis(2-ethylhexyl) phthalate	1.67	1.032		mg/Kg		62	40 - 140	28	30
Butyl benzyl phthalate	1.67	1.029		mg/Kg		62	40 - 140	30	30
Carbazole	1.67	0.9530		mg/Kg		57	40 - 140	28	30
Chrysene	1.67	0.9799		mg/Kg		59	40 - 140	29	30
Dibenz(a,h)anthracene	1.67	1.031		mg/Kg		62	40 - 140	27	30
Dibenzofuran	1.67	0.9059		mg/Kg		54	40 - 140	22	30
Diethyl phthalate	1.67	0.9691		mg/Kg		58	40 - 140	18	30
Dimethyl phthalate	1.67	0.8585		mg/Kg		52	40 - 140	18	30
Di-n-butyl phthalate	1.67	0.9171		mg/Kg		55	40 - 140	13	30
Di-n-octyl phthalate	1.67	1.111		mg/Kg		67	40 - 140	28	30
Fluoranthene	1.67	1.006		mg/Kg		60	40 - 140	29	30
Fluorene	1.67	0.9080		mg/Kg		54	40 - 140	22	30
Hexachlorobenzene	1.67	0.9449		mg/Kg		57	40 - 140	27	30
Hexachlorobutadiene	1.67	0.7161		mg/Kg		43	40 - 140	18	30
Hexachlorocyclopentadiene	1.67	0.8571	*1	mg/Kg		51	40 - 140	31	30
Hexachloroethane	1.67	0.7834		mg/Kg		47	40 - 140	23	30
Indeno[1,2,3-cd]pyrene	1.67	1.139		mg/Kg		68	40 - 140	27	30
Isophorone	1.67	0.6816		mg/Kg		41	40 - 140	22	30
Naphthalene	1.67	0.8366		mg/Kg		50	40 - 140	20	30
Nitrobenzene	1.67	NQ	E	mg/Kg		NaN	40 - 140	NaN	30
N-Nitrosodimethylamine	1.67	0.8068		mg/Kg		48	40 - 140	10	30
N-Nitrosodi-n-propylamine	1.67	0.8428		mg/Kg		51	40 - 140	6	30
N-Nitrosodiphenylamine	1.67	0.9776		mg/Kg		59	40 - 140	15	30
Pentachloronitrobenzene	1.67	1.003		mg/Kg		60	40 - 140	28	30
Pentachlorophenol	1.67	1.361		mg/Kg		82	30 - 130	25	30
Phenanthrene	1.67	0.9518		mg/Kg		57	40 - 140	28	30
Phenol	1.67	0.7609		mg/Kg		46	40 - 140	7	30
Pyrene	1.67	0.9928		mg/Kg		60	40 - 140	28	30
Pyridine	1.67	0.5372	*-	mg/Kg		32	40 - 140	29	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	50		30 - 130
2-Fluorophenol (Surr)	58		30 - 130

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 620-4461/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4461**

<u>Surrogate</u>	<u>LCS D</u> <u>%Recovery</u>	<u>LCS D</u> <u>Qualifier</u>	<u>Limits</u>
Nitrobenzene-d5 (Surr)	46		30 - 130
Phenol-d5 (Surr)	54		30 - 130
2,4,6-Tribromophenol (Surr)	66		30 - 130
Terphenyl-d14 (Surr)	59		30 - 130

**Lab Sample ID: MB 620-4462/1-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

<u>Analyte</u>	<u>MB</u> <u>Result</u>	<u>MB</u> <u>Qualifier</u>	<u>RL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
1,2,4,5-Tetrachlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
1,2,4-Trichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
1,2-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
1,3-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
1,4-Dichlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
1-Methylnaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4,5-Trichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4,6-Trichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4-Dichlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4-Dimethylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4-Dinitrophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,4-Dinitrotoluene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2,6-Dinitrotoluene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Chloronaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Chlorophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Methylnaphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
2-Nitrophenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
3 & 4 Methylphenol	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 15:01	1
3,3'-Dichlorobenzidine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
3-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4,6-Dinitro-2-methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Bromophenyl phenyl ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Chloro-3-methylphenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Chloroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Chlorophenyl phenyl ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Nitroaniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
4-Nitrophenol	ND		0.0200	mg/L		10/07/21 11:03	10/08/21 15:01	1
Acenaphthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Acenaphthylene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Aniline	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Azobenzene/Diphenyldiazene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzidine	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzo[a]anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzo[a]pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzo[b]fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 620-4462/1-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzo[k]fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzoic acid	ND		0.0100	mg/L		10/07/21 11:03	10/08/21 15:01	1
Benzyl alcohol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Bis(2-chloroethoxy)methane	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Bis(2-chloroethyl)ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
bis (2-chloroisopropyl) ether	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Bis(2-ethylhexyl) phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Butyl benzyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Carbazole	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Chrysene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Dibenz(a,h)anthracene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Dibenzofuran	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Diethyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Dimethyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Di-n-butyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Di-n-octyl phthalate	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Fluoranthene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Fluorene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Hexachlorobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Hexachlorobutadiene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Hexachlorocyclopentadiene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Hexachloroethane	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Indeno[1,2,3-cd]pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Isophorone	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Naphthalene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Nitrobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
N-Nitrosodimethylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
N-Nitrosodi-n-propylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
N-Nitrosodiphenylamine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Pentachloronitrobenzene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Pentachlorophenol	ND		0.0200	mg/L		10/07/21 11:03	10/08/21 15:01	1
Phenanthrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Phenol	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Pyrene	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1
Pyridine	ND		0.00500	mg/L		10/07/21 11:03	10/08/21 15:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		30 - 130	10/07/21 11:03	10/08/21 15:01	1
2-Fluorophenol (Surr)	49		15 - 110	10/07/21 11:03	10/08/21 15:01	1
Nitrobenzene-d5 (Surr)	58		30 - 130	10/07/21 11:03	10/08/21 15:01	1
Phenol-d5 (Surr)	30		15 - 110	10/07/21 11:03	10/08/21 15:01	1
2,4,6-Tribromophenol (Surr)	75		15 - 110	10/07/21 11:03	10/08/21 15:01	1
Terphenyl-d14 (Surr)	67		30 - 130	10/07/21 11:03	10/08/21 15:01	1

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 620-4462/2-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4,5-Tetrachlorobenzene	0.0500	0.03113		mg/L		62	40 - 140
1,2,4-Trichlorobenzene	0.0500	0.02774		mg/L		55	40 - 140
1,2-Dichlorobenzene	0.0500	0.03106		mg/L		62	40 - 140
1,3-Dichlorobenzene	0.0500	0.02909		mg/L		58	40 - 140
1,4-Dichlorobenzene	0.0500	0.03078		mg/L		62	40 - 140
1-Methylnaphthalene	0.0500	0.03112		mg/L		62	40 - 140
2,4,5-Trichlorophenol	0.0500	0.03352		mg/L		67	30 - 130
2,4,6-Trichlorophenol	0.0500	0.02847		mg/L		57	30 - 130
2,4-Dichlorophenol	0.0500	0.03084		mg/L		62	30 - 130
2,4-Dimethylphenol	0.0500	0.02708		mg/L		54	30 - 130
2,4-Dinitrophenol	0.0500	0.03085		mg/L		62	30 - 130
2,4-Dinitrotoluene	0.0500	0.04080		mg/L		82	40 - 140
2,6-Dinitrotoluene	0.0500	0.03530		mg/L		71	40 - 140
2-Chloronaphthalene	0.0500	0.03166		mg/L		63	40 - 140
2-Chlorophenol	0.0500	0.02957		mg/L		59	30 - 130
2-Methylnaphthalene	0.0500	0.02880		mg/L		58	40 - 140
2-Methylphenol	0.0500	0.02835		mg/L		57	30 - 130
2-Nitroaniline	0.0500	0.03866		mg/L		77	40 - 140
2-Nitrophenol	0.0500	0.02963		mg/L		59	30 - 130
3 & 4 Methylphenol	0.0500	0.02617		mg/L		52	30 - 130
3,3'-Dichlorobenzidine	0.0500	0.05921		mg/L		118	40 - 140
3-Nitroaniline	0.0500	0.03749		mg/L		75	40 - 140
4,6-Dinitro-2-methylphenol	0.0500	0.02943		mg/L		59	30 - 130
4-Bromophenyl phenyl ether	0.0500	0.03781		mg/L		76	40 - 140
4-Chloroaniline	0.0500	0.01235	*-	mg/L		25	40 - 140
4-Chlorophenyl phenyl ether	0.0500	0.03377		mg/L		68	40 - 140
4-Nitroaniline	0.0500	0.04210		mg/L		84	40 - 140
4-Nitrophenol	0.0500	0.02301		mg/L		46	30 - 130
Acenaphthene	0.0500	0.02839		mg/L		57	40 - 140
Acenaphthylene	0.0500	0.03023		mg/L		60	40 - 140
Aniline	0.0500	0.02940		mg/L		59	40 - 140
Anthracene	0.0500	0.04109		mg/L		82	40 - 140
Azobenzene/Diphenyldiazene	0.0500	0.03488		mg/L		70	40 - 140
Benzidine	0.0500	0.02009		mg/L		40	40 - 140
Benzo[a]anthracene	0.0500	0.04494		mg/L		90	40 - 140
Benzo[a]pyrene	0.0500	0.04099		mg/L		82	40 - 140
Benzo[b]fluoranthene	0.0500	0.04456		mg/L		89	40 - 140
Benzo[g,h,i]perylene	0.0500	0.04681		mg/L		94	40 - 140
Benzo[k]fluoranthene	0.0500	0.04051		mg/L		81	40 - 140
Benzoic acid	0.0500	0.01540		mg/L		31	30 - 130
Benzyl alcohol	0.0500	0.02798		mg/L		56	40 - 140
Bis(2-chloroethoxy)methane	0.0500	0.02918		mg/L		58	40 - 140
Bis(2-chloroethyl)ether	0.0500	0.02792		mg/L		56	40 - 140
bis (2-chloroisopropyl) ether	0.0500	0.03344		mg/L		67	40 - 140
Bis(2-ethylhexyl) phthalate	0.0500	0.04149		mg/L		83	40 - 140
Butyl benzyl phthalate	0.0500	0.04479		mg/L		90	40 - 140
Carbazole	0.0500	0.04186		mg/L		84	40 - 140
Chrysene	0.0500	0.04199		mg/L		84	40 - 140

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 620-4462/2-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz(a,h)anthracene	0.0500	0.04278		mg/L		86	40 - 140
Dibenzofuran	0.0500	0.03162		mg/L		63	40 - 140
Diethyl phthalate	0.0500	0.03811		mg/L		76	40 - 140
Dimethyl phthalate	0.0500	0.03239		mg/L		65	40 - 140
Di-n-butyl phthalate	0.0500	0.02828		mg/L		57	40 - 140
Di-n-octyl phthalate	0.0500	0.04302		mg/L		86	40 - 140
Fluoranthene	0.0500	0.04284		mg/L		86	40 - 140
Fluorene	0.0500	0.03302		mg/L		66	40 - 140
Hexachlorobenzene	0.0500	0.03804		mg/L		76	40 - 140
Hexachlorobutadiene	0.0500	0.02396		mg/L		48	40 - 140
Hexachlorocyclopentadiene	0.0500	0.02288		mg/L		46	40 - 140
Hexachloroethane	0.0500	0.02755		mg/L		55	40 - 140
Indeno[1,2,3-cd]pyrene	0.0500	0.04113		mg/L		82	40 - 140
Isophorone	0.0500	0.02477		mg/L		50	40 - 140
Naphthalene	0.0500	0.03032		mg/L		61	40 - 140
Nitrobenzene	0.0500	NQ	E	mg/L		NaN	40 - 140
N-Nitrosodimethylamine	0.0500	0.02180		mg/L		44	40 - 140
N-Nitrosodi-n-propylamine	0.0500	0.02961		mg/L		59	40 - 140
N-Nitrosodiphenylamine	0.0500	0.03951		mg/L		79	40 - 140
Pentachloronitrobenzene	0.0500	0.04026		mg/L		81	40 - 140
Pentachlorophenol	0.0500	0.04968		mg/L		99	30 - 130
Phenanthrene	0.0500	0.03916		mg/L		78	40 - 140
Phenol	0.0500	0.01574	*-	mg/L		31	40 - 140
Pyrene	0.0500	0.04320		mg/L		86	40 - 140
Pyridine	0.0500	0.02425		mg/L		48	40 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	56		30 - 130
2-Fluorophenol (Surr)	46		15 - 110
Nitrobenzene-d5 (Surr)	57		30 - 130
Phenol-d5 (Surr)	28		15 - 110
2,4,6-Tribromophenol (Surr)	89		15 - 110
Terphenyl-d14 (Surr)	86		30 - 130

**Lab Sample ID: LCSD 620-4462/3-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	0.0500	0.03444		mg/L		69	40 - 140	10	20
1,2,4-Trichlorobenzene	0.0500	0.03004		mg/L		60	40 - 140	8	20
1,2-Dichlorobenzene	0.0500	0.03168		mg/L		63	40 - 140	2	20
1,3-Dichlorobenzene	0.0500	0.02919		mg/L		58	40 - 140	0	20
1,4-Dichlorobenzene	0.0500	0.03137		mg/L		63	40 - 140	2	20
1-Methylnaphthalene	0.0500	0.03287		mg/L		66	40 - 140	5	20
2,4,5-Trichlorophenol	0.0500	0.03918		mg/L		78	30 - 130	16	20
2,4,6-Trichlorophenol	0.0500	0.03211		mg/L		64	30 - 130	12	20
2,4-Dichlorophenol	0.0500	0.03309		mg/L		66	30 - 130	7	20

Eurofins Environment Testing New England

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 620-4462/3-A**  
**Matrix: Water**  
**Analysis Batch: 4493**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4462**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
2,4-Dimethylphenol	0.0500	0.03001		mg/L		60	30 - 130	10	20
2,4-Dinitrophenol	0.0500	0.03394		mg/L		68	30 - 130	10	20
2,4-Dinitrotoluene	0.0500	0.04154		mg/L		83	40 - 140	2	20
2,6-Dinitrotoluene	0.0500	0.03915		mg/L		78	40 - 140	10	20
2-Chloronaphthalene	0.0500	0.03500		mg/L		70	40 - 140	10	20
2-Chlorophenol	0.0500	0.03117		mg/L		62	30 - 130	5	20
2-Methylnaphthalene	0.0500	0.02982		mg/L		60	40 - 140	3	20
2-Methylphenol	0.0500	0.02925		mg/L		59	30 - 130	3	20
2-Nitroaniline	0.0500	0.04206		mg/L		84	40 - 140	8	20
2-Nitrophenol	0.0500	0.03312		mg/L		66	30 - 130	11	20
3 & 4 Methylphenol	0.0500	0.02628		mg/L		53	30 - 130	0	20
3,3'-Dichlorobenzidine	0.0500	0.05888		mg/L		118	40 - 140	1	20
3-Nitroaniline	0.0500	0.04040		mg/L		81	40 - 140	7	20
4,6-Dinitro-2-methylphenol	0.0500	0.03231		mg/L		65	30 - 130	9	20
4-Bromophenyl phenyl ether	0.0500	0.04013		mg/L		80	40 - 140	6	20
4-Chloroaniline	0.0500	0.01278	*-	mg/L		26	40 - 140	3	20
4-Chlorophenyl phenyl ether	0.0500	0.03653		mg/L		73	40 - 140	8	20
4-Nitroaniline	0.0500	0.04472		mg/L		89	40 - 140	6	20
4-Nitrophenol	0.0500	0.02239		mg/L		45	30 - 130	3	20
Acenaphthene	0.0500	0.03097		mg/L		62	40 - 140	9	20
Acenaphthylene	0.0500	0.03317		mg/L		66	40 - 140	9	20
Aniline	0.0500	0.02998		mg/L		60	40 - 140	2	20
Anthracene	0.0500	0.04260		mg/L		85	40 - 140	4	20
Azobenzene/Diphenyldiazene	0.0500	0.03612		mg/L		72	40 - 140	4	20
Benzidine	0.0500	0.02244		mg/L		45	40 - 140	11	20
Benzo[a]anthracene	0.0500	0.04555		mg/L		91	40 - 140	1	20
Benzo[a]pyrene	0.0500	0.04204		mg/L		84	40 - 140	3	20
Benzo[b]fluoranthene	0.0500	0.04555		mg/L		91	40 - 140	2	20
Benzo[g,h,i]perylene	0.0500	0.04822		mg/L		96	40 - 140	3	20
Benzo[k]fluoranthene	0.0500	0.04318		mg/L		86	40 - 140	6	20
Benzoic acid	0.0500	0.01888		mg/L		38	30 - 130	20	20
Benzyl alcohol	0.0500	0.02857		mg/L		57	40 - 140	2	20
Bis(2-chloroethoxy)methane	0.0500	0.03218		mg/L		64	40 - 140	10	20
Bis(2-chloroethyl)ether	0.0500	0.02961		mg/L		59	40 - 140	6	20
bis (2-chloroisopropyl) ether	0.0500	0.03470		mg/L		69	40 - 140	4	20
Bis(2-ethylhexyl) phthalate	0.0500	0.04139		mg/L		83	40 - 140	0	20
Butyl benzyl phthalate	0.0500	0.04496		mg/L		90	40 - 140	0	20
Carbazole	0.0500	0.04266		mg/L		85	40 - 140	2	20
Chrysene	0.0500	0.04184		mg/L		84	40 - 140	0	20
Dibenz(a,h)anthracene	0.0500	0.04557		mg/L		91	40 - 140	6	20
Dibenzofuran	0.0500	0.03535		mg/L		71	40 - 140	11	20
Diethyl phthalate	0.0500	0.04110		mg/L		82	40 - 140	8	20
Dimethyl phthalate	0.0500	0.03507		mg/L		70	40 - 140	8	20
Di-n-butyl phthalate	0.0500	0.02886		mg/L		58	40 - 140	2	20
Di-n-octyl phthalate	0.0500	0.04458		mg/L		89	40 - 140	4	20
Fluoranthene	0.0500	0.04331		mg/L		87	40 - 140	1	20
Fluorene	0.0500	0.03603		mg/L		72	40 - 140	9	20
Hexachlorobenzene	0.0500	0.03937		mg/L		79	40 - 140	3	20
Hexachlorobutadiene	0.0500	0.02522		mg/L		50	40 - 140	5	20

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# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 620-4462/3-A  
Matrix: Water  
Analysis Batch: 4493

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 4462

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorocyclopentadiene	0.0500	0.02476		mg/L		50	40 - 140	8	20
Hexachloroethane	0.0500	0.02796		mg/L		56	40 - 140	1	20
Indeno[1,2,3-cd]pyrene	0.0500	0.04788		mg/L		96	40 - 140	15	20
Isophorone	0.0500	0.02708		mg/L		54	40 - 140	9	20
Naphthalene	0.0500	0.03309		mg/L		66	40 - 140	9	20
Nitrobenzene	0.0500	NQ	E	mg/L		NaN	40 - 140	NaN	20
N-Nitrosodimethylamine	0.0500	0.02298		mg/L		46	40 - 140	5	20
N-Nitrosodi-n-propylamine	0.0500	0.02874		mg/L		57	40 - 140	3	20
N-Nitrosodiphenylamine	0.0500	0.04004		mg/L		80	40 - 140	1	20
Pentachloronitrobenzene	0.0500	0.04119		mg/L		82	40 - 140	2	20
Pentachlorophenol	0.0500	0.05188		mg/L		104	30 - 130	4	20
Phenanthrene	0.0500	0.04033		mg/L		81	40 - 140	3	20
Phenol	0.0500	0.01448	*-	mg/L		29	40 - 140	8	20
Pyrene	0.0500	0.04313		mg/L		86	40 - 140	0	20
Pyridine	0.0500	0.02393		mg/L		48	40 - 140	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Fluorobiphenyl (Surr)	61		30 - 130
2-Fluorophenol (Surr)	47		15 - 110
Nitrobenzene-d5 (Surr)	61		30 - 130
Phenol-d5 (Surr)	29		15 - 110
2,4,6-Tribromophenol (Surr)	94		15 - 110
Terphenyl-d14 (Surr)	87		30 - 130

## Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 620-4450/3-A  
Matrix: Solid  
Analysis Batch: 4456

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 4450

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00	mg/Kg		10/07/21 09:43	10/07/21 13:50	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
2,5-Dibromotoluene (fid)	107		70 - 130	10/07/21 09:43	10/07/21 13:50	1

Lab Sample ID: LCS 620-4450/1-A  
Matrix: Solid  
Analysis Batch: 4456

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 4450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	12.5	9.407		mg/Kg		75	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
2,5-Dibromotoluene (fid)	98		70 - 130



# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8015D - Gasoline Range Organics (GRO) (GC) (Continued)

**Lab Sample ID: LCSD 620-4450/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4456**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4450**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	12.5	14.91	*1	mg/Kg		119	70 - 130	45	25
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
2,5-Dibromotoluene (fid)	97		70 - 130						

**Lab Sample ID: MB 620-4484/6**  
**Matrix: Water**  
**Analysis Batch: 4484**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		0.100	mg/L			10/08/21 12:11	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>					
2,5-Dibromotoluene (fid)	107		70 - 130	<b>Prepared</b>		<b>Analyzed</b>	<b>Dil Fac</b>	
				10/08/21 12:11		10/08/21 12:11	1	

**Lab Sample ID: LCS 620-4484/3**  
**Matrix: Water**  
**Analysis Batch: 4484**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	0.250	0.2055		mg/L		82	70 - 130
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
2,5-Dibromotoluene (fid)	114		70 - 130				

**Lab Sample ID: LCSD 620-4484/4**  
**Matrix: Water**  
**Analysis Batch: 4484**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	0.250	0.2100		mg/L		84	70 - 130	2	25
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
2,5-Dibromotoluene (fid)	114		70 - 130						

## Method: 8015D - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 620-4431/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4467**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4431**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		13.3	mg/Kg		10/06/21 12:10	10/07/21 16:09	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>					
<i>o</i> -Terphenyl	59		40 - 140	<b>Prepared</b>		<b>Analyzed</b>	<b>Dil Fac</b>	
1-Chlorooctadecane	68		40 - 140	10/06/21 12:10		10/07/21 16:09	1	

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# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: LCS 620-4431/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4467**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4431**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	333	171.6		mg/Kg		51	40 - 140
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
<i>o</i> -Terphenyl	80		40 - 140				
1-Chlorooctadecane	56		40 - 140				

**Lab Sample ID: LCSD 620-4431/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4467**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4431**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	333	188.9		mg/Kg		57	40 - 140	10	30
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>o</i> -Terphenyl	65		40 - 140						
1-Chlorooctadecane	62		40 - 140						

**Lab Sample ID: MB 620-4502/1-A**  
**Matrix: Water**  
**Analysis Batch: 4544**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4502**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.200	mg/L		10/08/21 10:12	10/11/21 15:30	1
<b>MB MB</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>		
<i>o</i> -Terphenyl	77		40 - 140	10/08/21 10:12	10/11/21 15:30	1		
1-Chlorooctadecane	81		40 - 140	10/08/21 10:12	10/11/21 15:30	1		

**Lab Sample ID: LCS 620-4502/2-A**  
**Matrix: Water**  
**Analysis Batch: 4544**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4502**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	5.00	3.946		mg/L		79	40 - 140
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
<i>o</i> -Terphenyl	86		40 - 140				
1-Chlorooctadecane	69		40 - 140				

**Lab Sample ID: LCSD 620-4502/3-A**  
**Matrix: Water**  
**Analysis Batch: 4544**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4502**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	5.00	3.682		mg/L		74	40 - 140	7	30

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: LCSD 620-4502/3-A**  
**Matrix: Water**  
**Analysis Batch: 4544**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4502**

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	84		40 - 140
1-Chlorooctadecane	59		40 - 140

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 620-4420/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier							
Arsenic	ND		1.45	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Barium	ND		0.968	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Cadmium	ND		0.484	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Chromium	ND		0.968	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Lead	ND		1.45	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Selenium	ND	^3+	1.45	mg/Kg		10/06/21 09:57	10/07/21 13:06		1
Silver	ND	^+ ^3+	1.45	mg/Kg		10/06/21 09:57	10/07/21 13:06		1

**Lab Sample ID: LCDSRM 620-4420/3-A**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Arsenic	157	131.7		mg/Kg		83.9	73.9 - 105.1	1	20	
Barium	228	206.6		mg/Kg		90.6	71.9 - 104.8	4	20	
Cadmium	125	91.34		mg/Kg		73.1	62.6 - 93.6	2	20	
Chromium	70.7	54.76		mg/Kg		77.5	68.6 - 102.3	1	20	
Lead	57.2	53.18		mg/Kg		93.0	82.2 - 115.9	2	20	
Selenium	41.7	32.43	^3+	mg/Kg		77.8	65.9 - 104.1	0	20	
Silver	22.3	17.86	^+ ^3+	mg/Kg		80.1	72.6 - 110.8	1	20	

**Lab Sample ID: LCSSRM 620-4420/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Arsenic	157	130.4		mg/Kg		83.1	73.9 - 105.1	1	20	
Barium	228	198.8		mg/Kg		87.2	71.9 - 104.8	4	20	
Cadmium	125	92.76		mg/Kg		74.2	62.6 - 93.6	2	20	
Chromium	70.7	55.24		mg/Kg		78.1	68.6 - 102.3	1	20	
Lead	57.2	51.97		mg/Kg		90.9	82.2 - 115.9	2	20	

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 6010D - Metals (ICP) (Continued)

**Lab Sample ID: LCSSRM 620-4420/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	41.7	32.45	^3+	mg/Kg		77.8	65.9 - 104.1
Silver	22.3	18.01	^+ ^3+	mg/Kg		80.8	72.6 - 110.8

**Lab Sample ID: 620-1378-5 MS**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: B-5-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.06		125	112.3		mg/Kg	⊛	88	75 - 125
Barium	19.8		125	138.9		mg/Kg	⊛	95	75 - 125
Cadmium	ND		125	108.1		mg/Kg	⊛	86	75 - 125
Chromium	4.08		125	120.1		mg/Kg	⊛	93	75 - 125
Lead	35.8		125	135.2		mg/Kg	⊛	79	75 - 125
Selenium	ND	^3+	125	109.9	^3+	mg/Kg	⊛	88	75 - 125
Silver	ND	^+ ^3+	125	102.3	^+ ^3+	mg/Kg	⊛	82	75 - 125

**Lab Sample ID: 620-1378-5 MSD**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: B-5-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	2.06		130	115.8		mg/Kg	⊛	87	75 - 125	3	20
Barium	19.8		130	145.4		mg/Kg	⊛	97	75 - 125	5	20
Cadmium	ND		130	113.6		mg/Kg	⊛	87	75 - 125	5	20
Chromium	4.08		130	125.1		mg/Kg	⊛	93	75 - 125	4	20
Lead	35.8		130	138.2		mg/Kg	⊛	79	75 - 125	2	20
Selenium	ND	^3+	130	112.8	^3+	mg/Kg	⊛	87	75 - 125	3	20
Silver	ND	^+ ^3+	130	106.3	^+ ^3+	mg/Kg	⊛	82	75 - 125	4	20

**Lab Sample ID: 620-1378-5 DU**  
**Matrix: Solid**  
**Analysis Batch: 4455**

**Client Sample ID: B-5-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4420**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	2.06		2.247		mg/Kg	⊛	9	20
Barium	19.8		22.50		mg/Kg	⊛	13	20
Cadmium	ND		ND		mg/Kg	⊛	NC	20
Chromium	4.08		5.265	F3	mg/Kg	⊛	25	20
Lead	35.8		30.28		mg/Kg	⊛	17	20
Selenium	ND	^3+	ND	^3+	mg/Kg	⊛	NC	20
Silver	ND	^+ ^3+	ND	^+ ^3+	mg/Kg	⊛	NC	20

**Lab Sample ID: MB 620-4438/1-A**  
**Matrix: Water**  
**Analysis Batch: 4496**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	^3+	0.00800	mg/L		10/06/21 16:02	10/08/21 13:06	1

# QC Sample Results

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 6010D - Metals (ICP) (Continued)

**Lab Sample ID: LCS 620-4438/2-A**  
**Matrix: Water**  
**Analysis Batch: 4496**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.50	2.623	^3+	mg/L		105	85 - 115

**Lab Sample ID: LCSD 620-4438/3-A**  
**Matrix: Water**  
**Analysis Batch: 4496**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	2.50	2.574	^3+	mg/L		103	85 - 115	2	20

**Lab Sample ID: 620-1378-6 MS**  
**Matrix: Water**  
**Analysis Batch: 4454**

**Client Sample ID: B-5-GW**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.311		2.50	2.589		mg/L		91	75 - 125
Cadmium	ND		2.50	2.079		mg/L		83	75 - 125
Chromium	0.0982		2.50	2.350		mg/L		90	75 - 125
Lead	0.108		2.50	2.284		mg/L		87	75 - 125
Selenium	ND	^3+	2.50	2.273	^3+	mg/L		91	75 - 125
Silver	ND	^3+	2.50	2.205	^3+	mg/L		88	75 - 125

**Lab Sample ID: 620-1378-6 MS**  
**Matrix: Water**  
**Analysis Batch: 4496**

**Client Sample ID: B-5-GW**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0800	^3+	2.50	2.309	^3+	mg/L		89	75 - 125

**Lab Sample ID: 620-1378-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 4454**

**Client Sample ID: B-5-GW**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Barium	0.311		2.50	2.602		mg/L		92	75 - 125	1	20
Cadmium	ND		2.50	2.089		mg/L		84	75 - 125	1	20
Chromium	0.0982		2.50	2.366		mg/L		91	75 - 125	1	20
Lead	0.108		2.50	2.300		mg/L		88	75 - 125	1	20
Selenium	ND	^3+	2.50	2.297	^3+	mg/L		92	75 - 125	1	20
Silver	ND	^3+	2.50	2.222	^3+	mg/L		89	75 - 125	1	20

**Lab Sample ID: 620-1378-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 4496**

**Client Sample ID: B-5-GW**  
**Prep Type: Total/NA**  
**Prep Batch: 4438**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	0.0800	^3+	2.50	2.371	^3+	mg/L		92	75 - 125	3	20

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 620-1378-6 DU  
 Matrix: Water  
 Analysis Batch: 4454

Client Sample ID: B-5-GW  
 Prep Type: Total/NA  
 Prep Batch: 4438

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Barium	0.311		0.3062		mg/L		1	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0982		0.09450		mg/L		4	20
Lead	0.108		0.1057		mg/L		2	20
Selenium	ND	^3+	ND	^3+	mg/L		NC	20
Silver	ND	^3+	ND	^3+	mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 620-4433/1-A  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Mercury	ND	^+	0.000200	mg/L		10/06/21 13:18	10/07/21 17:17	1

Lab Sample ID: LCS 620-4433/2-A  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Mercury	0.00500	0.005505	^+	mg/L		110	85 - 115

Lab Sample ID: LCSD 620-4433/3-A  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
		Result	Qualifier						
Mercury	0.00500	0.004912	^+	mg/L		98	85 - 115	11	20

Lab Sample ID: 620-1378-6 MS  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: B-5-GW  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Mercury	ND	^+	0.00500	0.005512	^+	mg/L		110	80 - 120

Lab Sample ID: 620-1378-6 MSD  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: B-5-GW  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Mercury	ND	^+	0.00500	0.005314	^+	mg/L		106	80 - 120	4	20

Lab Sample ID: 620-1378-6 DU  
 Matrix: Water  
 Analysis Batch: 4533

Client Sample ID: B-5-GW  
 Prep Type: Total/NA  
 Prep Batch: 4433

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Mercury	ND	^+	ND	^+	mg/L		NC	20

# QC Sample Results

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 620-4422/1-A**  
**Matrix: Solid**  
**Analysis Batch: 4578**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 4422**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0285	mg/Kg		10/06/21 10:03	10/12/21 11:12	1

**Lab Sample ID: LCSSRM 620-4422/2-A**  
**Matrix: Solid**  
**Analysis Batch: 4578**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 4422**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	15.4	16.72		mg/Kg		108.6	79.9 - 133.8

**Lab Sample ID: 620-1378-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 4578**

**Client Sample ID: B-1-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4422**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.427		0.219	0.5969		mg/Kg	⊛	78	75 - 125

**Lab Sample ID: 620-1378-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 4578**

**Client Sample ID: B-1-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4422**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.427		0.206	0.6764		mg/Kg	⊛	121	75 - 125	12	20

**Lab Sample ID: 620-1378-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 4578**

**Client Sample ID: B-1-2**  
**Prep Type: Total/NA**  
**Prep Batch: 4422**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.427		0.3313	F3	mg/Kg	⊛	25	20

# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## GC/MS VOA

### Pre Prep Batch: 4406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	Frozen Preserve	
620-1378-2	B-2-2	Total/NA	Solid	Frozen Preserve	
620-1378-3	B-3-2	Total/NA	Solid	Frozen Preserve	
620-1378-4 - RA	B-4-2	Total/NA	Solid	Frozen Preserve	
620-1378-4	B-4-2	Total/NA	Solid	Frozen Preserve	
620-1378-5	B-5-2	Total/NA	Solid	Frozen Preserve	

### Analysis Batch: 4445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	8260C	
MB 620-4445/7	Method Blank	Total/NA	Water	8260C	
LCS 620-4445/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 620-4445/5	Lab Control Sample Dup	Total/NA	Water	8260C	

### Prep Batch: 4490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-3	B-3-2	Total/NA	Solid	5035	4406
620-1378-4	B-4-2	Total/NA	Solid	5035	4406
620-1378-5	B-5-2	Total/NA	Solid	5035	4406
MB 620-4490/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-4490/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-4490/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

### Analysis Batch: 4546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-3	B-3-2	Total/NA	Solid	8260C	4490
620-1378-4	B-4-2	Total/NA	Solid	8260C	4490
620-1378-5	B-5-2	Total/NA	Solid	8260C	4490
MB 620-4490/3-A	Method Blank	Total/NA	Solid	8260C	4490
LCS 620-4490/1-A	Lab Control Sample	Total/NA	Solid	8260C	4490
LCSD 620-4490/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	4490

### Prep Batch: 4558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	5035	4406
620-1378-2	B-2-2	Total/NA	Solid	5035	4406
620-1378-4 - RA	B-4-2	Total/NA	Solid	5035	4406
MB 620-4558/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-4558/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-4558/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

### Analysis Batch: 4561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	8260C	4558
620-1378-2	B-2-2	Total/NA	Solid	8260C	4558
620-1378-4 - RA	B-4-2	Total/NA	Solid	8260C	4558
MB 620-4558/3-A	Method Blank	Total/NA	Solid	8260C	4558

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# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## GC/MS VOA (Continued)

### Analysis Batch: 4561 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 620-4558/1-A	Lab Control Sample	Total/NA	Solid	8260C	4558
LCSD 620-4558/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	4558

## GC/MS Semi VOA

### Prep Batch: 4461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	3546	
620-1378-2	B-2-2	Total/NA	Solid	3546	
620-1378-3	B-3-2	Total/NA	Solid	3546	
620-1378-4	B-4-2	Total/NA	Solid	3546	
620-1378-5	B-5-2	Total/NA	Solid	3546	
MB 620-4461/1-A	Method Blank	Total/NA	Solid	3546	
LCS 620-4461/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 620-4461/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

### Prep Batch: 4462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	3510C	
MB 620-4462/1-A	Method Blank	Total/NA	Water	3510C	
LCS 620-4462/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 620-4462/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 4493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	8270D	4461
620-1378-2	B-2-2	Total/NA	Solid	8270D	4461
620-1378-3	B-3-2	Total/NA	Solid	8270D	4461
620-1378-4	B-4-2	Total/NA	Solid	8270D	4461
620-1378-5	B-5-2	Total/NA	Solid	8270D	4461
620-1378-6	B-5-GW	Total/NA	Water	8270D	4462
MB 620-4461/1-A	Method Blank	Total/NA	Solid	8270D	4461
MB 620-4462/1-A	Method Blank	Total/NA	Water	8270D	4462
LCS 620-4461/2-A	Lab Control Sample	Total/NA	Solid	8270D	4461
LCS 620-4462/2-A	Lab Control Sample	Total/NA	Water	8270D	4462
LCSD 620-4461/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	4461
LCSD 620-4462/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	4462

## GC VOA

### Prep Batch: 4450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	5035	
620-1378-2	B-2-2	Total/NA	Solid	5035	
620-1378-3	B-3-2	Total/NA	Solid	5035	
620-1378-4	B-4-2	Total/NA	Solid	5035	
620-1378-5	B-5-2	Total/NA	Solid	5035	
MB 620-4450/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-4450/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-4450/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## GC VOA

### Analysis Batch: 4456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	8015D	4450
620-1378-2	B-2-2	Total/NA	Solid	8015D	4450
620-1378-3	B-3-2	Total/NA	Solid	8015D	4450
620-1378-4	B-4-2	Total/NA	Solid	8015D	4450
620-1378-5	B-5-2	Total/NA	Solid	8015D	4450
MB 620-4450/3-A	Method Blank	Total/NA	Solid	8015D	4450
LCS 620-4450/1-A	Lab Control Sample	Total/NA	Solid	8015D	4450
LCSD 620-4450/2-A	Lab Control Sample Dup	Total/NA	Solid	8015D	4450

### Analysis Batch: 4484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	8015D	
MB 620-4484/6	Method Blank	Total/NA	Water	8015D	
LCS 620-4484/3	Lab Control Sample	Total/NA	Water	8015D	
LCSD 620-4484/4	Lab Control Sample Dup	Total/NA	Water	8015D	

## GC Semi VOA

### Prep Batch: 4431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	3546	
620-1378-2	B-2-2	Total/NA	Solid	3546	
620-1378-3	B-3-2	Total/NA	Solid	3546	
620-1378-4	B-4-2	Total/NA	Solid	3546	
620-1378-5	B-5-2	Total/NA	Solid	3546	
MB 620-4431/1-A	Method Blank	Total/NA	Solid	3546	
LCS 620-4431/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 620-4431/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

### Analysis Batch: 4467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	8015D	4431
620-1378-2	B-2-2	Total/NA	Solid	8015D	4431
620-1378-3	B-3-2	Total/NA	Solid	8015D	4431
620-1378-4	B-4-2	Total/NA	Solid	8015D	4431
620-1378-5	B-5-2	Total/NA	Solid	8015D	4431
MB 620-4431/1-A	Method Blank	Total/NA	Solid	8015D	4431
LCS 620-4431/2-A	Lab Control Sample	Total/NA	Solid	8015D	4431
LCSD 620-4431/3-A	Lab Control Sample Dup	Total/NA	Solid	8015D	4431

### Prep Batch: 4502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	3510C	
MB 620-4502/1-A	Method Blank	Total/NA	Water	3510C	
LCS 620-4502/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 620-4502/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 4544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	8015D	4502
MB 620-4502/1-A	Method Blank	Total/NA	Water	8015D	4502

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# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## GC Semi VOA (Continued)

### Analysis Batch: 4544 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 620-4502/2-A	Lab Control Sample	Total/NA	Water	8015D	4502
LCSD 620-4502/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	4502

