APPENDIX J 2024 MARINE SAMPLING REPORT

Back River Project: Marine Laydown Area - 2024 Marine Sampling Report

Back River Project, Nunavut

Prepared for:

B2Gold Back River Corp.

Prepared by:

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March 18, 2025

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Executive Summary

The Back River Project (the Project) is a developing gold project that is owned by B2Gold Back River Corp. (B2Gold Nunavut) and lies within the West Kitikmeot region of southwestern Nunavut. The Project consists of two main areas: the Goose Property, which is situated approximately 130 km south-southwest of Bathurst inlet, and the Marine Laydown Area (MLA), which is situated along the western shore of Bathurst Inlet. The MLA is a small, year-round operated camp that is supplied with desalinated seawater and has a barge ramp that is used for offloading materials. Materials are stored on site at the MLA until they are transported to the Goose Property.

B2Gold Nunavut is required to undertake an annual marine monitoring program (MMP) during the life of the Project in accordance with Nunavut Impact Review Board Project Certificate No. 007 Term and Condition 62. Nunami Stantec Limited was contracted by B2Gold Nunavut to conduct annual marine monitoring and produce this Marine Sampling Report.

Two sampling events were conducted in 2024 for the marine monitoring program: in April under ice cover and in August for open-water conditions. Both sampling events consisted of physical oceanography, water quality and phytoplankton sampling at three MLA stations and two reference stations. The August sampling event expanded in scope to include benthic macroinvertebrate and sediment quality sampling which is only conducted every three years. A summary of the results is as follows.

Physical Oceanography

Profiles for temperature, salinity, dissolved oxygen, turbidity, and pH concentration were collected of the water column at the reference and MLA stations. The stratified two-layer water column structure for temperature, salinity and DO for the deeper MLA and reference stations is noticeable in April and is more strongly stratified in August during the open-water season. Overall concentrations were similar between the reference and the MLA stations during both sampling programs. Dissolved oxygen concentrations were consistently above the Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Marine Aquatic Life (MAL) recommended minimum concentration of 8.0 mg/L during both the April and August sampling events.

Water Quality

There were no parameters that exceeded the CCME MAL guidelines in water samples collected for both 2024 sampling events and for either the MLA or the reference stations.

Phytoplankton

Phytoplankton biomass (as Chlorophyll *a*) was collected in triplicate at the MLA stations and reference stations during both the April and August sampling events. Chlorophyll *a* concentrations were higher at station BRP-48 during the April sampling and higher at stations BRP-51 and BRP-46 during the August sampling event. The differences in Chlorophyll *a* concentrations may reflect natural variability across stations.

Sediment Quality

Sediment samples were collected in triplicate at each station during the August 2024 sampling program. There were no exceedances of CCME interim sediment quality guidelines and probable effect levels guidelines at the MLA or the reference stations in any samples collected in 2024.

Benthic Macroinvertebrates

Benthic macroinvertebrate samples were collected in triplicate at each station during the August 2024 sampling program. Bivalves were the dominate species in the shallow stations and polychaete species dominated the deeper stations. Taxa richness across all sampling stations ranged from 11 to 26 species. Evenness index values ranged from low to moderate evenness with 0.14 to 0.42 per sample.

Quality Assurance and Quality Control

Results from the analysis of water and sediment samples collected for the purposes of quality assurance and quality control (QA/QC) indicate the water and sediment data collected are considered representative of the sites' marine water and sediment quality data used for the assessment and comparison to CCME guidelines for the protection of marine aquatic life. QA/QC results indicate that the MLA and reference area samples are representative of the water and sediment being sampled and were not significantly influenced by field or laboratory methodologies.