## Metals

### Prep Batch: 4420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	3050B	
620-1378-2	B-2-2	Total/NA	Solid	3050B	
620-1378-3	B-3-2	Total/NA	Solid	3050B	
620-1378-4	B-4-2	Total/NA	Solid	3050B	
620-1378-5	B-5-2	Total/NA	Solid	3050B	
MB 620-4420/1-A	Method Blank	Total/NA	Solid	3050B	
LCDSRM 620-4420/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 620-4420/2-A	Lab Control Sample	Total/NA	Solid	3050B	
620-1378-5 MS	B-5-2	Total/NA	Solid	3050B	
620-1378-5 MSD	B-5-2	Total/NA	Solid	3050B	
620-1378-5 DU	B-5-2	Total/NA	Solid	3050B	

### Prep Batch: 4422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	7471B	
620-1378-2	B-2-2	Total/NA	Solid	7471B	
620-1378-3	B-3-2	Total/NA	Solid	7471B	
620-1378-4	B-4-2	Total/NA	Solid	7471B	
620-1378-5	B-5-2	Total/NA	Solid	7471B	
MB 620-4422/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 620-4422/2-A	Lab Control Sample	Total/NA	Solid	7471B	
620-1378-1 MS	B-1-2	Total/NA	Solid	7471B	
620-1378-1 MSD	B-1-2	Total/NA	Solid	7471B	
620-1378-1 DU	B-1-2	Total/NA	Solid	7471B	

### Prep Batch: 4433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	7470A	
MB 620-4433/1-A	Method Blank	Total/NA	Water	7470A	
LCS 620-4433/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 620-4433/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
620-1378-6 MS	B-5-GW	Total/NA	Water	7470A	
620-1378-6 MSD	B-5-GW	Total/NA	Water	7470A	
620-1378-6 DU	B-5-GW	Total/NA	Water	7470A	

### Prep Batch: 4438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	3005A	
MB 620-4438/1-A	Method Blank	Total/NA	Water	3005A	
LCS 620-4438/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 620-4438/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
620-1378-6 MS	B-5-GW	Total/NA	Water	3005A	
620-1378-6 MSD	B-5-GW	Total/NA	Water	3005A	
620-1378-6 DU	B-5-GW	Total/NA	Water	3005A	

# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Metals

### Analysis Batch: 4454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	6010D	4438
620-1378-6 MS	B-5-GW	Total/NA	Water	6010D	4438
620-1378-6 MSD	B-5-GW	Total/NA	Water	6010D	4438
620-1378-6 DU	B-5-GW	Total/NA	Water	6010D	4438

### Analysis Batch: 4455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	6010D	4420
620-1378-2	B-2-2	Total/NA	Solid	6010D	4420
620-1378-3	B-3-2	Total/NA	Solid	6010D	4420
620-1378-4	B-4-2	Total/NA	Solid	6010D	4420
620-1378-5	B-5-2	Total/NA	Solid	6010D	4420
MB 620-4420/1-A	Method Blank	Total/NA	Solid	6010D	4420
LCDSRM 620-4420/3-A	Lab Control Sample Dup	Total/NA	Solid	6010D	4420
LCSSRM 620-4420/2-A	Lab Control Sample	Total/NA	Solid	6010D	4420
620-1378-5 MS	B-5-2	Total/NA	Solid	6010D	4420
620-1378-5 MSD	B-5-2	Total/NA	Solid	6010D	4420
620-1378-5 DU	B-5-2	Total/NA	Solid	6010D	4420

### Analysis Batch: 4496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	6010D	4438
MB 620-4438/1-A	Method Blank	Total/NA	Water	6010D	4438
LCS 620-4438/2-A	Lab Control Sample	Total/NA	Water	6010D	4438
LCSD 620-4438/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	4438
620-1378-6 MS	B-5-GW	Total/NA	Water	6010D	4438
620-1378-6 MSD	B-5-GW	Total/NA	Water	6010D	4438

### Analysis Batch: 4533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-6	B-5-GW	Total/NA	Water	7470A	4433
MB 620-4433/1-A	Method Blank	Total/NA	Water	7470A	4433
LCS 620-4433/2-A	Lab Control Sample	Total/NA	Water	7470A	4433
LCSD 620-4433/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	4433
620-1378-6 MS	B-5-GW	Total/NA	Water	7470A	4433
620-1378-6 MSD	B-5-GW	Total/NA	Water	7470A	4433
620-1378-6 DU	B-5-GW	Total/NA	Water	7470A	4433

### Analysis Batch: 4578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	7471B	4422
620-1378-2	B-2-2	Total/NA	Solid	7471B	4422
620-1378-3	B-3-2	Total/NA	Solid	7471B	4422
620-1378-4	B-4-2	Total/NA	Solid	7471B	4422
620-1378-5	B-5-2	Total/NA	Solid	7471B	4422
MB 620-4422/1-A	Method Blank	Total/NA	Solid	7471B	4422
LCSSRM 620-4422/2-A	Lab Control Sample	Total/NA	Solid	7471B	4422
620-1378-1 MS	B-1-2	Total/NA	Solid	7471B	4422
620-1378-1 MSD	B-1-2	Total/NA	Solid	7471B	4422
620-1378-1 DU	B-1-2	Total/NA	Solid	7471B	4422

Eurofins Environment Testing New England

# QC Association Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## General Chemistry

### Analysis Batch: 4458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1378-1	B-1-2	Total/NA	Solid	Moisture	
620-1378-2	B-2-2	Total/NA	Solid	Moisture	
620-1378-3	B-3-2	Total/NA	Solid	Moisture	
620-1378-4	B-4-2	Total/NA	Solid	Moisture	
620-1378-5	B-5-2	Total/NA	Solid	Moisture	

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# Lab Chronicle

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	4458	10/07/21 10:35	EDT	ENE

**Client Sample ID: B-1-2**

**Lab Sample ID: 620-1378-1**

**Date Collected: 10/05/21 11:10**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035			4558	10/12/21 08:35	DDP	ENE
Total/NA	Analysis	8260C		1	4561	10/12/21 12:42	DDP	ENE
Total/NA	Prep	3546			4461	10/07/21 11:02	PRB	ENE
Total/NA	Analysis	8270D		5	4493	10/08/21 20:57	BJJ	ENE
Total/NA	Prep	5035			4450	10/07/21 09:43	MED	ENE
Total/NA	Analysis	8015D		1	4456	10/07/21 14:29	MED	ENE
Total/NA	Prep	3546			4431	10/06/21 12:10	BJJ	ENE
Total/NA	Analysis	8015D		5	4467	10/07/21 19:43	AEK	ENE
Total/NA	Prep	3050B			4420	10/06/21 09:57	CEV	ENE
Total/NA	Analysis	6010D		1	4455	10/07/21 13:23	CEV	ENE
Total/NA	Prep	7471B			4422	10/06/21 10:03	CEV	ENE
Total/NA	Analysis	7471B		1	4578	10/12/21 11:16	EDT	ENE

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

**Date Collected: 10/05/21 11:20**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	4458	10/07/21 10:35	EDT	ENE

**Client Sample ID: B-2-2**

**Lab Sample ID: 620-1378-2**

**Date Collected: 10/05/21 11:20**

**Matrix: Solid**

**Date Received: 10/05/21 15:41**

**Percent Solids: 92.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035			4558	10/12/21 08:35	DDP	ENE
Total/NA	Analysis	8260C		1	4561	10/12/21 13:08	DDP	ENE
Total/NA	Prep	3546			4461	10/07/21 11:02	PRB	ENE
Total/NA	Analysis	8270D		1	4493	10/08/21 18:59	BJJ	ENE
Total/NA	Prep	5035			4450	10/07/21 09:43	MED	ENE
Total/NA	Analysis	8015D		1	4456	10/07/21 15:07	MED	ENE
Total/NA	Prep	3546			4431	10/06/21 12:10	BJJ	ENE
Total/NA	Analysis	8015D		1	4467	10/07/21 17:26	AEK	ENE
Total/NA	Prep	3050B			4420	10/06/21 09:57	CEV	ENE
Total/NA	Analysis	6010D		1	4455	10/07/21 13:29	CEV	ENE

# Lab Chronicle

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Client Sample ID: B-2-2

Lab Sample ID: 620-1378-2

Date Collected: 10/05/21 11:20

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			4422	10/06/21 10:03	CEV	ENE
Total/NA	Analysis	7471B		1	4578	10/12/21 11:30	EDT	ENE

## Client Sample ID: B-3-2

Lab Sample ID: 620-1378-3

Date Collected: 10/05/21 11:30

Matrix: Solid

Date Received: 10/05/21 15:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	4458	10/07/21 10:35	EDT	ENE

## Client Sample ID: B-3-2

Lab Sample ID: 620-1378-3

Date Collected: 10/05/21 11:30

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035			4490	10/08/21 08:46	DDP	ENE
Total/NA	Analysis	8260C		1	4546	10/11/21 20:48	DDP	ENE
Total/NA	Prep	3546			4461	10/07/21 11:02	PRB	ENE
Total/NA	Analysis	8270D		5	4493	10/08/21 19:58	BJJ	ENE
Total/NA	Prep	5035			4450	10/07/21 09:43	MED	ENE
Total/NA	Analysis	8015D		1	4456	10/07/21 15:46	MED	ENE
Total/NA	Prep	3546			4431	10/06/21 12:10	BJJ	ENE
Total/NA	Analysis	8015D		1	4467	10/07/21 19:05	AEK	ENE
Total/NA	Prep	3050B			4420	10/06/21 09:57	CEV	ENE
Total/NA	Analysis	6010D		1	4455	10/07/21 13:34	CEV	ENE
Total/NA	Prep	7471B			4422	10/06/21 10:03	CEV	ENE
Total/NA	Analysis	7471B		1	4578	10/12/21 11:32	EDT	ENE

## Client Sample ID: B-4-2

Lab Sample ID: 620-1378-4

Date Collected: 10/05/21 11:40

Matrix: Solid

Date Received: 10/05/21 15:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	4458	10/07/21 10:35	EDT	ENE

## Client Sample ID: B-4-2

Lab Sample ID: 620-1378-4

Date Collected: 10/05/21 11:40

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035			4490	10/08/21 08:46	DDP	ENE
Total/NA	Analysis	8260C		1	4546	10/11/21 21:15	DDP	ENE

# Lab Chronicle

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-4-2**

**Lab Sample ID: 620-1378-4**

Date Collected: 10/05/21 11:40

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve	RA		4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035	RA		4558	10/12/21 08:35	DDP	ENE
Total/NA	Analysis	8260C	RA	1	4561	10/12/21 13:35	DDP	ENE
Total/NA	Prep	3546			4461	10/07/21 11:02	PRB	ENE
Total/NA	Analysis	8270D		5	4493	10/08/21 20:28	BJJ	ENE
Total/NA	Prep	5035			4450	10/07/21 09:43	MED	ENE
Total/NA	Analysis	8015D		1	4456	10/07/21 16:24	MED	ENE
Total/NA	Prep	3546			4431	10/06/21 12:10	BJJ	ENE
Total/NA	Analysis	8015D		1	4467	10/07/21 18:28	AEK	ENE
Total/NA	Prep	3050B			4420	10/06/21 09:57	CEV	ENE
Total/NA	Analysis	6010D		1	4455	10/07/21 13:51	CEV	ENE
Total/NA	Prep	7471B			4422	10/06/21 10:03	CEV	ENE
Total/NA	Analysis	7471B		1	4578	10/12/21 11:34	EDT	ENE

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

Date Collected: 10/05/21 11:50

Matrix: Solid

Date Received: 10/05/21 15:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	4458	10/07/21 10:35	EDT	ENE

**Client Sample ID: B-5-2**

**Lab Sample ID: 620-1378-5**

Date Collected: 10/05/21 11:50

Matrix: Solid

Date Received: 10/05/21 15:41

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			4406	10/05/21 18:04	KFS	ENE
Total/NA	Prep	5035			4490	10/08/21 08:46	DDP	ENE
Total/NA	Analysis	8260C		1	4546	10/11/21 21:42	DDP	ENE
Total/NA	Prep	3546			4461	10/07/21 11:02	PRB	ENE
Total/NA	Analysis	8270D		1	4493	10/08/21 19:29	BJJ	ENE
Total/NA	Prep	5035			4450	10/07/21 09:43	MED	ENE
Total/NA	Analysis	8015D		1	4456	10/07/21 17:03	MED	ENE
Total/NA	Prep	3546			4431	10/06/21 12:10	BJJ	ENE
Total/NA	Analysis	8015D		1	4467	10/07/21 17:51	AEK	ENE
Total/NA	Prep	3050B			4420	10/06/21 09:57	CEV	ENE
Total/NA	Analysis	6010D		1	4455	10/07/21 13:57	CEV	ENE
Total/NA	Prep	7471B			4422	10/06/21 10:03	CEV	ENE
Total/NA	Analysis	7471B		1	4578	10/12/21 11:36	EDT	ENE



# Lab Chronicle

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

**Client Sample ID: B-5-GW**

**Lab Sample ID: 620-1378-6**

**Date Collected: 10/05/21 14:00**

**Matrix: Water**

**Date Received: 10/05/21 15:41**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Analysis	8260C		1	4445	10/07/21 13:59	DDP	ENE
Total/NA	Prep	3510C			4462	10/07/21 11:03	AEK	ENE
Total/NA	Analysis	8270D		1	4493	10/08/21 18:00	BJJ	ENE
Total/NA	Analysis	8015D		1	4484	10/08/21 13:27	DDP	ENE
Total/NA	Prep	3510C			4502	10/08/21 10:12	PRB	ENE
Total/NA	Analysis	8015D		1	4544	10/11/21 16:47	BJJ	ENE
Total/NA	Prep	3005A			4438	10/06/21 16:02	CEV	ENE
Total/NA	Analysis	6010D		1	4454	10/07/21 13:34	CEV	ENE
Total/NA	Prep	3005A			4438	10/06/21 16:02	CEV	ENE
Total/NA	Analysis	6010D		1	4496	10/08/21 13:21	CEV	ENE
Total/NA	Prep	7470A			4433	10/06/21 13:18	CEV	ENE
Total/NA	Analysis	7470A		1	4533	10/07/21 17:23	EDT	ENE

**Laboratory References:**

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Rhode Island	State	LAI00368	12-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010D	3005A	Water	Arsenic
6010D	3005A	Water	Barium
6010D	3005A	Water	Cadmium
6010D	3005A	Water	Chromium
6010D	3005A	Water	Lead
6010D	3005A	Water	Selenium
6010D	3005A	Water	Silver
6010D	3050B	Solid	Arsenic
6010D	3050B	Solid	Barium
6010D	3050B	Solid	Cadmium
6010D	3050B	Solid	Chromium
6010D	3050B	Solid	Lead
6010D	3050B	Solid	Selenium
6010D	3050B	Solid	Silver
7470A	7470A	Water	Mercury
7471B	7471B	Solid	Mercury
8015D		Water	C6-C10
8015D	3510C	Water	C10-C28
8015D	3546	Solid	C10-C28
8015D	5035	Solid	C6-C10
8260C		Water	1,1,1,2-Tetrachloroethane
8260C		Water	1,1,1-Trichloroethane
8260C		Water	1,1,2,2-Tetrachloroethane
8260C		Water	1,1,2-Trichloroethane
8260C		Water	1,1,2-Trichlorotrifluoroethane (Freon 113)
8260C		Water	1,1-Dichloroethane
8260C		Water	1,1-Dichloroethene
8260C		Water	1,1-Dichloropropene
8260C		Water	1,2,3-Trichlorobenzene
8260C		Water	1,2,3-Trichloropropane
8260C		Water	1,2,4-Trichlorobenzene
8260C		Water	1,2,4-Trimethylbenzene
8260C		Water	1,2-Dibromo-3-Chloropropane
8260C		Water	1,2-Dibromoethane (EDB)
8260C		Water	1,2-Dichlorobenzene
8260C		Water	1,2-Dichloroethane
8260C		Water	1,2-Dichloropropane
8260C		Water	1,3,5-Trichlorobenzene
8260C		Water	1,3,5-Trimethylbenzene
8260C		Water	1,3-Dichlorobenzene
8260C		Water	1,3-Dichloropropane
8260C		Water	1,4-Dichlorobenzene
8260C		Water	1,4-Dioxane
8260C		Water	2,2-Dichloropropane
8260C		Water	2-Butanone (MEK)

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	2-Chlorotoluene
8260C		Water	2-Hexanone (MBK)
8260C		Water	4-Chlorotoluene
8260C		Water	4-Isopropyltoluene
8260C		Water	4-Methyl-2-pentanone (MIBK)
8260C		Water	Acetone
8260C		Water	Acrylonitrile
8260C		Water	Benzene
8260C		Water	Bromobenzene
8260C		Water	Bromochloromethane
8260C		Water	Bromodichloromethane
8260C		Water	Bromoform
8260C		Water	Bromomethane
8260C		Water	Carbon disulfide
8260C		Water	Carbon tetrachloride
8260C		Water	Chlorobenzene
8260C		Water	Chloroethane
8260C		Water	Chloroform
8260C		Water	Chloromethane
8260C		Water	cis-1,2-Dichloroethene
8260C		Water	cis-1,3-Dichloropropene
8260C		Water	Dibromochloromethane
8260C		Water	Dibromomethane
8260C		Water	Dichlorodifluoromethane (Freon 12)
8260C		Water	di-Isopropyl ether
8260C		Water	Ethanol
8260C		Water	Ethyl ether
8260C		Water	Ethyl tert-butyl ether
8260C		Water	Ethylbenzene
8260C		Water	Hexachlorobutadiene
8260C		Water	Isopropylbenzene
8260C		Water	m,p-Xylene
8260C		Water	Methyl tert-butyl ether
8260C		Water	Methylene Chloride
8260C		Water	Naphthalene
8260C		Water	n-Butylbenzene
8260C		Water	N-Propylbenzene
8260C		Water	o-Xylene
8260C		Water	sec-Butylbenzene
8260C		Water	Styrene
8260C		Water	Tert-amyl methyl ether
8260C		Water	tert-Butanol
8260C		Water	tert-Butylbenzene
8260C		Water	Tetrachloroethene
8260C		Water	Tetrahydrofuran
8260C		Water	Toluene
8260C		Water	trans-1,2-Dichloroethene

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	trans-1,3-Dichloropropene
8260C		Water	trans-1,4-Dichloro-2-butene
8260C		Water	Trichloroethene
8260C		Water	Trichlorofluoromethane (Freon 11)
8260C		Water	Vinyl chloride
8260C	5035	Solid	1,1,1,2-Tetrachloroethane
8260C	5035	Solid	1,1,1-Trichloroethane
8260C	5035	Solid	1,1,2,2-Tetrachloroethane
8260C	5035	Solid	1,1,2-Trichloroethane
8260C	5035	Solid	1,1,2-Trichlorotrifluoroethane (Freon 113)
8260C	5035	Solid	1,1-Dichloroethane
8260C	5035	Solid	1,1-Dichloroethene
8260C	5035	Solid	1,1-Dichloropropene
8260C	5035	Solid	1,2,3-Trichlorobenzene
8260C	5035	Solid	1,2,3-Trichloropropane
8260C	5035	Solid	1,2,4-Trichlorobenzene
8260C	5035	Solid	1,2,4-Trimethylbenzene
8260C	5035	Solid	1,2-Dibromo-3-Chloropropane
8260C	5035	Solid	1,2-Dibromoethane (EDB)
8260C	5035	Solid	1,2-Dichlorobenzene
8260C	5035	Solid	1,2-Dichloroethane
8260C	5035	Solid	1,2-Dichloropropane
8260C	5035	Solid	1,3,5-Trichlorobenzene
8260C	5035	Solid	1,3,5-Trimethylbenzene
8260C	5035	Solid	1,3-Dichlorobenzene
8260C	5035	Solid	1,3-Dichloropropane
8260C	5035	Solid	1,4-Dichlorobenzene
8260C	5035	Solid	1,4-Dioxane
8260C	5035	Solid	2,2-Dichloropropane
8260C	5035	Solid	2-Butanone (MEK)
8260C	5035	Solid	2-Chlorotoluene
8260C	5035	Solid	2-Hexanone (MBK)
8260C	5035	Solid	4-Chlorotoluene
8260C	5035	Solid	4-Isopropyltoluene
8260C	5035	Solid	4-Methyl-2-pentanone (MIBK)
8260C	5035	Solid	Acetone
8260C	5035	Solid	Acrylonitrile
8260C	5035	Solid	Benzene
8260C	5035	Solid	Bromobenzene
8260C	5035	Solid	Bromochloromethane
8260C	5035	Solid	Bromodichloromethane
8260C	5035	Solid	Bromoform
8260C	5035	Solid	Bromomethane
8260C	5035	Solid	Carbon disulfide
8260C	5035	Solid	Carbon tetrachloride
8260C	5035	Solid	Chlorobenzene
8260C	5035	Solid	Chloroethane