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Abbreviations

BRP ..... Back River Project
CCME. ..... Canadian Council of Ministers of the Environment
CTD ..... Conductivity, Temperature, Depth
EAU ..... Electronic Aquatic Utility
FR ..... Field Replicate
ISQG ..... interim sediment quality guideline
LSA. ..... Local Study Area
MAL ..... Marine Aquatic Life
MLA. ..... Marine Laydown Area
NIRB. ..... Nunavut Impact Review Board
PEL ..... probable effect level
QA ..... Quality Assurance
QC ..... Quality Control
REF ..... Reference
RPD ..... Relative Percent Difference
RSA. ..... Regional Study Area
WQ ..... Water Quality

Glossary

The Project	The Back River Project
Report	Marine Sampling Report
B2Gold Nunavut	B2Gold Back River Corp.
Nunami Stantec	Nunami Stantec Limited

1.0 Introduction

The Back River Project (the Project) is a developing gold project that is owned and operated by B2Gold Back River Corp. (B2Gold Nunavut) and lies within the West Kitikmeot region of southwestern Nunavut. The Project is located predominantly within the Queen Maud Gulf Watershed and is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet (Kingaok), and 520 km northeast of Yellowknife, Northwest Territories.

The Project is comprised of two main areas: Goose Property, which is situated approximately 130 km south-southwest of Bathurst inlet, and the Marine Laydown Area (MLA), which is situated along the western shore of Bathurst Inlet. Materials and supplies that are brought into the MLA by ship are transported south to the Goose Property via a 160 km ice road in the winter months. The MLA is a camp that operates year-round and is supplied with desalinated seawater for all domestic water uses. The MLA has a barge ramp that extends into the water, Vessels are brought to the ramp for offloading and materials are stored on site at the MLA until they are transported to the Goose Property.

In 2018, a Marine Monitoring Plan (MMP) (Sabina, 2018) was designed to satisfy the requirement of the Nunavut Impact Review Board (NIRB) Project Certificate No. 007 Terms and Conditions 62, which states the following:

"The Proponent shall maintain a marine monitoring program at the Marine Laydown Area to enable identification of potential impacts of the Project on the marine environment and to inform adaptive management actions. The monitoring program shall be in line with the proposed monitoring in the Aquatic Effects Monitoring Program, or as required by applicable regulatory authorities. At a minimum, water sampling should include end of pipe and control area samples, collected on a regular basis to confirm salinity levels of the discharge and the receiving environment."

As outlined in the MMP, physical oceanography, water quality, and phytoplankton sampling are conducted semi-annually, and sediment quality and benthic macroinvertebrates are sampled once every three years. Nunami Stantec Limited was contracted by B2Gold Nunavut in 2022 to conduct semi-annual marine monitoring in accordance with the MMP.

The purpose of this Marine Sampling Report (Report) is to present the results of marine monitoring that was completed in April and August 2024 at the MLA and at reference locations as well as to report on the desalination sampling results.

The April and August 2024 sampling consisted of physical oceanography, water quality and phytoplankton sampling. The August sampling extended to include benthic macroinvertebrate and sediment quality sampling.

1.1 Background Environmental information

Several studies have been conducted to document existing conditions pre-development within the general vicinity of the MLA. Two of these studies (Table 1) include sampling of water and sediment and physical oceanography in the MLA and therefore are relevant to the current monitoring program for MLA stations BRP-46, BRP-48, and BRP-51. Please note that reference stations used in in the two studies listed in Table 1 are not relevant since new reference stations were selected in 2022 specific to the MLA (Stantec 2023).

Table 1 Background Winter Environmental Information

Report Title	Information
BACK RIVER PROJECT 2018 Marine Sampling Report (Sabina, 2018)	Physical oceanography: collected during April 2018 with the use of a YSI.
	Water quality: Samples were collected in April and late September/early October 2018. Water samples were collected from one metre below the surface in the summer and 1 metre below the ice during the winter sampling. Deep water quality samples were collected from the middle of the water column, whereas sampling in 2022 collected water at 1 m from the bottom (Stantec 2023).
	Phytoplankton: samples collected under ice in April 2018.
Back River Project. FEIS Volume 7: Marine Environment (Sabina, 2015)	Physical Oceanography: The FEIS provides a summary of baseline water column profiles that were collected throughout Bathurst inlet during the winter. No samples were taken near the MLA location during winter sampling.
	Water quality: The FEIS provides a summary of baseline water samples that were collected throughout Bathurst inlet during the winter. No samples were taken near the MLA location during winter sampling.
	Phytoplankton: The FEIS provides a summary of baseline phytoplankton samples that were collected throughout Bathurst inlet during the winter. No samples were taken near the MLA location during winter sampling.

2.0 Program Overview

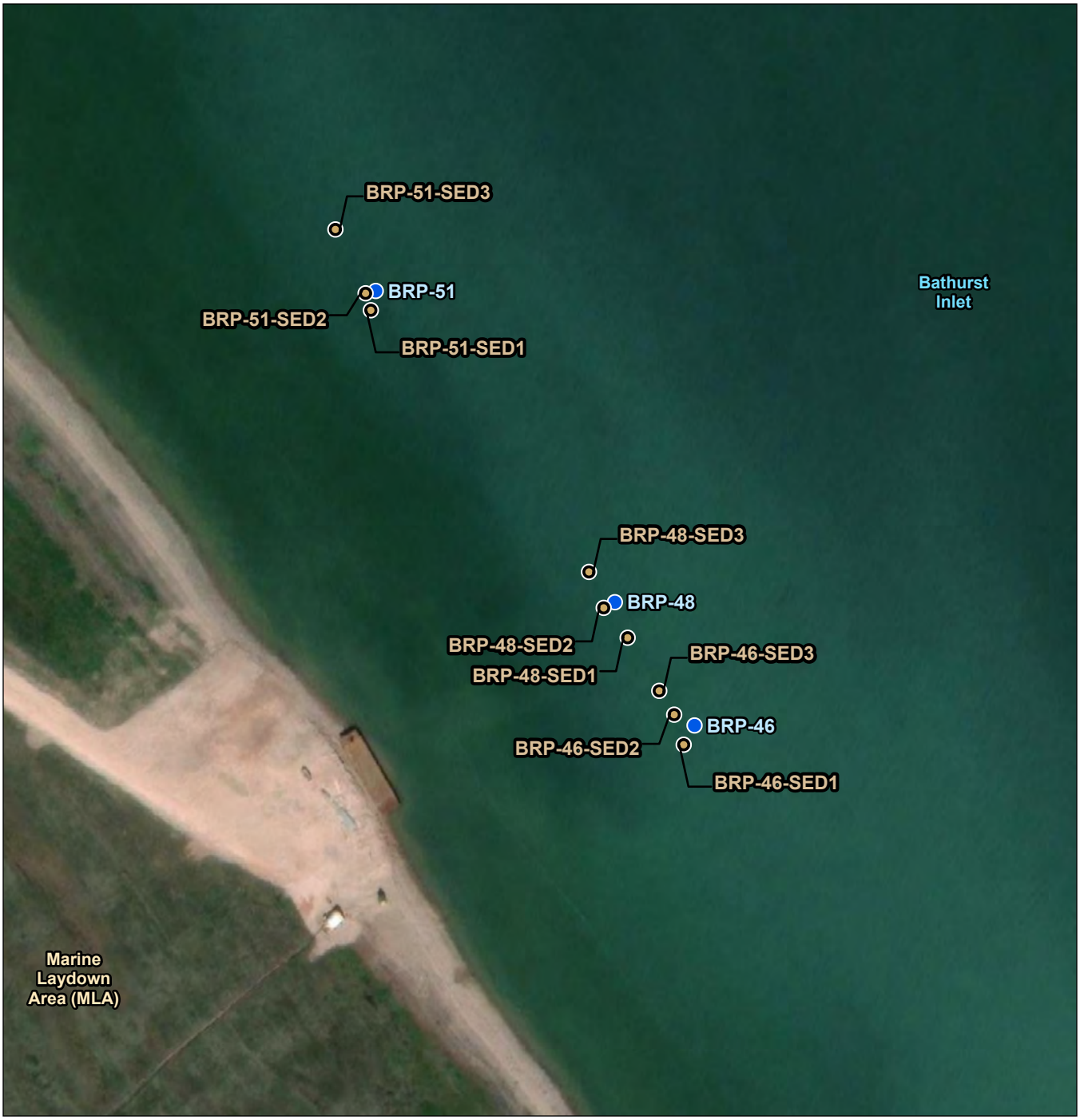
The objective of the 2024 marine monitoring program was to conduct semi-annual sampling in the MLA and at a reference location for physical oceanography, water quality, and phytoplankton in accordance with the MMP. Sediment quality and benthic macroinvertebrate sampling were added to the August 2024 sampling program.