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C	5035	Solid	Chloroform
8260C	5035	Solid	Chloromethane
8260C	5035	Solid	cis-1,2-Dichloroethene
8260C	5035	Solid	cis-1,3-Dichloropropene
8260C	5035	Solid	Dibromochloromethane
8260C	5035	Solid	Dibromomethane
8260C	5035	Solid	Dichlorodifluoromethane (Freon 12)
8260C	5035	Solid	di-Isopropyl ether
8260C	5035	Solid	Ethanol
8260C	5035	Solid	Ethyl ether
8260C	5035	Solid	Ethyl tert-butyl ether
8260C	5035	Solid	Ethylbenzene
8260C	5035	Solid	Hexachlorobutadiene
8260C	5035	Solid	Isopropylbenzene
8260C	5035	Solid	m,p-Xylene
8260C	5035	Solid	Methyl tert-butyl ether
8260C	5035	Solid	Methylene Chloride
8260C	5035	Solid	Naphthalene
8260C	5035	Solid	n-Butylbenzene
8260C	5035	Solid	N-Propylbenzene
8260C	5035	Solid	o-Xylene
8260C	5035	Solid	sec-Butylbenzene
8260C	5035	Solid	Styrene
8260C	5035	Solid	Tert-amyl methyl ether
8260C	5035	Solid	tert-Butanol
8260C	5035	Solid	tert-Butylbenzene
8260C	5035	Solid	Tetrachloroethene
8260C	5035	Solid	Tetrahydrofuran
8260C	5035	Solid	Toluene
8260C	5035	Solid	trans-1,2-Dichloroethene
8260C	5035	Solid	trans-1,3-Dichloropropene
8260C	5035	Solid	trans-1,4-Dichloro-2-butene
8260C	5035	Solid	Trichloroethene
8260C	5035	Solid	Trichlorofluoromethane (Freon 11)
8260C	5035	Solid	Vinyl chloride
8270D	3510C	Water	1,2,4,5-Tetrachlorobenzene
8270D	3510C	Water	1,2,4-Trichlorobenzene
8270D	3510C	Water	1,2-Dichlorobenzene
8270D	3510C	Water	1,3-Dichlorobenzene
8270D	3510C	Water	1,4-Dichlorobenzene
8270D	3510C	Water	1-Methylnaphthalene
8270D	3510C	Water	2,4,5-Trichlorophenol
8270D	3510C	Water	2,4,6-Trichlorophenol
8270D	3510C	Water	2,4-Dichlorophenol
8270D	3510C	Water	2,4-Dimethylphenol
8270D	3510C	Water	2,4-Dinitrophenol
8270D	3510C	Water	2,4-Dinitrotoluene

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270D	3510C	Water	2,6-Dinitrotoluene
8270D	3510C	Water	2-Chloronaphthalene
8270D	3510C	Water	2-Chlorophenol
8270D	3510C	Water	2-Methylnaphthalene
8270D	3510C	Water	2-Methylphenol
8270D	3510C	Water	2-Nitroaniline
8270D	3510C	Water	2-Nitrophenol
8270D	3510C	Water	3 & 4 Methylphenol
8270D	3510C	Water	3,3'-Dichlorobenzidine
8270D	3510C	Water	3-Nitroaniline
8270D	3510C	Water	4,6-Dinitro-2-methylphenol
8270D	3510C	Water	4-Bromophenyl phenyl ether
8270D	3510C	Water	4-Chloro-3-methylphenol
8270D	3510C	Water	4-Chloroaniline
8270D	3510C	Water	4-Chlorophenyl phenyl ether
8270D	3510C	Water	4-Nitroaniline
8270D	3510C	Water	4-Nitrophenol
8270D	3510C	Water	Acenaphthene
8270D	3510C	Water	Acenaphthylene
8270D	3510C	Water	Aniline
8270D	3510C	Water	Anthracene
8270D	3510C	Water	Azobenzene/Diphenyldiazene
8270D	3510C	Water	Benzidine
8270D	3510C	Water	Benzo[a]anthracene
8270D	3510C	Water	Benzo[a]pyrene
8270D	3510C	Water	Benzo[b]fluoranthene
8270D	3510C	Water	Benzo[g,h,i]perylene
8270D	3510C	Water	Benzo[k]fluoranthene
8270D	3510C	Water	Benzoic acid
8270D	3510C	Water	Benzyl alcohol
8270D	3510C	Water	bis (2-chloroisopropyl) ether
8270D	3510C	Water	Bis(2-chloroethoxy)methane
8270D	3510C	Water	Bis(2-chloroethyl)ether
8270D	3510C	Water	Bis(2-ethylhexyl) phthalate
8270D	3510C	Water	Butyl benzyl phthalate
8270D	3510C	Water	Carbazole
8270D	3510C	Water	Chrysene
8270D	3510C	Water	Dibenz(a,h)anthracene
8270D	3510C	Water	Dibenzofuran
8270D	3510C	Water	Diethyl phthalate
8270D	3510C	Water	Dimethyl phthalate
8270D	3510C	Water	Di-n-butyl phthalate
8270D	3510C	Water	Di-n-octyl phthalate
8270D	3510C	Water	Fluoranthene
8270D	3510C	Water	Fluorene
8270D	3510C	Water	Hexachlorobenzene
8270D	3510C	Water	Hexachlorobutadiene

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270D	3510C	Water	Hexachlorocyclopentadiene
8270D	3510C	Water	Hexachloroethane
8270D	3510C	Water	Indeno[1,2,3-cd]pyrene
8270D	3510C	Water	Isophorone
8270D	3510C	Water	Naphthalene
8270D	3510C	Water	Nitrobenzene
8270D	3510C	Water	N-Nitrosodimethylamine
8270D	3510C	Water	N-Nitrosodi-n-propylamine
8270D	3510C	Water	N-Nitrosodiphenylamine
8270D	3510C	Water	Pentachloronitrobenzene
8270D	3510C	Water	Pentachlorophenol
8270D	3510C	Water	Phenanthrene
8270D	3510C	Water	Phenol
8270D	3510C	Water	Pyrene
8270D	3510C	Water	Pyridine
8270D	3546	Solid	1,2,4,5-Tetrachlorobenzene
8270D	3546	Solid	1,2,4-Trichlorobenzene
8270D	3546	Solid	1,2-Dichlorobenzene
8270D	3546	Solid	1,3-Dichlorobenzene
8270D	3546	Solid	1,4-Dichlorobenzene
8270D	3546	Solid	1-Methylnaphthalene
8270D	3546	Solid	2,4,5-Trichlorophenol
8270D	3546	Solid	2,4,6-Trichlorophenol
8270D	3546	Solid	2,4-Dichlorophenol
8270D	3546	Solid	2,4-Dimethylphenol
8270D	3546	Solid	2,4-Dinitrophenol
8270D	3546	Solid	2,4-Dinitrotoluene
8270D	3546	Solid	2,6-Dinitrotoluene
8270D	3546	Solid	2-Chloronaphthalene
8270D	3546	Solid	2-Chlorophenol
8270D	3546	Solid	2-Methylnaphthalene
8270D	3546	Solid	2-Methylphenol
8270D	3546	Solid	2-Nitroaniline
8270D	3546	Solid	2-Nitrophenol
8270D	3546	Solid	3 & 4 Methylphenol
8270D	3546	Solid	3,3'-Dichlorobenzidine
8270D	3546	Solid	3-Nitroaniline
8270D	3546	Solid	4,6-Dinitro-2-methylphenol
8270D	3546	Solid	4-Bromophenyl phenyl ether
8270D	3546	Solid	4-Chloro-3-methylphenol
8270D	3546	Solid	4-Chloroaniline
8270D	3546	Solid	4-Chlorophenyl phenyl ether
8270D	3546	Solid	4-Nitroaniline
8270D	3546	Solid	4-Nitrophenol
8270D	3546	Solid	Acenaphthene
8270D	3546	Solid	Acenaphthylene
8270D	3546	Solid	Aniline

# Accreditation/Certification Summary

Client: Earth Science LLC  
 Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

## Laboratory: Eurofins Environment Testing New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
-----------	---------	-----------------------	-----------------

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270D	3546	Solid	Anthracene
8270D	3546	Solid	Azobenzene/Diphenyldiazene
8270D	3546	Solid	Benzidine
8270D	3546	Solid	Benzo[a]anthracene
8270D	3546	Solid	Benzo[a]pyrene
8270D	3546	Solid	Benzo[b]fluoranthene
8270D	3546	Solid	Benzo[g,h,i]perylene
8270D	3546	Solid	Benzo[k]fluoranthene
8270D	3546	Solid	Benzoic acid
8270D	3546	Solid	Benzyl alcohol
8270D	3546	Solid	bis (2-chloroisopropyl) ether
8270D	3546	Solid	Bis(2-chloroethoxy)methane
8270D	3546	Solid	Bis(2-chloroethyl)ether
8270D	3546	Solid	Bis(2-ethylhexyl) phthalate
8270D	3546	Solid	Butyl benzyl phthalate
8270D	3546	Solid	Carbazole
8270D	3546	Solid	Chrysene
8270D	3546	Solid	Dibenz(a,h)anthracene
8270D	3546	Solid	Dibenzofuran
8270D	3546	Solid	Diethyl phthalate
8270D	3546	Solid	Dimethyl phthalate
8270D	3546	Solid	Di-n-butyl phthalate
8270D	3546	Solid	Di-n-octyl phthalate
8270D	3546	Solid	Fluoranthene
8270D	3546	Solid	Fluorene
8270D	3546	Solid	Hexachlorobenzene
8270D	3546	Solid	Hexachlorobutadiene
8270D	3546	Solid	Hexachlorocyclopentadiene
8270D	3546	Solid	Hexachloroethane
8270D	3546	Solid	Indeno[1,2,3-cd]pyrene
8270D	3546	Solid	Isophorone
8270D	3546	Solid	Naphthalene
8270D	3546	Solid	Nitrobenzene
8270D	3546	Solid	N-Nitrosodimethylamine
8270D	3546	Solid	N-Nitrosodi-n-propylamine
8270D	3546	Solid	N-Nitrosodiphenylamine
8270D	3546	Solid	Pentachloronitrobenzene
8270D	3546	Solid	Pentachlorophenol
8270D	3546	Solid	Phenanthrene
8270D	3546	Solid	Phenol
8270D	3546	Solid	Pyrene
8270D	3546	Solid	Pyridine
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# Method Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ENE
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	ENE
8015D	Gasoline Range Organics (GRO) (GC)	SW846	ENE
8015D	Diesel Range Organics (DRO) (GC)	SW846	ENE
6010D	Metals (ICP)	SW846	ENE
7470A	Mercury (CVAA)	SW846	ENE
7471B	Mercury (CVAA)	SW846	ENE
Moisture	Percent Moisture	EPA	ENE
3005A	Preparation, Total Metals	SW846	ENE
3050B	Preparation, Metals	SW846	ENE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ENE
3546	Microwave Extraction	SW846	ENE
5030C	Purge and Trap	SW846	ENE
5035	Closed System Purge and Trap	SW846	ENE
7470A	Preparation, Mercury	SW846	ENE
7471B	Preparation, Mercury	SW846	ENE
Frozen Preserve	Freezing Samples	None	ENE

#### Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

# Sample Summary

Client: Earth Science LLC  
Project/Site: Mula Group RI Samples

Job ID: 620-1378-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
620-1378-1	B-1-2	Solid	10/05/21 11:10	10/05/21 15:41
620-1378-2	B-2-2	Solid	10/05/21 11:20	10/05/21 15:41
620-1378-3	B-3-2	Solid	10/05/21 11:30	10/05/21 15:41
620-1378-4	B-4-2	Solid	10/05/21 11:40	10/05/21 15:41
620-1378-5	B-5-2	Solid	10/05/21 11:50	10/05/21 15:41
620-1378-6	B-5-GW	Water	10/05/21 14:00	10/05/21 15:41

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New England

# Chain of Custody Record

# Harrisburg

1378 EIM



Environment Testing  
America

620-1378 Chain of Custody

Client Contact: Sean Rakhshani  
 Company: Mite Group  
 Address: 325 Cottage Hill Rd, PA, 17401  
 City: York  
 State, Zip: PA, 17401  
 Phone: 717-880-0131(Tel)  
 Email: mite@homegroup.com  
 Project Name: Mula Group RI Samples  
 Site:

Lab PM: Huntley, Agnes R  
 E-Mail: agnes.huntley@eurofinset.com  
 Phone: #267  
 Carrier Tracking No(s): 620-434-84.1  
 Page: Page 1 of 2  
 Job #: 620

Analysis Requested: 8260C - 8260 Standard List, 8015D PRO, 8270D, 6010D, 7471B, 7470A - Mercury, 6010D - RCRA (ICP), 8260C - 8260 Standard List, TO15 STD - TA-Standard Analyte List

Due Date Requested: 10/14  
 TAT Requested (days): 7 Business Day  
 Compliance Project: Purchase Order not required  
 PO #:   
 WO #:   
 Project #: 62000671  
 SSOW#:   
 Email: seanr@euro-science.com

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (liquid, solid, on-vehicle, etc)
B-1-2-01	10/5	11:10	G	Solid
B-2-2-02	"	11:20	"	Solid
B-3-2-03	"	11:30	"	Solid
B-4-2-04	"	11:40	"	Solid
B-5-2-05	"	11:50	"	Solid
B-5-6W-06	"	2:00pm	"	Water
				Water
				Water

Special Instructions/Note:  
 mg/kg  
 mg/kg  
 mg/kg  
 mg/kg  
 mg/kg  
 mg/L

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:

M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2OAS  
 Q - Na2SO3  
 R - Na2SO4  
 S - H2SO4  
 T - TSP Dodecylsulfate  
 U - Acetone  
 V - NCAAA  
 W - pH 4-5  
 Z - other (specify)

Special Instructions/Note:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: Mitchell Lender Date/Time: 10/5 3:30pm Company: Mula Company  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ Custody Seal No. \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: 9.6/1/4.6 #6



Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: Earth Science LLC

Job Number: 620-1378-1

**Login Number: 1378**

**List Source: Eurofins Environment Testing New England**

**List Number: 1**

**Creator: Makhoul, Elie**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

Eurofins TestAmerica, Burlington  
530 Community Drive  
Suite 11  
South Burlington, VT 05403  
Tel: (802)660-1990

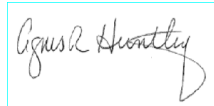
Laboratory Job ID: 200-60460-1

Client Project/Site: Mula Group RI Samples

**For:**

Mula Group  
325 Cottage Hill Rd  
York, Pennsylvania 17401

Attn: Mitch Lenker



Authorized for release by:  
10/15/2021 5:24:15 PM

Agnes Huntley, Project Manager  
(401)372-3482  
[agnes.huntley@eurofinset.com](mailto:agnes.huntley@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Detection Summary . . . . .	4
Client Sample Results . . . . .	8
QC Sample Results . . . . .	21
QC Association Summary . . . . .	26
Lab Chronicle . . . . .	27
Certification Summary . . . . .	28
Method Summary . . . . .	29
Sample Summary . . . . .	30
Chain of Custody . . . . .	31
Receipt Checklists . . . . .	33

# Definitions/Glossary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Qualifiers

### Air - GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Detection Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-1-SG5**

**Lab Sample ID: 200-60460-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	137	H	8.00	ppb v/v	8		TO-15	Total/NA
Acetone	112	H	40.0	ppb v/v	8		TO-15	Total/NA
Carbon disulfide	5.66	H	4.00	ppb v/v	8		TO-15	Total/NA
Ethylbenzene	1.65	H	1.60	ppb v/v	8		TO-15	Total/NA
m-Xylene & p-Xylene	6.40	H	6.40	ppb v/v	8		TO-15	Total/NA
Methylene Chloride	5.27	H	4.00	ppb v/v	8		TO-15	Total/NA
o-Xylene	4.99	H	1.60	ppb v/v	8		TO-15	Total/NA
Toluene	2.78	H	1.60	ppb v/v	8		TO-15	Total/NA
Trichloroethene	8.48	H	1.60	ppb v/v	8		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	403	H	23.6	ug/m3	8		TO-15	Total/NA
Acetone	266	H	95.0	ug/m3	8		TO-15	Total/NA
Carbon disulfide	17.6	H	12.5	ug/m3	8		TO-15	Total/NA
Ethylbenzene	7.17	H	6.95	ug/m3	8		TO-15	Total/NA
m-Xylene & p-Xylene	27.8	H	27.8	ug/m3	8		TO-15	Total/NA
Methylene Chloride	18.3	H	13.9	ug/m3	8		TO-15	Total/NA
o-Xylene	21.7	H	6.95	ug/m3	8		TO-15	Total/NA
Toluene	10.5	H	6.03	ug/m3	8		TO-15	Total/NA
Trichloroethene	45.6	H	8.60	ug/m3	8		TO-15	Total/NA

**Client Sample ID: B-2-SG5**

**Lab Sample ID: 200-60460-2**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.256	H	0.200	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.87	H	1.00	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.87	H	0.500	ppb v/v	1		TO-15	Total/NA
Acetone	31.0	H	5.00	ppb v/v	1		TO-15	Total/NA
Benzene	0.773	H	0.200	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	5.14	H	0.500	ppb v/v	1		TO-15	Total/NA
Cyclohexane	2.83	H	0.500	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	4.06	H	0.200	ppb v/v	1		TO-15	Total/NA
Hexane	1.01	H	0.800	ppb v/v	1		TO-15	Total/NA
m-Xylene & p-Xylene	18.1	H	0.800	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	4.89	H	0.500	ppb v/v	1		TO-15	Total/NA
o-Xylene	15.9	H	0.200	ppb v/v	1		TO-15	Total/NA
Styrene	0.337	H	0.200	ppb v/v	1		TO-15	Total/NA
Toluene	3.88	H	0.200	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.213	H	0.200	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.462	H	0.200	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.26	H	0.983	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	8.48	H	2.95	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	7.66	H	2.05	ug/m3	1		TO-15	Total/NA
Acetone	73.6	H	11.9	ug/m3	1		TO-15	Total/NA
Benzene	2.47	H	0.639	ug/m3	1		TO-15	Total/NA
Carbon disulfide	16.0	H	1.56	ug/m3	1		TO-15	Total/NA
Cyclohexane	9.75	H	1.72	ug/m3	1		TO-15	Total/NA
Ethylbenzene	17.6	H	0.868	ug/m3	1		TO-15	Total/NA
Hexane	3.55	H	2.82	ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	78.8	H	3.47	ug/m3	1		TO-15	Total/NA
Methylene Chloride	17.0	H	1.74	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington



# Detection Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Client Sample ID: B-2-SG5 (Continued)

## Lab Sample ID: 200-60460-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
o-Xylene	69.0	H	0.868	ug/m3	1		TO-15	Total/NA
Styrene	1.44	H	0.852	ug/m3	1		TO-15	Total/NA
Toluene	14.6	H	0.754	ug/m3	1		TO-15	Total/NA
Trichloroethene	1.15	H	1.07	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.60	H	1.12	ug/m3	1		TO-15	Total/NA

## Client Sample ID: B-3-SG5

## Lab Sample ID: 200-60460-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.08	H	0.200	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.65	H	1.00	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.35	H	0.500	ppb v/v	1		TO-15	Total/NA
Acetone	36.0	H	5.00	ppb v/v	1		TO-15	Total/NA
Benzene	1.69	H	0.200	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	7.41	H	0.500	ppb v/v	1		TO-15	Total/NA
Cyclohexane	2.51	H	0.500	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	2.46	H	0.200	ppb v/v	1		TO-15	Total/NA
Hexane	3.64	H	0.800	ppb v/v	1		TO-15	Total/NA
Isopropyl alcohol	15.2	H	5.00	ppb v/v	1		TO-15	Total/NA
m-Xylene & p-Xylene	10.9	H	0.800	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	9.11	H	0.500	ppb v/v	1		TO-15	Total/NA
o-Xylene	9.31	H	0.200	ppb v/v	1		TO-15	Total/NA
Styrene	0.227	H	0.200	ppb v/v	1		TO-15	Total/NA
Toluene	3.99	H	0.200	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	8.54	H	0.200	ppb v/v	1		TO-15	Total/NA
Vinyl acetate	5.18	H	5.00	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	5.87	H	1.09	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	7.83	H	2.95	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	5.54	H	2.05	ug/m3	1		TO-15	Total/NA
Acetone	85.6	H	11.9	ug/m3	1		TO-15	Total/NA
Benzene	5.40	H	0.639	ug/m3	1		TO-15	Total/NA
Carbon disulfide	23.1	H	1.56	ug/m3	1		TO-15	Total/NA
Cyclohexane	8.63	H	1.72	ug/m3	1		TO-15	Total/NA
Ethylbenzene	10.7	H	0.868	ug/m3	1		TO-15	Total/NA
Hexane	12.8	H	2.82	ug/m3	1		TO-15	Total/NA
Isopropyl alcohol	37.2	H	12.3	ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	47.3	H	3.47	ug/m3	1		TO-15	Total/NA
Methylene Chloride	31.6	H	1.74	ug/m3	1		TO-15	Total/NA
o-Xylene	40.4	H	0.868	ug/m3	1		TO-15	Total/NA
Styrene	0.966	H	0.852	ug/m3	1		TO-15	Total/NA
Toluene	15.0	H	0.754	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	48.0	H	1.12	ug/m3	1		TO-15	Total/NA
Vinyl acetate	18.2	H	17.6	ug/m3	1		TO-15	Total/NA

## Client Sample ID: B-4-SG5

## Lab Sample ID: 200-60460-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.74	H	1.00	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.24	H	0.500	ppb v/v	1		TO-15	Total/NA
Acetone	29.9	H	5.00	ppb v/v	1		TO-15	Total/NA
Benzene	0.818	H	0.200	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

# Detection Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Client Sample ID: B-4-SG5 (Continued)

## Lab Sample ID: 200-60460-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	6.01	H	0.500	ppb v/v	1		TO-15	Total/NA
Cyclohexane	1.11	H	0.500	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	2.18	H	0.200	ppb v/v	1		TO-15	Total/NA
Hexane	1.22	H	0.800	ppb v/v	1		TO-15	Total/NA
m-Xylene & p-Xylene	9.51	H	0.800	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	4.24	H	0.500	ppb v/v	1		TO-15	Total/NA
o-Xylene	8.02	H	0.200	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	0.252	H	0.200	ppb v/v	1		TO-15	Total/NA
Toluene	2.89	H	0.200	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.823	H	0.200	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	8.09	H	2.95	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	5.09	H	2.05	ug/m3	1		TO-15	Total/NA
Acetone	70.9	H	11.9	ug/m3	1		TO-15	Total/NA
Benzene	2.61	H	0.639	ug/m3	1		TO-15	Total/NA
Carbon disulfide	18.7	H	1.56	ug/m3	1		TO-15	Total/NA
Cyclohexane	3.81	H	1.72	ug/m3	1		TO-15	Total/NA
Ethylbenzene	9.46	H	0.868	ug/m3	1		TO-15	Total/NA
Hexane	4.30	H	2.82	ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	41.3	H	3.47	ug/m3	1		TO-15	Total/NA
Methylene Chloride	14.7	H	1.74	ug/m3	1		TO-15	Total/NA
o-Xylene	34.8	H	0.868	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	1.71	H	1.36	ug/m3	1		TO-15	Total/NA
Toluene	10.9	H	0.754	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	4.63	H	1.12	ug/m3	1		TO-15	Total/NA

## Client Sample ID: B-5-SG5

## Lab Sample ID: 200-60460-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.569	H	0.200	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	1.17	H	1.00	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	2.02	H	0.500	ppb v/v	1		TO-15	Total/NA
Acetone	22.9	H	5.00	ppb v/v	1		TO-15	Total/NA
Benzene	0.546	H	0.200	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	3.85	H	0.500	ppb v/v	1		TO-15	Total/NA
Cyclohexane	0.650	H	0.500	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	3.65	H	0.200	ppb v/v	1		TO-15	Total/NA
Hexane	0.906	H	0.800	ppb v/v	1		TO-15	Total/NA
m-Xylene & p-Xylene	16.0	H	0.800	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	3.74	H	0.500	ppb v/v	1		TO-15	Total/NA
o-Xylene	13.8	H	0.200	ppb v/v	1		TO-15	Total/NA
Toluene	4.35	H	0.200	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.333	H	0.200	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	3.10	H	1.09	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	3.44	H	2.95	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	8.28	H	2.05	ug/m3	1		TO-15	Total/NA
Acetone	54.5	H	11.9	ug/m3	1		TO-15	Total/NA
Benzene	1.74	H	0.639	ug/m3	1		TO-15	Total/NA
Carbon disulfide	12.0	H	1.56	ug/m3	1		TO-15	Total/NA
Cyclohexane	2.24	H	1.72	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

# Detection Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-5-SG5 (Continued)**

**Lab Sample ID: 200-60460-5**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	15.8	H	0.868	ug/m3	1		TO-15	Total/NA
Hexane	3.19	H	2.82	ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	69.4	H	3.47	ug/m3	1		TO-15	Total/NA
Methylene Chloride	13.0	H	1.74	ug/m3	1		TO-15	Total/NA
o-Xylene	60.1	H	0.868	ug/m3	1		TO-15	Total/NA
Toluene	16.4	H	0.754	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	1.87	H	1.12	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-1-SG5**

**Lab Sample ID: 200-60460-1**

Date Collected: 10/05/21 13:00

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,1,2,2-Tetrachloroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,1,2-Trichloroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,1-Dichloroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,1-Dichloroethene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,2,4-Trichlorobenzene	ND	H	16.0	ppb v/v			10/13/21 14:02	8
1,2,4-Trimethylbenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,2-Dichlorobenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,2-Dichloroethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,2-Dichloropropane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,3,5-Trimethylbenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,3-Dichlorobenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,4-Dichlorobenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
1,4-Dioxane	ND	H	40.0	ppb v/v			10/13/21 14:02	8
<b>2-Butanone (MEK)</b>	<b>137</b>	<b>H</b>	8.00	ppb v/v			10/13/21 14:02	8
4-Methyl-2-pentanone (MIBK)	ND	H	4.00	ppb v/v			10/13/21 14:02	8
<b>Acetone</b>	<b>112</b>	<b>H</b>	40.0	ppb v/v			10/13/21 14:02	8
Benzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Benzyl chloride	ND	H	6.40	ppb v/v			10/13/21 14:02	8
Bromoform	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Bromomethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
<b>Carbon disulfide</b>	<b>5.66</b>	<b>H</b>	4.00	ppb v/v			10/13/21 14:02	8
Carbon tetrachloride	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Chlorobenzene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Dibromochloromethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Chloroethane	ND	H	6.40	ppb v/v			10/13/21 14:02	8
Chloroform	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Chloromethane	ND	H	4.00	ppb v/v			10/13/21 14:02	8
cis-1,2-Dichloroethene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
cis-1,3-Dichloropropene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Cyclohexane	ND	H	4.00	ppb v/v			10/13/21 14:02	8
Bromodichloromethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Dichlorodifluoromethane	ND	H	4.00	ppb v/v			10/13/21 14:02	8
<b>Ethylbenzene</b>	<b>1.65</b>	<b>H</b>	1.60	ppb v/v			10/13/21 14:02	8
1,2-Dibromoethane (EDB)	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Hexachlorobutadiene	ND	H	16.0	ppb v/v			10/13/21 14:02	8
Hexane	ND	H	6.40	ppb v/v			10/13/21 14:02	8
Isopropyl alcohol	ND	H	40.0	ppb v/v			10/13/21 14:02	8
Isopropylbenzene	ND	H	6.40	ppb v/v			10/13/21 14:02	8
<b>m-Xylene &amp; p-Xylene</b>	<b>6.40</b>	<b>H</b>	6.40	ppb v/v			10/13/21 14:02	8
Methyl tert-butyl ether	ND	H	8.00	ppb v/v			10/13/21 14:02	8
<b>Methylene Chloride</b>	<b>5.27</b>	<b>H</b>	4.00	ppb v/v			10/13/21 14:02	8
Naphthalene	ND	H	4.00	ppb v/v			10/13/21 14:02	8
<b>o-Xylene</b>	<b>4.99</b>	<b>H</b>	1.60	ppb v/v			10/13/21 14:02	8
Styrene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Tetrachloroethene	ND	H	1.60	ppb v/v			10/13/21 14:02	8

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-1-SG5**

**Lab Sample ID: 200-60460-1**

Date Collected: 10/05/21 13:00

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND	H	40.0	ppb v/v			10/13/21 14:02	8
<b>Toluene</b>	<b>2.78</b>	<b>H</b>	1.60	ppb v/v			10/13/21 14:02	8
trans-1,2-Dichloroethene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
trans-1,3-Dichloropropene	ND	H	1.60	ppb v/v			10/13/21 14:02	8
<b>Trichloroethene</b>	<b>8.48</b>	<b>H</b>	1.60	ppb v/v			10/13/21 14:02	8
Trichlorofluoromethane	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Vinyl acetate	ND	H	40.0	ppb v/v			10/13/21 14:02	8
Vinyl bromide	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Vinyl chloride	ND	H	1.60	ppb v/v			10/13/21 14:02	8
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	8.73	ug/m3			10/13/21 14:02	8
1,1,1,2-Tetrachloroethane	ND	H	11.0	ug/m3			10/13/21 14:02	8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	12.3	ug/m3			10/13/21 14:02	8
1,1,2-Trichloroethane	ND	H	8.73	ug/m3			10/13/21 14:02	8
1,1-Dichloroethane	ND	H	6.48	ug/m3			10/13/21 14:02	8
1,1-Dichloroethene	ND	H	6.34	ug/m3			10/13/21 14:02	8
1,2,4-Trichlorobenzene	ND	H	119	ug/m3			10/13/21 14:02	8
1,2,4-Trimethylbenzene	ND	H	7.87	ug/m3			10/13/21 14:02	8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	11.2	ug/m3			10/13/21 14:02	8
1,2-Dichlorobenzene	ND	H	9.62	ug/m3			10/13/21 14:02	8
1,2-Dichloroethane	ND	H	6.48	ug/m3			10/13/21 14:02	8
1,2-Dichloropropane	ND	H	7.39	ug/m3			10/13/21 14:02	8
1,3,5-Trimethylbenzene	ND	H	7.87	ug/m3			10/13/21 14:02	8
1,3-Dichlorobenzene	ND	H	9.62	ug/m3			10/13/21 14:02	8
1,4-Dichlorobenzene	ND	H	9.62	ug/m3			10/13/21 14:02	8
1,4-Dioxane	ND	H	144	ug/m3			10/13/21 14:02	8
<b>2-Butanone (MEK)</b>	<b>403</b>	<b>H</b>	23.6	ug/m3			10/13/21 14:02	8
4-Methyl-2-pentanone (MIBK)	ND	H	16.4	ug/m3			10/13/21 14:02	8
<b>Acetone</b>	<b>266</b>	<b>H</b>	95.0	ug/m3			10/13/21 14:02	8
Benzene	ND	H	5.11	ug/m3			10/13/21 14:02	8
Benzyl chloride	ND	H	33.1	ug/m3			10/13/21 14:02	8
Bromoform	ND	H	16.5	ug/m3			10/13/21 14:02	8
Bromomethane	ND	H	6.21	ug/m3			10/13/21 14:02	8
<b>Carbon disulfide</b>	<b>17.6</b>	<b>H</b>	12.5	ug/m3			10/13/21 14:02	8
Carbon tetrachloride	ND	H	10.1	ug/m3			10/13/21 14:02	8
Chlorobenzene	ND	H	7.37	ug/m3			10/13/21 14:02	8
Dibromochloromethane	ND	H	13.6	ug/m3			10/13/21 14:02	8
Chloroethane	ND	H	16.9	ug/m3			10/13/21 14:02	8
Chloroform	ND	H	7.81	ug/m3			10/13/21 14:02	8
Chloromethane	ND	H	8.26	ug/m3			10/13/21 14:02	8
cis-1,2-Dichloroethene	ND	H	6.34	ug/m3			10/13/21 14:02	8
cis-1,3-Dichloropropene	ND	H	7.26	ug/m3			10/13/21 14:02	8
Cyclohexane	ND	H	13.8	ug/m3			10/13/21 14:02	8
Bromodichloromethane	ND	H	10.7	ug/m3			10/13/21 14:02	8
Dichlorodifluoromethane	ND	H	19.8	ug/m3			10/13/21 14:02	8
<b>Ethylbenzene</b>	<b>7.17</b>	<b>H</b>	6.95	ug/m3			10/13/21 14:02	8
1,2-Dibromoethane (EDB)	ND	H	12.3	ug/m3			10/13/21 14:02	8
Hexachlorobutadiene	ND	H	171	ug/m3			10/13/21 14:02	8

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-1-SG5**

**Lab Sample ID: 200-60460-1**

Date Collected: 10/05/21 13:00

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND	H	22.6	ug/m3			10/13/21 14:02	8
Isopropyl alcohol	ND	H	98.3	ug/m3			10/13/21 14:02	8
Isopropylbenzene	ND	H	31.5	ug/m3			10/13/21 14:02	8
<b>m-Xylene &amp; p-Xylene</b>	<b>27.8</b>	<b>H</b>	27.8	ug/m3			10/13/21 14:02	8
Methyl tert-butyl ether	ND	H	28.8	ug/m3			10/13/21 14:02	8
<b>Methylene Chloride</b>	<b>18.3</b>	<b>H</b>	13.9	ug/m3			10/13/21 14:02	8
Naphthalene	ND	H	21.0	ug/m3			10/13/21 14:02	8
<b>o-Xylene</b>	<b>21.7</b>	<b>H</b>	6.95	ug/m3			10/13/21 14:02	8
Styrene	ND	H	6.82	ug/m3			10/13/21 14:02	8
Tetrachloroethene	ND	H	10.9	ug/m3			10/13/21 14:02	8
Tetrahydrofuran	ND	H	118	ug/m3			10/13/21 14:02	8
<b>Toluene</b>	<b>10.5</b>	<b>H</b>	6.03	ug/m3			10/13/21 14:02	8
trans-1,2-Dichloroethene	ND	H	6.34	ug/m3			10/13/21 14:02	8
trans-1,3-Dichloropropene	ND	H	7.26	ug/m3			10/13/21 14:02	8
<b>Trichloroethene</b>	<b>45.6</b>	<b>H</b>	8.60	ug/m3			10/13/21 14:02	8
Trichlorofluoromethane	ND	H	8.99	ug/m3			10/13/21 14:02	8
Vinyl acetate	ND	H	141	ug/m3			10/13/21 14:02	8
Vinyl bromide	ND	H	7.00	ug/m3			10/13/21 14:02	8
Vinyl chloride	ND	H	4.09	ug/m3			10/13/21 14:02	8

**Client Sample ID: B-2-SG5**

**Lab Sample ID: 200-60460-2**

Date Collected: 10/05/21 13:15

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,1,1,2-Tetrachloroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,1,2-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,1-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,1-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,2,4-Trichlorobenzene	ND	H	2.00	ppb v/v			10/13/21 14:55	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.256</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,2-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,2-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,2-Dichloropropane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,3,5-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,3-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,4-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
1,4-Dioxane	ND	H	5.00	ppb v/v			10/13/21 14:55	1
<b>2-Butanone (MEK)</b>	<b>2.87</b>	<b>H</b>	1.00	ppb v/v			10/13/21 14:55	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>1.87</b>	<b>H</b>	0.500	ppb v/v			10/13/21 14:55	1
<b>Acetone</b>	<b>31.0</b>	<b>H</b>	5.00	ppb v/v			10/13/21 14:55	1
<b>Benzene</b>	<b>0.773</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
Benzyl chloride	ND	H	0.800	ppb v/v			10/13/21 14:55	1
Bromoform	ND	H	0.200	ppb v/v			10/13/21 14:55	1

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# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-2-SG5**

**Lab Sample ID: 200-60460-2**

Date Collected: 10/05/21 13:15

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
<b>Carbon disulfide</b>	<b>5.14</b>	<b>H</b>	0.500	ppb v/v			10/13/21 14:55	1
Carbon tetrachloride	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Chlorobenzene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Dibromochloromethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Chloroethane	ND	H	0.800	ppb v/v			10/13/21 14:55	1
Chloroform	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Chloromethane	ND	H	0.500	ppb v/v			10/13/21 14:55	1
cis-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
cis-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
<b>Cyclohexane</b>	<b>2.83</b>	<b>H</b>	0.500	ppb v/v			10/13/21 14:55	1
Bromodichloromethane	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Dichlorodifluoromethane	ND	H	0.500	ppb v/v			10/13/21 14:55	1
<b>Ethylbenzene</b>	<b>4.06</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
1,2-Dibromoethane (EDB)	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Hexachlorobutadiene	ND	H	2.00	ppb v/v			10/13/21 14:55	1
<b>Hexane</b>	<b>1.01</b>	<b>H</b>	0.800	ppb v/v			10/13/21 14:55	1
Isopropyl alcohol	ND	H	5.00	ppb v/v			10/13/21 14:55	1
Isopropylbenzene	ND	H	0.800	ppb v/v			10/13/21 14:55	1
<b>m-Xylene &amp; p-Xylene</b>	<b>18.1</b>	<b>H</b>	0.800	ppb v/v			10/13/21 14:55	1
Methyl tert-butyl ether	ND	H	1.00	ppb v/v			10/13/21 14:55	1
<b>Methylene Chloride</b>	<b>4.89</b>	<b>H</b>	0.500	ppb v/v			10/13/21 14:55	1
Naphthalene	ND	H	0.500	ppb v/v			10/13/21 14:55	1
<b>o-Xylene</b>	<b>15.9</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
<b>Styrene</b>	<b>0.337</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
Tetrachloroethene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Tetrahydrofuran	ND	H	5.00	ppb v/v			10/13/21 14:55	1
<b>Toluene</b>	<b>3.88</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
trans-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
trans-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 14:55	1
<b>Trichloroethene</b>	<b>0.213</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
<b>Trichlorofluoromethane</b>	<b>0.462</b>	<b>H</b>	0.200	ppb v/v			10/13/21 14:55	1
Vinyl acetate	ND	H	5.00	ppb v/v			10/13/21 14:55	1
Vinyl bromide	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Vinyl chloride	ND	H	0.200	ppb v/v			10/13/21 14:55	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 14:55	1
1,1,2,2-Tetrachloroethane	ND	H	1.37	ug/m3			10/13/21 14:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	1.53	ug/m3			10/13/21 14:55	1
1,1,2-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 14:55	1
1,1-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 14:55	1
1,1-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 14:55	1
1,2,4-Trichlorobenzene	ND	H	14.8	ug/m3			10/13/21 14:55	1
<b>1,2,4-Trimethylbenzene</b>	<b>1.26</b>	<b>H</b>	0.983	ug/m3			10/13/21 14:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	1.40	ug/m3			10/13/21 14:55	1
1,2-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 14:55	1
1,2-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 14:55	1
1,2-Dichloropropane	ND	H	0.924	ug/m3			10/13/21 14:55	1