Water samples were screened against the Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Marine Aquatic Life (MAL). Sediment samples were screened against the CCME Interim Sediment Quality Guidelines (ISQG) and (Probable Effect Levels (PEL). Parameters that exceeded CCME guidelines were subject to additional evaluation including comparison to historical records. Exceedances that are outside of historical and reference conditions are subject to further investigation with the threshold for significant effects considered to be twice the standard deviation of mean/median water quality or sediment quality concentrations at the reference site (Sabina 2018).

3.0 Methods

Marine environment sampling was conducted on April 24 and 25, 2024 and August 22 to 26, 2024. Samples were collected from three previously established sampling stations adjacent to the MLA (BRP-46, BRP-48, BRP-51) and two previously established reference stations located approximately 5 kilometres (km) north of the MLA (REF-04, REF-05). These sampling locations are described in Table 2 and shown in Figure 1 and Figure 2. Additional sampling information is provided in Appendix A.

During the April sampling program stations were accessed with the use of snowmobiles from the MLA camp, and a sled trailer was used to transport sampling equipment. An electric auger was used to drill through the ice and a pop-up ice shelter was erected over the hole to create a protected enclosure to sample from. During the August sampling program stations were accessed with the use of a power boat and samples were collected from over the side of the hull. Field data were recorded using Stantec's mobile Electronic Aquatic Utility (EAU) data application and a notebook.



- Sediment Sampling Location
- Water Quality Sampling Location

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Stantec

Project Location
Kiluhiqtuq
Bathurst Inlet, Nunavut

Prepared on 2025-02-07

Client/Project
Nunami Stantec Limited
Sabina Back River Project
Marine Monitoring Services

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Figure No.
1

Title
Marine Laydown Area Sampling Locations, Back River Project

Notes
1. Coordinate System: Canada Albers Equal Area Conic
2. Data Sources: Stantec
3. Background: World Boundaries and Places: Esri, HERE, Garmin, NRCan, World Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Stantec World Topographic Map: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NRCan, Parks Canada, World Hillshade: Esri, USGS

- Sediment Sampling Location
- Water Quality Sampling Location

0 20 40 metres

(At original document size of 8.5x11)
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Stantec

Project Location
Kiluhiqtuq
Bathurst Inlet, Nunavut

Prepared on 2025-02-07

Client/Project
121417593_003
Nunami Stantec Limited
Sabina Back River Project
Marine Monitoring Services

Figure No.
2

Title
Reference Area Sampling Locations, Back River Project

Notes
1. Coordinate System: Canada Albers Equal Area Conic
2. Data Sources: Stantec
3. Background: World Boundaries and Places: Esri, HERE, Garmin, NRCan, World Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Stantec World Topographic Map: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NRCan, Parks Canada, World Hillshade: Esri, USGS

Table 2 Marine Monitoring Program Sampling Locations

Station ID	Description	Target Depth (m)	Purpose	Geographic Location
BRP-46	MLA deep station by the water discharge pipeline	13-15	Monitor marine environment near MLA water discharge/barge offload/bulk fuel transfer	Latitude 66°38'58.46"N Longitude 107°40'47.13"W
BRP-48	MLA deep station by the barge	13-15	Monitor marine environment near MLA water discharge/barge offload/bulk fuel transfer	Latitude 66°39'0.06"N Longitude 107°40'49.99"W
BRP-51	MLA shallow station by tanker fuel offload	4-5	Monitor marine environment near MLA water discharge/barge offload/bulk fuel transfer	Latitude 66°39'4.08"N Longitude 107°40'58.49"W
REF-04	Deep reference station	13-15	Reference station for comparison to deep exposure stations within the MLA.	Latitude 66°41'29.80"N Longitude107°44'45.15"W
REF-05	Shallow reference station	4-5	Reference station for comparison to shallow exposure stations within the MLA.	Latitude 66°41'29.41"N Longitude 107°44'48.83"W

An overview of the sample type, location, and number of samples that were collected during the 2024 sampling program is provided in Table 3.