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-2-SG5**

**Lab Sample ID: 200-60460-2**

Date Collected: 10/05/21 13:15

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 14:55	1
1,3-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 14:55	1
1,4-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 14:55	1
1,4-Dioxane	ND	H	18.0	ug/m3			10/13/21 14:55	1
<b>2-Butanone (MEK)</b>	<b>8.48</b>	<b>H</b>	2.95	ug/m3			10/13/21 14:55	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>7.66</b>	<b>H</b>	2.05	ug/m3			10/13/21 14:55	1
<b>Acetone</b>	<b>73.6</b>	<b>H</b>	11.9	ug/m3			10/13/21 14:55	1
<b>Benzene</b>	<b>2.47</b>	<b>H</b>	0.639	ug/m3			10/13/21 14:55	1
Benzyl chloride	ND	H	4.14	ug/m3			10/13/21 14:55	1
Bromoform	ND	H	2.07	ug/m3			10/13/21 14:55	1
Bromomethane	ND	H	0.777	ug/m3			10/13/21 14:55	1
<b>Carbon disulfide</b>	<b>16.0</b>	<b>H</b>	1.56	ug/m3			10/13/21 14:55	1
Carbon tetrachloride	ND	H	1.26	ug/m3			10/13/21 14:55	1
Chlorobenzene	ND	H	0.921	ug/m3			10/13/21 14:55	1
Dibromochloromethane	ND	H	1.70	ug/m3			10/13/21 14:55	1
Chloroethane	ND	H	2.11	ug/m3			10/13/21 14:55	1
Chloroform	ND	H	0.977	ug/m3			10/13/21 14:55	1
Chloromethane	ND	H	1.03	ug/m3			10/13/21 14:55	1
cis-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 14:55	1
cis-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 14:55	1
<b>Cyclohexane</b>	<b>9.75</b>	<b>H</b>	1.72	ug/m3			10/13/21 14:55	1
Bromodichloromethane	ND	H	1.34	ug/m3			10/13/21 14:55	1
Dichlorodifluoromethane	ND	H	2.47	ug/m3			10/13/21 14:55	1
<b>Ethylbenzene</b>	<b>17.6</b>	<b>H</b>	0.868	ug/m3			10/13/21 14:55	1
1,2-Dibromoethane (EDB)	ND	H	1.54	ug/m3			10/13/21 14:55	1
Hexachlorobutadiene	ND	H	21.3	ug/m3			10/13/21 14:55	1
<b>Hexane</b>	<b>3.55</b>	<b>H</b>	2.82	ug/m3			10/13/21 14:55	1
Isopropyl alcohol	ND	H	12.3	ug/m3			10/13/21 14:55	1
Isopropylbenzene	ND	H	3.93	ug/m3			10/13/21 14:55	1
<b>m-Xylene &amp; p-Xylene</b>	<b>78.8</b>	<b>H</b>	3.47	ug/m3			10/13/21 14:55	1
Methyl tert-butyl ether	ND	H	3.61	ug/m3			10/13/21 14:55	1
<b>Methylene Chloride</b>	<b>17.0</b>	<b>H</b>	1.74	ug/m3			10/13/21 14:55	1
Naphthalene	ND	H	2.62	ug/m3			10/13/21 14:55	1
<b>o-Xylene</b>	<b>69.0</b>	<b>H</b>	0.868	ug/m3			10/13/21 14:55	1
<b>Styrene</b>	<b>1.44</b>	<b>H</b>	0.852	ug/m3			10/13/21 14:55	1
Tetrachloroethene	ND	H	1.36	ug/m3			10/13/21 14:55	1
Tetrahydrofuran	ND	H	14.7	ug/m3			10/13/21 14:55	1
<b>Toluene</b>	<b>14.6</b>	<b>H</b>	0.754	ug/m3			10/13/21 14:55	1
trans-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 14:55	1
trans-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 14:55	1
<b>Trichloroethene</b>	<b>1.15</b>	<b>H</b>	1.07	ug/m3			10/13/21 14:55	1
<b>Trichlorofluoromethane</b>	<b>2.60</b>	<b>H</b>	1.12	ug/m3			10/13/21 14:55	1
Vinyl acetate	ND	H	17.6	ug/m3			10/13/21 14:55	1
Vinyl bromide	ND	H	0.875	ug/m3			10/13/21 14:55	1
Vinyl chloride	ND	H	0.511	ug/m3			10/13/21 14:55	1



# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-3-SG5**

**Lab Sample ID: 200-60460-3**

Date Collected: 10/05/21 13:30

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,1-Trichloroethane</b>	<b>1.08</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
1,1,2,2-Tetrachloroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,1,2-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,1-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,1-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,2,4-Trichlorobenzene	ND	H	2.00	ppb v/v			10/13/21 15:47	1
1,2,4-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,2-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,2-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,2-Dichloropropane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,3,5-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,3-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,4-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
1,4-Dioxane	ND	H	5.00	ppb v/v			10/13/21 15:47	1
<b>2-Butanone (MEK)</b>	<b>2.65</b>	<b>H</b>	1.00	ppb v/v			10/13/21 15:47	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>1.35</b>	<b>H</b>	0.500	ppb v/v			10/13/21 15:47	1
<b>Acetone</b>	<b>36.0</b>	<b>H</b>	5.00	ppb v/v			10/13/21 15:47	1
<b>Benzene</b>	<b>1.69</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
Benzyl chloride	ND	H	0.800	ppb v/v			10/13/21 15:47	1
Bromoform	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Bromomethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
<b>Carbon disulfide</b>	<b>7.41</b>	<b>H</b>	0.500	ppb v/v			10/13/21 15:47	1
Carbon tetrachloride	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Chlorobenzene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Dibromochloromethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Chloroethane	ND	H	0.800	ppb v/v			10/13/21 15:47	1
Chloroform	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Chloromethane	ND	H	0.500	ppb v/v			10/13/21 15:47	1
cis-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
cis-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
<b>Cyclohexane</b>	<b>2.51</b>	<b>H</b>	0.500	ppb v/v			10/13/21 15:47	1
Bromodichloromethane	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Dichlorodifluoromethane	ND	H	0.500	ppb v/v			10/13/21 15:47	1
<b>Ethylbenzene</b>	<b>2.46</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
1,2-Dibromoethane (EDB)	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Hexachlorobutadiene	ND	H	2.00	ppb v/v			10/13/21 15:47	1
<b>Hexane</b>	<b>3.64</b>	<b>H</b>	0.800	ppb v/v			10/13/21 15:47	1
<b>Isopropyl alcohol</b>	<b>15.2</b>	<b>H</b>	5.00	ppb v/v			10/13/21 15:47	1
Isopropylbenzene	ND	H	0.800	ppb v/v			10/13/21 15:47	1
<b>m-Xylene &amp; p-Xylene</b>	<b>10.9</b>	<b>H</b>	0.800	ppb v/v			10/13/21 15:47	1
Methyl tert-butyl ether	ND	H	1.00	ppb v/v			10/13/21 15:47	1
<b>Methylene Chloride</b>	<b>9.11</b>	<b>H</b>	0.500	ppb v/v			10/13/21 15:47	1
Naphthalene	ND	H	0.500	ppb v/v			10/13/21 15:47	1
<b>o-Xylene</b>	<b>9.31</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
<b>Styrene</b>	<b>0.227</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
Tetrachloroethene	ND	H	0.200	ppb v/v			10/13/21 15:47	1

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# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-3-SG5**

**Lab Sample ID: 200-60460-3**

Date Collected: 10/05/21 13:30

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND	H	5.00	ppb v/v			10/13/21 15:47	1
<b>Toluene</b>	<b>3.99</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
trans-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
trans-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Trichloroethene	ND	H	0.200	ppb v/v			10/13/21 15:47	1
<b>Trichlorofluoromethane</b>	<b>8.54</b>	<b>H</b>	0.200	ppb v/v			10/13/21 15:47	1
<b>Vinyl acetate</b>	<b>5.18</b>	<b>H</b>	5.00	ppb v/v			10/13/21 15:47	1
Vinyl bromide	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Vinyl chloride	ND	H	0.200	ppb v/v			10/13/21 15:47	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,1-Trichloroethane</b>	<b>5.87</b>	<b>H</b>	1.09	ug/m3			10/13/21 15:47	1
1,1,1,2-Tetrachloroethane	ND	H	1.37	ug/m3			10/13/21 15:47	1
1,1,2-Trichloro-1,1,2,2-trifluoroethane	ND	H	1.53	ug/m3			10/13/21 15:47	1
1,1,2-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 15:47	1
1,1-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 15:47	1
1,1-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 15:47	1
1,2,4-Trichlorobenzene	ND	H	14.8	ug/m3			10/13/21 15:47	1
1,2,4-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 15:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	1.40	ug/m3			10/13/21 15:47	1
1,2-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 15:47	1
1,2-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 15:47	1
1,2-Dichloropropane	ND	H	0.924	ug/m3			10/13/21 15:47	1
1,3,5-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 15:47	1
1,3-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 15:47	1
1,4-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 15:47	1
1,4-Dioxane	ND	H	18.0	ug/m3			10/13/21 15:47	1
<b>2-Butanone (MEK)</b>	<b>7.83</b>	<b>H</b>	2.95	ug/m3			10/13/21 15:47	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>5.54</b>	<b>H</b>	2.05	ug/m3			10/13/21 15:47	1
<b>Acetone</b>	<b>85.6</b>	<b>H</b>	11.9	ug/m3			10/13/21 15:47	1
<b>Benzene</b>	<b>5.40</b>	<b>H</b>	0.639	ug/m3			10/13/21 15:47	1
Benzyl chloride	ND	H	4.14	ug/m3			10/13/21 15:47	1
Bromoform	ND	H	2.07	ug/m3			10/13/21 15:47	1
Bromomethane	ND	H	0.777	ug/m3			10/13/21 15:47	1
<b>Carbon disulfide</b>	<b>23.1</b>	<b>H</b>	1.56	ug/m3			10/13/21 15:47	1
Carbon tetrachloride	ND	H	1.26	ug/m3			10/13/21 15:47	1
Chlorobenzene	ND	H	0.921	ug/m3			10/13/21 15:47	1
Dibromochloromethane	ND	H	1.70	ug/m3			10/13/21 15:47	1
Chloroethane	ND	H	2.11	ug/m3			10/13/21 15:47	1
Chloroform	ND	H	0.977	ug/m3			10/13/21 15:47	1
Chloromethane	ND	H	1.03	ug/m3			10/13/21 15:47	1
cis-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 15:47	1
cis-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 15:47	1
<b>Cyclohexane</b>	<b>8.63</b>	<b>H</b>	1.72	ug/m3			10/13/21 15:47	1
Bromodichloromethane	ND	H	1.34	ug/m3			10/13/21 15:47	1
Dichlorodifluoromethane	ND	H	2.47	ug/m3			10/13/21 15:47	1
<b>Ethylbenzene</b>	<b>10.7</b>	<b>H</b>	0.868	ug/m3			10/13/21 15:47	1
1,2-Dibromoethane (EDB)	ND	H	1.54	ug/m3			10/13/21 15:47	1
Hexachlorobutadiene	ND	H	21.3	ug/m3			10/13/21 15:47	1

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-3-SG5**

**Lab Sample ID: 200-60460-3**

Date Collected: 10/05/21 13:30

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	12.8	H	2.82	ug/m3			10/13/21 15:47	1
Isopropyl alcohol	37.2	H	12.3	ug/m3			10/13/21 15:47	1
Isopropylbenzene	ND	H	3.93	ug/m3			10/13/21 15:47	1
m-Xylene & p-Xylene	47.3	H	3.47	ug/m3			10/13/21 15:47	1
Methyl tert-butyl ether	ND	H	3.61	ug/m3			10/13/21 15:47	1
Methylene Chloride	31.6	H	1.74	ug/m3			10/13/21 15:47	1
Naphthalene	ND	H	2.62	ug/m3			10/13/21 15:47	1
o-Xylene	40.4	H	0.868	ug/m3			10/13/21 15:47	1
Styrene	0.966	H	0.852	ug/m3			10/13/21 15:47	1
Tetrachloroethene	ND	H	1.36	ug/m3			10/13/21 15:47	1
Tetrahydrofuran	ND	H	14.7	ug/m3			10/13/21 15:47	1
Toluene	15.0	H	0.754	ug/m3			10/13/21 15:47	1
trans-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 15:47	1
trans-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 15:47	1
Trichloroethene	ND	H	1.07	ug/m3			10/13/21 15:47	1
Trichlorofluoromethane	48.0	H	1.12	ug/m3			10/13/21 15:47	1
Vinyl acetate	18.2	H	17.6	ug/m3			10/13/21 15:47	1
Vinyl bromide	ND	H	0.875	ug/m3			10/13/21 15:47	1
Vinyl chloride	ND	H	0.511	ug/m3			10/13/21 15:47	1

**Client Sample ID: B-4-SG5**

**Lab Sample ID: 200-60460-4**

Date Collected: 10/05/21 13:40

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,1,1,2-Tetrachloroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,1,2-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,1-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,1-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,2,4-Trichlorobenzene	ND	H	2.00	ppb v/v			10/13/21 16:40	1
1,2,4-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,2-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,2-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,2-Dichloropropane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,3,5-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,3-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,4-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
1,4-Dioxane	ND	H	5.00	ppb v/v			10/13/21 16:40	1
2-Butanone (MEK)	2.74	H	1.00	ppb v/v			10/13/21 16:40	1
4-Methyl-2-pentanone (MIBK)	1.24	H	0.500	ppb v/v			10/13/21 16:40	1
Acetone	29.9	H	5.00	ppb v/v			10/13/21 16:40	1
Benzene	0.818	H	0.200	ppb v/v			10/13/21 16:40	1
Benzyl chloride	ND	H	0.800	ppb v/v			10/13/21 16:40	1
Bromoform	ND	H	0.200	ppb v/v			10/13/21 16:40	1

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-4-SG5**

**Lab Sample ID: 200-60460-4**

Date Collected: 10/05/21 13:40

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
<b>Carbon disulfide</b>	<b>6.01</b>	<b>H</b>	0.500	ppb v/v			10/13/21 16:40	1
Carbon tetrachloride	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Chlorobenzene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Dibromochloromethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Chloroethane	ND	H	0.800	ppb v/v			10/13/21 16:40	1
Chloroform	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Chloromethane	ND	H	0.500	ppb v/v			10/13/21 16:40	1
cis-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
cis-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
<b>Cyclohexane</b>	<b>1.11</b>	<b>H</b>	0.500	ppb v/v			10/13/21 16:40	1
Bromodichloromethane	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Dichlorodifluoromethane	ND	H	0.500	ppb v/v			10/13/21 16:40	1
<b>Ethylbenzene</b>	<b>2.18</b>	<b>H</b>	0.200	ppb v/v			10/13/21 16:40	1
1,2-Dibromoethane (EDB)	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Hexachlorobutadiene	ND	H	2.00	ppb v/v			10/13/21 16:40	1
<b>Hexane</b>	<b>1.22</b>	<b>H</b>	0.800	ppb v/v			10/13/21 16:40	1
Isopropyl alcohol	ND	H	5.00	ppb v/v			10/13/21 16:40	1
Isopropylbenzene	ND	H	0.800	ppb v/v			10/13/21 16:40	1
<b>m-Xylene &amp; p-Xylene</b>	<b>9.51</b>	<b>H</b>	0.800	ppb v/v			10/13/21 16:40	1
Methyl tert-butyl ether	ND	H	1.00	ppb v/v			10/13/21 16:40	1
<b>Methylene Chloride</b>	<b>4.24</b>	<b>H</b>	0.500	ppb v/v			10/13/21 16:40	1
Naphthalene	ND	H	0.500	ppb v/v			10/13/21 16:40	1
<b>o-Xylene</b>	<b>8.02</b>	<b>H</b>	0.200	ppb v/v			10/13/21 16:40	1
Styrene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
<b>Tetrachloroethene</b>	<b>0.252</b>	<b>H</b>	0.200	ppb v/v			10/13/21 16:40	1
Tetrahydrofuran	ND	H	5.00	ppb v/v			10/13/21 16:40	1
<b>Toluene</b>	<b>2.89</b>	<b>H</b>	0.200	ppb v/v			10/13/21 16:40	1
trans-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
trans-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Trichloroethene	ND	H	0.200	ppb v/v			10/13/21 16:40	1
<b>Trichlorofluoromethane</b>	<b>0.823</b>	<b>H</b>	0.200	ppb v/v			10/13/21 16:40	1
Vinyl acetate	ND	H	5.00	ppb v/v			10/13/21 16:40	1
Vinyl bromide	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Vinyl chloride	ND	H	0.200	ppb v/v			10/13/21 16:40	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 16:40	1
1,1,2,2-Tetrachloroethane	ND	H	1.37	ug/m3			10/13/21 16:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	1.53	ug/m3			10/13/21 16:40	1
1,1,2-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 16:40	1
1,1-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 16:40	1
1,1-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 16:40	1
1,2,4-Trichlorobenzene	ND	H	14.8	ug/m3			10/13/21 16:40	1
1,2,4-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 16:40	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	1.40	ug/m3			10/13/21 16:40	1
1,2-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 16:40	1
1,2-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 16:40	1
1,2-Dichloropropane	ND	H	0.924	ug/m3			10/13/21 16:40	1

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-4-SG5**

**Lab Sample ID: 200-60460-4**

Date Collected: 10/05/21 13:40

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 16:40	1
1,3-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 16:40	1
1,4-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 16:40	1
1,4-Dioxane	ND	H	18.0	ug/m3			10/13/21 16:40	1
<b>2-Butanone (MEK)</b>	<b>8.09</b>	<b>H</b>	2.95	ug/m3			10/13/21 16:40	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>5.09</b>	<b>H</b>	2.05	ug/m3			10/13/21 16:40	1
<b>Acetone</b>	<b>70.9</b>	<b>H</b>	11.9	ug/m3			10/13/21 16:40	1
<b>Benzene</b>	<b>2.61</b>	<b>H</b>	0.639	ug/m3			10/13/21 16:40	1
Benzyl chloride	ND	H	4.14	ug/m3			10/13/21 16:40	1
Bromoform	ND	H	2.07	ug/m3			10/13/21 16:40	1
Bromomethane	ND	H	0.777	ug/m3			10/13/21 16:40	1
<b>Carbon disulfide</b>	<b>18.7</b>	<b>H</b>	1.56	ug/m3			10/13/21 16:40	1
Carbon tetrachloride	ND	H	1.26	ug/m3			10/13/21 16:40	1
Chlorobenzene	ND	H	0.921	ug/m3			10/13/21 16:40	1
Dibromochloromethane	ND	H	1.70	ug/m3			10/13/21 16:40	1
Chloroethane	ND	H	2.11	ug/m3			10/13/21 16:40	1
Chloroform	ND	H	0.977	ug/m3			10/13/21 16:40	1
Chloromethane	ND	H	1.03	ug/m3			10/13/21 16:40	1
cis-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 16:40	1
cis-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 16:40	1
<b>Cyclohexane</b>	<b>3.81</b>	<b>H</b>	1.72	ug/m3			10/13/21 16:40	1
Bromodichloromethane	ND	H	1.34	ug/m3			10/13/21 16:40	1
Dichlorodifluoromethane	ND	H	2.47	ug/m3			10/13/21 16:40	1
<b>Ethylbenzene</b>	<b>9.46</b>	<b>H</b>	0.868	ug/m3			10/13/21 16:40	1
1,2-Dibromoethane (EDB)	ND	H	1.54	ug/m3			10/13/21 16:40	1
Hexachlorobutadiene	ND	H	21.3	ug/m3			10/13/21 16:40	1
<b>Hexane</b>	<b>4.30</b>	<b>H</b>	2.82	ug/m3			10/13/21 16:40	1
Isopropyl alcohol	ND	H	12.3	ug/m3			10/13/21 16:40	1
Isopropylbenzene	ND	H	3.93	ug/m3			10/13/21 16:40	1
<b>m-Xylene &amp; p-Xylene</b>	<b>41.3</b>	<b>H</b>	3.47	ug/m3			10/13/21 16:40	1
Methyl tert-butyl ether	ND	H	3.61	ug/m3			10/13/21 16:40	1
<b>Methylene Chloride</b>	<b>14.7</b>	<b>H</b>	1.74	ug/m3			10/13/21 16:40	1
Naphthalene	ND	H	2.62	ug/m3			10/13/21 16:40	1
<b>o-Xylene</b>	<b>34.8</b>	<b>H</b>	0.868	ug/m3			10/13/21 16:40	1
Styrene	ND	H	0.852	ug/m3			10/13/21 16:40	1
<b>Tetrachloroethene</b>	<b>1.71</b>	<b>H</b>	1.36	ug/m3			10/13/21 16:40	1
Tetrahydrofuran	ND	H	14.7	ug/m3			10/13/21 16:40	1
<b>Toluene</b>	<b>10.9</b>	<b>H</b>	0.754	ug/m3			10/13/21 16:40	1
trans-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 16:40	1
trans-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 16:40	1
Trichloroethene	ND	H	1.07	ug/m3			10/13/21 16:40	1
<b>Trichlorofluoromethane</b>	<b>4.63</b>	<b>H</b>	1.12	ug/m3			10/13/21 16:40	1
Vinyl acetate	ND	H	17.6	ug/m3			10/13/21 16:40	1
Vinyl bromide	ND	H	0.875	ug/m3			10/13/21 16:40	1
Vinyl chloride	ND	H	0.511	ug/m3			10/13/21 16:40	1

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-5-SG5**

**Lab Sample ID: 200-60460-5**

Date Collected: 10/05/21 13:50

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,1-Trichloroethane</b>	<b>0.569</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
1,1,2,2-Tetrachloroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,1,2-Trichloroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,1-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,1-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,2,4-Trichlorobenzene	ND	H	2.00	ppb v/v			10/13/21 17:33	1
1,2,4-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,2-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,2-Dichloroethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,2-Dichloropropane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,3,5-Trimethylbenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,3-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,4-Dichlorobenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
1,4-Dioxane	ND	H	5.00	ppb v/v			10/13/21 17:33	1
<b>2-Butanone (MEK)</b>	<b>1.17</b>	<b>H</b>	1.00	ppb v/v			10/13/21 17:33	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>2.02</b>	<b>H</b>	0.500	ppb v/v			10/13/21 17:33	1
<b>Acetone</b>	<b>22.9</b>	<b>H</b>	5.00	ppb v/v			10/13/21 17:33	1
<b>Benzene</b>	<b>0.546</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
Benzyl chloride	ND	H	0.800	ppb v/v			10/13/21 17:33	1
Bromoform	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Bromomethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
<b>Carbon disulfide</b>	<b>3.85</b>	<b>H</b>	0.500	ppb v/v			10/13/21 17:33	1
Carbon tetrachloride	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Chlorobenzene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Dibromochloromethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Chloroethane	ND	H	0.800	ppb v/v			10/13/21 17:33	1
Chloroform	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Chloromethane	ND	H	0.500	ppb v/v			10/13/21 17:33	1
cis-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
cis-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
<b>Cyclohexane</b>	<b>0.650</b>	<b>H</b>	0.500	ppb v/v			10/13/21 17:33	1
Bromodichloromethane	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Dichlorodifluoromethane	ND	H	0.500	ppb v/v			10/13/21 17:33	1
<b>Ethylbenzene</b>	<b>3.65</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
1,2-Dibromoethane (EDB)	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Hexachlorobutadiene	ND	H	2.00	ppb v/v			10/13/21 17:33	1
<b>Hexane</b>	<b>0.906</b>	<b>H</b>	0.800	ppb v/v			10/13/21 17:33	1
Isopropyl alcohol	ND	H	5.00	ppb v/v			10/13/21 17:33	1
Isopropylbenzene	ND	H	0.800	ppb v/v			10/13/21 17:33	1
<b>m-Xylene &amp; p-Xylene</b>	<b>16.0</b>	<b>H</b>	0.800	ppb v/v			10/13/21 17:33	1
Methyl tert-butyl ether	ND	H	1.00	ppb v/v			10/13/21 17:33	1
<b>Methylene Chloride</b>	<b>3.74</b>	<b>H</b>	0.500	ppb v/v			10/13/21 17:33	1
Naphthalene	ND	H	0.500	ppb v/v			10/13/21 17:33	1
<b>o-Xylene</b>	<b>13.8</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
Styrene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Tetrachloroethene	ND	H	0.200	ppb v/v			10/13/21 17:33	1

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-5-SG5**

**Lab Sample ID: 200-60460-5**

Date Collected: 10/05/21 13:50

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND	H	5.00	ppb v/v			10/13/21 17:33	1
<b>Toluene</b>	<b>4.35</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
trans-1,2-Dichloroethene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
trans-1,3-Dichloropropene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Trichloroethene	ND	H	0.200	ppb v/v			10/13/21 17:33	1
<b>Trichlorofluoromethane</b>	<b>0.333</b>	<b>H</b>	0.200	ppb v/v			10/13/21 17:33	1
Vinyl acetate	ND	H	5.00	ppb v/v			10/13/21 17:33	1
Vinyl bromide	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Vinyl chloride	ND	H	0.200	ppb v/v			10/13/21 17:33	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,1-Trichloroethane</b>	<b>3.10</b>	<b>H</b>	1.09	ug/m3			10/13/21 17:33	1
1,1,1,2-Tetrachloroethane	ND	H	1.37	ug/m3			10/13/21 17:33	1
1,1,2-Trichloro-1,1,2,2-trifluoroethane	ND	H	1.53	ug/m3			10/13/21 17:33	1
1,1,2-Trichloroethane	ND	H	1.09	ug/m3			10/13/21 17:33	1
1,1-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 17:33	1
1,1-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 17:33	1
1,2,4-Trichlorobenzene	ND	H	14.8	ug/m3			10/13/21 17:33	1
1,2,4-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 17:33	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	H	1.40	ug/m3			10/13/21 17:33	1
1,2-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 17:33	1
1,2-Dichloroethane	ND	H	0.809	ug/m3			10/13/21 17:33	1
1,2-Dichloropropane	ND	H	0.924	ug/m3			10/13/21 17:33	1
1,3,5-Trimethylbenzene	ND	H	0.983	ug/m3			10/13/21 17:33	1
1,3-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 17:33	1
1,4-Dichlorobenzene	ND	H	1.20	ug/m3			10/13/21 17:33	1
1,4-Dioxane	ND	H	18.0	ug/m3			10/13/21 17:33	1
<b>2-Butanone (MEK)</b>	<b>3.44</b>	<b>H</b>	2.95	ug/m3			10/13/21 17:33	1
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>8.28</b>	<b>H</b>	2.05	ug/m3			10/13/21 17:33	1
<b>Acetone</b>	<b>54.5</b>	<b>H</b>	11.9	ug/m3			10/13/21 17:33	1
<b>Benzene</b>	<b>1.74</b>	<b>H</b>	0.639	ug/m3			10/13/21 17:33	1
Benzyl chloride	ND	H	4.14	ug/m3			10/13/21 17:33	1
Bromoform	ND	H	2.07	ug/m3			10/13/21 17:33	1
Bromomethane	ND	H	0.777	ug/m3			10/13/21 17:33	1
<b>Carbon disulfide</b>	<b>12.0</b>	<b>H</b>	1.56	ug/m3			10/13/21 17:33	1
Carbon tetrachloride	ND	H	1.26	ug/m3			10/13/21 17:33	1
Chlorobenzene	ND	H	0.921	ug/m3			10/13/21 17:33	1
Dibromochloromethane	ND	H	1.70	ug/m3			10/13/21 17:33	1
Chloroethane	ND	H	2.11	ug/m3			10/13/21 17:33	1
Chloroform	ND	H	0.977	ug/m3			10/13/21 17:33	1
Chloromethane	ND	H	1.03	ug/m3			10/13/21 17:33	1
cis-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 17:33	1
cis-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 17:33	1
<b>Cyclohexane</b>	<b>2.24</b>	<b>H</b>	1.72	ug/m3			10/13/21 17:33	1
Bromodichloromethane	ND	H	1.34	ug/m3			10/13/21 17:33	1
Dichlorodifluoromethane	ND	H	2.47	ug/m3			10/13/21 17:33	1
<b>Ethylbenzene</b>	<b>15.8</b>	<b>H</b>	0.868	ug/m3			10/13/21 17:33	1
1,2-Dibromoethane (EDB)	ND	H	1.54	ug/m3			10/13/21 17:33	1
Hexachlorobutadiene	ND	H	21.3	ug/m3			10/13/21 17:33	1

Eurofins TestAmerica, Burlington

# Client Sample Results

Client: Mula Group  
 Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

**Client Sample ID: B-5-SG5**

**Lab Sample ID: 200-60460-5**

Date Collected: 10/05/21 13:50

Matrix: Air

Date Received: 10/08/21 12:30

Sample Container: Tedlar Bag 1L

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Hexane</b>	<b>3.19</b>	<b>H</b>	2.82	ug/m3			10/13/21 17:33	1
Isopropyl alcohol	ND	H	12.3	ug/m3			10/13/21 17:33	1
Isopropylbenzene	ND	H	3.93	ug/m3			10/13/21 17:33	1
<b>m-Xylene &amp; p-Xylene</b>	<b>69.4</b>	<b>H</b>	3.47	ug/m3			10/13/21 17:33	1
Methyl tert-butyl ether	ND	H	3.61	ug/m3			10/13/21 17:33	1
<b>Methylene Chloride</b>	<b>13.0</b>	<b>H</b>	1.74	ug/m3			10/13/21 17:33	1
Naphthalene	ND	H	2.62	ug/m3			10/13/21 17:33	1
<b>o-Xylene</b>	<b>60.1</b>	<b>H</b>	0.868	ug/m3			10/13/21 17:33	1
Styrene	ND	H	0.852	ug/m3			10/13/21 17:33	1
Tetrachloroethene	ND	H	1.36	ug/m3			10/13/21 17:33	1
Tetrahydrofuran	ND	H	14.7	ug/m3			10/13/21 17:33	1
<b>Toluene</b>	<b>16.4</b>	<b>H</b>	0.754	ug/m3			10/13/21 17:33	1
trans-1,2-Dichloroethene	ND	H	0.793	ug/m3			10/13/21 17:33	1
trans-1,3-Dichloropropene	ND	H	0.908	ug/m3			10/13/21 17:33	1
Trichloroethene	ND	H	1.07	ug/m3			10/13/21 17:33	1
<b>Trichlorofluoromethane</b>	<b>1.87</b>	<b>H</b>	1.12	ug/m3			10/13/21 17:33	1
Vinyl acetate	ND	H	17.6	ug/m3			10/13/21 17:33	1
Vinyl bromide	ND	H	0.875	ug/m3			10/13/21 17:33	1
Vinyl chloride	ND	H	0.511	ug/m3			10/13/21 17:33	1



# QC Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

**Lab Sample ID: MB 200-172558/4**  
**Matrix: Air**  
**Analysis Batch: 172558**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,1,2,2-Tetrachloroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,1,2-Trichloroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,1-Dichloroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,1-Dichloroethene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2,4-Trichlorobenzene	ND		2.00	ppb v/v			10/13/21 10:31	1
1,2,4-Trimethylbenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2-Dichlorobenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2-Dichloroethane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2-Dichloropropane	ND		0.200	ppb v/v			10/13/21 10:31	1
1,3,5-Trimethylbenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,3-Dichlorobenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,4-Dichlorobenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,4-Dioxane	ND		5.00	ppb v/v			10/13/21 10:31	1
2-Butanone (MEK)	ND		1.00	ppb v/v			10/13/21 10:31	1
4-Methyl-2-pentanone (MIBK)	ND		0.500	ppb v/v			10/13/21 10:31	1
Acetone	ND		5.00	ppb v/v			10/13/21 10:31	1
Benzene	ND		0.200	ppb v/v			10/13/21 10:31	1
Benzyl chloride	ND		0.800	ppb v/v			10/13/21 10:31	1
Bromoform	ND		0.200	ppb v/v			10/13/21 10:31	1
Bromomethane	ND		0.200	ppb v/v			10/13/21 10:31	1
Carbon disulfide	ND		0.500	ppb v/v			10/13/21 10:31	1
Carbon tetrachloride	ND		0.200	ppb v/v			10/13/21 10:31	1
Chlorobenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
Dibromochloromethane	ND		0.200	ppb v/v			10/13/21 10:31	1
Chloroethane	ND		0.800	ppb v/v			10/13/21 10:31	1
Chloroform	ND		0.200	ppb v/v			10/13/21 10:31	1
Chloromethane	ND		0.500	ppb v/v			10/13/21 10:31	1
cis-1,2-Dichloroethene	ND		0.200	ppb v/v			10/13/21 10:31	1
cis-1,3-Dichloropropene	ND		0.200	ppb v/v			10/13/21 10:31	1
Cyclohexane	ND		0.500	ppb v/v			10/13/21 10:31	1
Bromodichloromethane	ND		0.200	ppb v/v			10/13/21 10:31	1
Dichlorodifluoromethane	ND		0.500	ppb v/v			10/13/21 10:31	1
Ethylbenzene	ND		0.200	ppb v/v			10/13/21 10:31	1
1,2-Dibromoethane (EDB)	ND		0.200	ppb v/v			10/13/21 10:31	1
Hexachlorobutadiene	ND		2.00	ppb v/v			10/13/21 10:31	1
Hexane	ND		0.800	ppb v/v			10/13/21 10:31	1
Isopropyl alcohol	ND		5.00	ppb v/v			10/13/21 10:31	1
Isopropylbenzene	ND		0.800	ppb v/v			10/13/21 10:31	1
m-Xylene & p-Xylene	ND		0.800	ppb v/v			10/13/21 10:31	1
Methyl tert-butyl ether	ND		1.00	ppb v/v			10/13/21 10:31	1
Methylene Chloride	ND		0.500	ppb v/v			10/13/21 10:31	1
Naphthalene	ND		0.500	ppb v/v			10/13/21 10:31	1
o-Xylene	ND		0.200	ppb v/v			10/13/21 10:31	1
Styrene	ND		0.200	ppb v/v			10/13/21 10:31	1
Tetrachloroethene	ND		0.200	ppb v/v			10/13/21 10:31	1

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# QC Sample Results

Client: Mula Group  
 Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 200-172558/4**  
**Matrix: Air**  
**Analysis Batch: 172558**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		5.00	ppb v/v			10/13/21 10:31	1
Toluene	ND		0.200	ppb v/v			10/13/21 10:31	1
trans-1,2-Dichloroethene	ND		0.200	ppb v/v			10/13/21 10:31	1
trans-1,3-Dichloropropene	ND		0.200	ppb v/v			10/13/21 10:31	1
Trichloroethene	ND		0.200	ppb v/v			10/13/21 10:31	1
Trichlorofluoromethane	ND		0.200	ppb v/v			10/13/21 10:31	1
Vinyl acetate	ND		5.00	ppb v/v			10/13/21 10:31	1
Vinyl bromide	ND		0.200	ppb v/v			10/13/21 10:31	1
Vinyl chloride	ND		0.200	ppb v/v			10/13/21 10:31	1
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.09	ug/m3			10/13/21 10:31	1
1,1,2,2-Tetrachloroethane	ND		1.37	ug/m3			10/13/21 10:31	1
1,1,2-Trichloro-1,1,2,2-trifluoroethane	ND		1.53	ug/m3			10/13/21 10:31	1
1,1,2-Trichloroethane	ND		1.09	ug/m3			10/13/21 10:31	1
1,1-Dichloroethane	ND		0.809	ug/m3			10/13/21 10:31	1
1,1-Dichloroethene	ND		0.793	ug/m3			10/13/21 10:31	1
1,2,4-Trichlorobenzene	ND		14.8	ug/m3			10/13/21 10:31	1
1,2,4-Trimethylbenzene	ND		0.983	ug/m3			10/13/21 10:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.40	ug/m3			10/13/21 10:31	1
1,2-Dichlorobenzene	ND		1.20	ug/m3			10/13/21 10:31	1
1,2-Dichloroethane	ND		0.809	ug/m3			10/13/21 10:31	1
1,2-Dichloropropane	ND		0.924	ug/m3			10/13/21 10:31	1
1,3,5-Trimethylbenzene	ND		0.983	ug/m3			10/13/21 10:31	1
1,3-Dichlorobenzene	ND		1.20	ug/m3			10/13/21 10:31	1
1,4-Dichlorobenzene	ND		1.20	ug/m3			10/13/21 10:31	1
1,4-Dioxane	ND		18.0	ug/m3			10/13/21 10:31	1
2-Butanone (MEK)	ND		2.95	ug/m3			10/13/21 10:31	1
4-Methyl-2-pentanone (MIBK)	ND		2.05	ug/m3			10/13/21 10:31	1
Acetone	ND		11.9	ug/m3			10/13/21 10:31	1
Benzene	ND		0.639	ug/m3			10/13/21 10:31	1
Benzyl chloride	ND		4.14	ug/m3			10/13/21 10:31	1
Bromoform	ND		2.07	ug/m3			10/13/21 10:31	1
Bromomethane	ND		0.777	ug/m3			10/13/21 10:31	1
Carbon disulfide	ND		1.56	ug/m3			10/13/21 10:31	1
Carbon tetrachloride	ND		1.26	ug/m3			10/13/21 10:31	1
Chlorobenzene	ND		0.921	ug/m3			10/13/21 10:31	1
Dibromochloromethane	ND		1.70	ug/m3			10/13/21 10:31	1
Chloroethane	ND		2.11	ug/m3			10/13/21 10:31	1
Chloroform	ND		0.977	ug/m3			10/13/21 10:31	1
Chloromethane	ND		1.03	ug/m3			10/13/21 10:31	1
cis-1,2-Dichloroethene	ND		0.793	ug/m3			10/13/21 10:31	1
cis-1,3-Dichloropropene	ND		0.908	ug/m3			10/13/21 10:31	1
Cyclohexane	ND		1.72	ug/m3			10/13/21 10:31	1
Bromodichloromethane	ND		1.34	ug/m3			10/13/21 10:31	1
Dichlorodifluoromethane	ND		2.47	ug/m3			10/13/21 10:31	1
Ethylbenzene	ND		0.868	ug/m3			10/13/21 10:31	1
1,2-Dibromoethane (EDB)	ND		1.54	ug/m3			10/13/21 10:31	1
Hexachlorobutadiene	ND		21.3	ug/m3			10/13/21 10:31	1

Eurofins TestAmerica, Burlington

# QC Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 200-172558/4**  
**Matrix: Air**  
**Analysis Batch: 172558**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		2.82	ug/m3			10/13/21 10:31	1
Isopropyl alcohol	ND		12.3	ug/m3			10/13/21 10:31	1
Isopropylbenzene	ND		3.93	ug/m3			10/13/21 10:31	1
m-Xylene & p-Xylene	ND		3.47	ug/m3			10/13/21 10:31	1
Methyl tert-butyl ether	ND		3.61	ug/m3			10/13/21 10:31	1
Methylene Chloride	ND		1.74	ug/m3			10/13/21 10:31	1
Naphthalene	ND		2.62	ug/m3			10/13/21 10:31	1
o-Xylene	ND		0.868	ug/m3			10/13/21 10:31	1
Styrene	ND		0.852	ug/m3			10/13/21 10:31	1
Tetrachloroethene	ND		1.36	ug/m3			10/13/21 10:31	1
Tetrahydrofuran	ND		14.7	ug/m3			10/13/21 10:31	1
Toluene	ND		0.754	ug/m3			10/13/21 10:31	1
trans-1,2-Dichloroethene	ND		0.793	ug/m3			10/13/21 10:31	1
trans-1,3-Dichloropropene	ND		0.908	ug/m3			10/13/21 10:31	1
Trichloroethene	ND		1.07	ug/m3			10/13/21 10:31	1
Trichlorofluoromethane	ND		1.12	ug/m3			10/13/21 10:31	1
Vinyl acetate	ND		17.6	ug/m3			10/13/21 10:31	1
Vinyl bromide	ND		0.875	ug/m3			10/13/21 10:31	1
Vinyl chloride	ND		0.511	ug/m3			10/13/21 10:31	1

**Lab Sample ID: LCS 200-172558/3**  
**Matrix: Air**  
**Analysis Batch: 172558**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.3	10.61		ppb v/v		103	72 - 127
1,1,1,2-Tetrachloroethane	10.3	8.948		ppb v/v		86	74 - 126
1,1,1,2-Trichloro-1,1,2,2-trifluoroethane	10.7	9.756		ppb v/v		91	70 - 121
1,1,2-Trichloroethane	10.5	9.861		ppb v/v		94	75 - 126
1,1-Dichloroethane	10.3	8.822		ppb v/v		86	66 - 130
1,1-Dichloroethene	10.2	9.021		ppb v/v		89	68 - 120
1,2,4-Trichlorobenzene	11.0	12.73		ppb v/v		116	50 - 150
1,2,4-Trimethylbenzene	10.4	11.97		ppb v/v		115	71 - 129
1,2-Dichloro-1,1,2,2-tetrafluoroethane	10.6	13.25		ppb v/v		125	71 - 141
1,2-Dichlorobenzene	10.8	12.43		ppb v/v		116	68 - 129
1,2-Dichloroethane	10.5	10.50		ppb v/v		100	68 - 135
1,2-Dichloropropane	10.3	9.587		ppb v/v		93	69 - 128
1,3,5-Trimethylbenzene	10.5	11.15		ppb v/v		106	72 - 126
1,3-Dichlorobenzene	10.2	12.55		ppb v/v		123	69 - 131
1,4-Dichlorobenzene	10.4	12.41		ppb v/v		119	67 - 132
1,4-Dioxane	10.3	10.49		ppb v/v		102	66 - 129
2-Butanone (MEK)	10.4	9.752		ppb v/v		94	72 - 124
4-Methyl-2-pentanone (MIBK)	10.2	9.661		ppb v/v		95	58 - 144
Acetone	10.4	9.336		ppb v/v		90	54 - 154
Benzene	10.4	9.821		ppb v/v		95	73 - 119
Benzyl chloride	10.2	11.83		ppb v/v		116	60 - 136
Bromoform	10.3	10.63		ppb v/v		103	53 - 149

Eurofins TestAmerica, Burlington

# QC Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-172558/3

Matrix: Air

Analysis Batch: 172558

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	10.4	10.39		ppb v/v		100	72 - 124
Carbon disulfide	10.4	9.023		ppb v/v		87	71 - 138
Carbon tetrachloride	10.0	11.68		ppb v/v		116	71 - 133
Chlorobenzene	10.5	10.77		ppb v/v		103	76 - 119
Dibromochloromethane	10.6	9.863		ppb v/v		93	73 - 125
Chloroethane	10.6	9.220		ppb v/v		87	68 - 130
Chloroform	10.3	9.762		ppb v/v		95	73 - 124
Chloromethane	9.94	12.83		ppb v/v		129	56 - 141
cis-1,2-Dichloroethene	10.4	9.262		ppb v/v		89	72 - 121
cis-1,3-Dichloropropene	9.94	10.38		ppb v/v		104	74 - 125
Cyclohexane	10.2	9.770		ppb v/v		96	76 - 124
Bromodichloromethane	10.3	10.65		ppb v/v		104	75 - 127
Dichlorodifluoromethane	10.6	13.42		ppb v/v		127	61 - 142
Ethylbenzene	10.2	10.21		ppb v/v		100	74 - 122
1,2-Dibromoethane (EDB)	10.7	10.56		ppb v/v		99	78 - 122
Hexachlorobutadiene	10.8	13.85		ppb v/v		128	58 - 130
Hexane	10.5	9.625		ppb v/v		92	63 - 138
Isopropyl alcohol	10.2	9.274		ppb v/v		91	53 - 142
Isopropylbenzene	10.5	10.67		ppb v/v		102	73 - 123
m-Xylene & p-Xylene	20.0	22.63		ppb v/v		113	76 - 121
Methyl tert-butyl ether	10.6	9.875		ppb v/v		94	70 - 127
Methylene Chloride	10.2	9.314		ppb v/v		91	59 - 137
Naphthalene	10.5	11.42		ppb v/v		109	50 - 150
o-Xylene	10.4	10.68		ppb v/v		103	73 - 123
Styrene	10.3	11.50		ppb v/v		112	74 - 125
Tetrachloroethene	10.5	10.60		ppb v/v		101	70 - 125
Tetrahydrofuran	9.81	9.387		ppb v/v		96	60 - 149
Toluene	10.2	9.882		ppb v/v		97	75 - 122
trans-1,2-Dichloroethene	10.3	9.306		ppb v/v		90	69 - 137
trans-1,3-Dichloropropene	9.85	10.08		ppb v/v		102	74 - 128
Trichloroethene	10.3	11.02		ppb v/v		107	73 - 122
Trichlorofluoromethane	10.4	10.31		ppb v/v		99	70 - 129
Vinyl acetate	10.1	6.819		ppb v/v		68	59 - 149
Vinyl bromide	10.0	9.850		ppb v/v		98	75 - 125
Vinyl chloride	9.99	12.15		ppb v/v		122	61 - 135
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	56.3	57.90		ug/m3		103	72 - 127
1,1,2,2-Tetrachloroethane	71.0	61.43		ug/m3		86	74 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	81.8	74.77		ug/m3		91	70 - 121
1,1,2-Trichloroethane	57.2	53.81		ug/m3		94	75 - 126
1,1-Dichloroethane	41.6	35.70		ug/m3		86	66 - 130
1,1-Dichloroethene	40.4	35.77		ug/m3		89	68 - 120
1,2,4-Trichlorobenzene	81.5	94.51		ug/m3		116	50 - 150
1,2,4-Trimethylbenzene	51.3	58.87		ug/m3		115	71 - 129
1,2-Dichloro-1,1,2,2-tetrafluoroethane	74.0	92.61		ug/m3		125	71 - 141
1,2-Dichlorobenzene	64.7	74.74		ug/m3		116	68 - 129

Eurofins TestAmerica, Burlington

# QC Sample Results

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-172558/3

Matrix: Air

Analysis Batch: 172558

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	42.3	42.52		ug/m3		100	68 - 135
1,2-Dichloropropane	47.8	44.31		ug/m3		93	69 - 128
1,3,5-Trimethylbenzene	51.6	54.82		ug/m3		106	72 - 126
1,3-Dichlorobenzene	61.1	75.47		ug/m3		123	69 - 131
1,4-Dichlorobenzene	62.5	74.62		ug/m3		119	67 - 132
1,4-Dioxane	37.1	37.79		ug/m3		102	66 - 129
2-Butanone (MEK)	30.5	28.76		ug/m3		94	72 - 124
4-Methyl-2-pentanone (MIBK)	41.7	39.58		ug/m3		95	58 - 144
Acetone	24.8	22.18		ug/m3		90	54 - 154
Benzene	33.2	31.37		ug/m3		95	73 - 119
Benzyl chloride	52.6	61.26		ug/m3		116	60 - 136
Bromoform	106	109.9		ug/m3		103	53 - 149
Bromomethane	40.4	40.36		ug/m3		100	72 - 124
Carbon disulfide	32.3	28.10		ug/m3		87	71 - 138
Carbon tetrachloride	63.2	73.50		ug/m3		116	71 - 133
Chlorobenzene	48.3	49.57		ug/m3		103	76 - 119
Dibromochloromethane	90.3	84.02		ug/m3		93	73 - 125
Chloroethane	27.9	24.33		ug/m3		87	68 - 130
Chloroform	50.4	47.66		ug/m3		95	73 - 124
Chloromethane	20.5	26.49		ug/m3		129	56 - 141
cis-1,2-Dichloroethene	41.1	36.72		ug/m3		89	72 - 121
cis-1,3-Dichloropropene	45.1	47.09		ug/m3		104	74 - 125
Cyclohexane	35.2	33.63		ug/m3		96	76 - 124
Bromodichloromethane	68.9	71.38		ug/m3		104	75 - 127
Dichlorodifluoromethane	52.3	66.37		ug/m3		127	61 - 142
Ethylbenzene	44.4	44.34		ug/m3		100	74 - 122
1,2-Dibromoethane (EDB)	81.9	81.15		ug/m3		99	78 - 122
Hexachlorobutadiene	116	147.8		ug/m3		128	58 - 130
Hexane	36.9	33.92		ug/m3		92	63 - 138
Isopropyl alcohol	25.0	22.80		ug/m3		91	53 - 142
Isopropylbenzene	51.4	52.46		ug/m3		102	73 - 123
m-Xylene & p-Xylene	86.8	98.26		ug/m3		113	76 - 121
Methyl tert-butyl ether	38.1	35.60		ug/m3		94	70 - 127
Methylene Chloride	35.6	32.35		ug/m3		91	59 - 137
Naphthalene	55.0	59.86		ug/m3		109	50 - 150
o-Xylene	45.0	46.39		ug/m3		103	73 - 123
Styrene	43.8	48.98		ug/m3		112	74 - 125
Tetrachloroethene	71.0	71.89		ug/m3		101	70 - 125
Tetrahydrofuran	28.9	27.68		ug/m3		96	60 - 149
Toluene	38.4	37.24		ug/m3		97	75 - 122
trans-1,2-Dichloroethene	40.9	36.90		ug/m3		90	69 - 137
trans-1,3-Dichloropropene	44.7	45.76		ug/m3		102	74 - 128
Trichloroethene	55.3	59.20		ug/m3		107	73 - 122
Trichlorofluoromethane	58.5	57.93		ug/m3		99	70 - 129
Vinyl acetate	35.5	24.01		ug/m3		68	59 - 149
Vinyl bromide	44.0	43.09		ug/m3		98	75 - 125
Vinyl chloride	25.5	31.06		ug/m3		122	61 - 135

Eurofins TestAmerica, Burlington

# QC Association Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Air - GC/MS VOA

### Analysis Batch: 172558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-60460-1	B-1-SG5	Total/NA	Air	TO-15	
200-60460-2	B-2-SG5	Total/NA	Air	TO-15	
200-60460-3	B-3-SG5	Total/NA	Air	TO-15	
200-60460-4	B-4-SG5	Total/NA	Air	TO-15	
200-60460-5	B-5-SG5	Total/NA	Air	TO-15	
MB 200-172558/4	Method Blank	Total/NA	Air	TO-15	
LCS 200-172558/3	Lab Control Sample	Total/NA	Air	TO-15	



# Lab Chronicle

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Client Sample ID: B-1-SG5

Lab Sample ID: 200-60460-1

Date Collected: 10/05/21 13:00

Matrix: Air

Date Received: 10/08/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		8	172558	10/13/21 14:02	A1B	TAL BUR

## Client Sample ID: B-2-SG5

Lab Sample ID: 200-60460-2

Date Collected: 10/05/21 13:15

Matrix: Air

Date Received: 10/08/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	172558	10/13/21 14:55	A1B	TAL BUR

## Client Sample ID: B-3-SG5

Lab Sample ID: 200-60460-3

Date Collected: 10/05/21 13:30

Matrix: Air

Date Received: 10/08/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	172558	10/13/21 15:47	A1B	TAL BUR

## Client Sample ID: B-4-SG5

Lab Sample ID: 200-60460-4

Date Collected: 10/05/21 13:40

Matrix: Air

Date Received: 10/08/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	172558	10/13/21 16:40	A1B	TAL BUR

## Client Sample ID: B-5-SG5

Lab Sample ID: 200-60460-5

Date Collected: 10/05/21 13:50

Matrix: Air

Date Received: 10/08/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	172558	10/13/21 17:33	A1B	TAL BUR

### Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

# Accreditation/Certification Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

## Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2336	02-25-23
Connecticut	State	PH-0751	09-30-21 *
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	05-17-22
Florida	NELAP	E87467	06-30-22
Minnesota	NELAP	050-999-436	12-31-21
New Hampshire	NELAP	2006	12-18-21
New Jersey	NELAP	VT972	06-30-22
New York	NELAP	10391	04-01-22
Pennsylvania	NELAP	68-00489	04-30-22
Rhode Island	State	LAO00298	12-30-21
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00272	10-30-23
Vermont	State	VT4000	02-10-22
Virginia	NELAP	460209	12-14-21
Wisconsin	State	399133350	08-31-22

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Burlington



# Method Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

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Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL BUR

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**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



# Sample Summary

Client: Mula Group  
Project/Site: Mula Group RI Samples

Job ID: 200-60460-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
200-60460-1	B-1-SG5	Air	10/05/21 13:00	10/08/21 12:30
200-60460-2	B-2-SG5	Air	10/05/21 13:15	10/08/21 12:30
200-60460-3	B-3-SG5	Air	10/05/21 13:30	10/08/21 12:30
200-60460-4	B-4-SG5	Air	10/05/21 13:40	10/08/21 12:30
200-60460-5	B-5-SG5	Air	10/05/21 13:50	10/08/21 12:30


- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

646 Camp Ave  
North Kingstown, RI 02852  
Phone: 413-789-9018

**Chain of Custody Record**

**Harrisburg**

#267

<b>Client Information</b>		Sampler:	Lab PM:	COC No:																														
Client Contact: <i>Stan Rakhshean</i>		Huntley, Agnes R	620-434-64.2																															
Company: <i>Earth Sciences LLC</i>		E-Mail: <i>agnes.huntley@eurofinset.com</i>	Page: Page 2 of 2																															
Address: 325 Cottage Hill Rd		State of Origin:	Job #:																															
City: York		<b>Analysis Requested</b>																																
State, Zip: PA, 17401		<table border="1"> <tr><td>8260C - 8260 Standard List</td><td>8260C - 8260 Standard List</td><td>8260C - 8260 Standard List</td><td>8260C - 8260 Standard List</td><td>8260C - 8260 Standard List</td></tr> <tr><td>8015D_DRO, 8270D</td><td>8010D, 7471B</td><td>7470A - Mercury</td><td>6010D - RCRA (ICP)</td><td>8260C - TA-Standard Analyte List</td></tr> </table>			8260C - 8260 Standard List	8260C - 8260 Standard List	8260C - 8260 Standard List	8260C - 8260 Standard List	8260C - 8260 Standard List	8015D_DRO, 8270D	8010D, 7471B	7470A - Mercury	6010D - RCRA (ICP)	8260C - TA-Standard Analyte List																				
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Phone: 717-880-0131(Tel)		<p><b>Preservation Codes:</b></p> <table border="0"> <tr><td>A - HCL</td><td>M - Hexane</td></tr> <tr><td>B - NaOH</td><td>N - None</td></tr> <tr><td>C - Zn Acetate</td><td>O - AsNaO2</td></tr> <tr><td>D - Nitric Acid</td><td>P - Na2O4S</td></tr> <tr><td>E - NaHSO4</td><td>Q - Na2SO3</td></tr> <tr><td>F - MeOH</td><td>R - Na2SO3</td></tr> <tr><td>G - Amchlor</td><td>S - H2SO4</td></tr> <tr><td>H - Ascorbic Acid</td><td>T - TSP Dodecahydrate</td></tr> <tr><td>I - Ice</td><td>U - Acetone</td></tr> <tr><td>J - DI Water</td><td>V - MCAA</td></tr> <tr><td>K - EDTA</td><td>W - pH 4.5</td></tr> <tr><td>L - EDA</td><td>Z - other (specify)</td></tr> </table>			A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2SO3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4.5	L - EDA	Z - other (specify)						
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L - EDA	Z - other (specify)																																	
Other:		Special Instructions/Note:																																
<p><b>Sample Identification</b></p> <table border="1"> <thead> <tr> <th>Sample ID</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=comp, G=grab)</th> <th>Matrix (Water, Solid, Organic, Inorganic, BT=Tissue, A=Air)</th> </tr> </thead> <tbody> <tr><td>B-1-565</td><td>10/5</td><td>1:00</td><td>6</td><td>Air</td></tr> <tr><td>B-2-565</td><td>"</td><td>1:15</td><td>"</td><td>Air</td></tr> <tr><td>B-3-565</td><td>"</td><td>1:30</td><td>"</td><td>Air</td></tr> <tr><td>B-4-565</td><td>"</td><td>1:40</td><td>"</td><td>Air</td></tr> <tr><td>B-5-565</td><td>"</td><td>1:50</td><td>"</td><td>Air</td></tr> </tbody> </table>		Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Organic, Inorganic, BT=Tissue, A=Air)	B-1-565	10/5	1:00	6	Air	B-2-565	"	1:15	"	Air	B-3-565	"	1:30	"	Air	B-4-565	"	1:40	"	Air	B-5-565	"	1:50	"	Air	<p>200-60460 Chain of Custody</p> 		
Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Organic, Inorganic, BT=Tissue, A=Air)																														
B-1-565	10/5	1:00	6	Air																														
B-2-565	"	1:15	"	Air																														
B-3-565	"	1:30	"	Air																														
B-4-565	"	1:40	"	Air																														
B-5-565	"	1:50	"	Air																														
<p><b>Possible Hazard Identification</b></p> <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<p>Special Instructions/QC Requirements:</p> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																
<p>Empty Kit Relinquished by:</p> <p>Relinquished by: <i>Michelle Lender</i></p> <p>Relinquished by:</p> <p>Relinquished by:</p>		<p>Method of Shipment:</p> <p>Date/Time: 10/5/21 15:41</p> <p>Date/Time: 10/8/21 17:30</p> <p>Date/Time:</p>																																
<p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Custody Seal No.:</p>		<p>Company: <i>mmj</i></p> <p>Company: <i>mmj</i></p> <p>Company: <i>mmj</i></p> <p>Cooler Temperature(s) °C and Other Remarks: <i>7.6/1/4.6 #6</i></p>																																



ORIGIN ID: NCOA (413) 426-2915  
PHUC NGUYEN  
EUROFINS SPECTRUM ANALYTICAL  
646 CAMP AVE

SHIP DATE: 05OCT21  
ACTWGT: 15.00 LB  
CAD: 108821262/NET4400

80'01  
99Z8  
10:30  
V

BILL SENDER

NORTH KINGSTOWN, RI 02852  
UNITED STATES US

TO **SAMPLE RECEIVING**  
**TEST AMERICA - BURLINGTON, VT**  
30 COMMUNITY DR  
STE 11  
SOUTH BURLINGTON VT 05403

560.0207781FEAA

REF: (802) 660-1990  
INV:  
PO:

DEPT:



FedEx Express



WED - 06 OCT 10:30A  
PRIORITY OVERNIGHT

TRK# 7748 9032 8263  
0201

05403  
VT-US BTV

**XH BTVA**



FedEx Ship Manager - Print Your Label(s)

10/15/2021

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Login Sample Receipt Checklist

Client: Cash in Advance (New England)

Job Number: 200-60460-1

**Login Number: 60460**

**List Number: 1**

**Creator: Sofio, Michael G**

**List Source: Eurofins TestAmerica, Burlington**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1487222
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