Table 3 Sampling Type, Sample Locations and Number of Samples

Sample Type	Sample Locations	Number of samples
Physical Oceanography	• MLA stations: BRP-46, BRP-48, BRP-51	• 3 (one profile per location)
	• Reference stations: REF-04, REF-05	• 2 (one profile per location)
Water Quality	• MLA stations: BRP-46, BRP-48, BRP-51	• 5 (1 at shallow station BRP-51; 2 at each deeper station [BRP-46 and BRP-48]: 1 m below ice/water surface and 2 m above bottom)
	• Reference stations: REF-04, REF-05	• 3 (1 at station REF-05; 2 at deeper station REF-04: 1 m below ice/water surface and 2 m above bottom)
	• Quality Control – *Field Dup, FB	• 3 (1 field replicate, 1 field blank and 1 trip blank)
Phytoplankton Chlorophyll *a*	• MLA stations: BRP-46, BRP-48, BRP-51	• 9 (triplicate samples from each of the 3 stations within the MLA sampled 1 m below ice/water surface)
	• Reference stations –REF-04, REF-05	• 6 (triplicate samples at each of the 2 reference locations sampled 1 m below ice)

Table 3 Sampling Type, Sample Locations and Number of Samples

Sample Type	Sample Locations	Number of samples
Sediment Quality[1]	• MLA stations: BRP-46, BRP-48, BRP-51	• 9 (triplicate surficial composite samples from each of the 3 stations within the MLA)
	• Reference stations: REF-04, REF-05	• 6 (triplicate surficial composite samples at each of the 2 reference locations)
	• Quality Control – *Field Dup	• 1 field replicate
Benthic Macroinvertebrate[1]	• MLA stations: BRP-46, BRP-48, BRP-51	• 9 (triplicate surficial samples from each of the 3 stations within the MLA)
	• Reference stations: REF-04, REF-05	• 6 (triplicate surficial samples at each of the 2 reference locations)
*Field Dup is the field replicate sample. FB is the Field Blank sample [1] Only collected during the August 2024 field sampling event		

3.1 Physical Oceanography

Conductivity, temperature, depth (CTD) profiles were collected at all monitoring stations using an Aqua TROLL 600 Multiparameter Sonde lowered to the seafloor and retrieved while logging data.

To collect the CTD profiles, the sonde was lowered just below the water surface (through the hole in the ice in April) until the sensors stabilized and surface water parameters were reading consistently on the handheld display. Once stabilized, the sonde was lowered slowly until the depth sensor stabilized (i.e., stopped increasing). The sonde was then positioned to a starting point 1 m above the sea floor and retrieved to the surface. Data were logged when pulling the sensors up in the water column. The parameters measured during the CTD profiles included conductivity, temperature, depth, salinity, dissolved oxygen, turbidity, and pH.

3.1.1 Secchi Disk

For the August open water sampling event, a Secchi disk was lowered over the shady side of the boat and the depth was recorded at which the observer can no longer see the disk. The disk was lowered further and raised up slowly until it was again visible, and the depth was recorded a second time on the field data sheet. The reappearance depth was used to determine the photic zone depth (the depth to which photosynthesis can occur) using the following formula:

$$Z=4.6/k'$$

where 4.6 is a constant derived from Beer's Law, and k' is the extinction coefficient calculated from the Secchi depth (Ds) using the formula (Poole & Atkins 1929):

$$k'=1.7/Ds$$

Secchi disk sampling was not conducted during April sampling because of ice cover and unreliable results in observing the Secchi disk.

3.2 Water Quality

Water quality samples were collected from each monitoring station. Water quality samples were collected with a Niskin discrete water sampler deployed from the surface of the ice/water. Samples were collected from 1 m below the bottom of the ice in April or water surface in August at each station, and a second sample collected at 2 m above the sea floor at locations deeper than 5 m (i.e., at deeper stations BRP-46, BRP-48, REF-04).

Water from the Niskin sampler was placed into bottles provided by ALS Laboratories, a CALA-accredited analytical laboratory. A total of eleven water samples were collected, including five samples from the three MLA stations (one from shallow station BRP-51, two each from deeper stations BRP-46 and BRP-48), three samples from the two reference stations (one from shallow station REF-05 and two from deep station REF-04), and three quality control samples (one field replicate, one field blank, and one trip blank). Samples were treated with suitable preservatives and were filtered as required. Water samples were placed into a cooler and kept cool but not frozen prior to shipment to ALS Laboratories in Yellowknife, Northwest Territories for analysis.

3.3 Phytoplankton

Phytoplankton biomass as Chlorophyll *a* was collected from 1 m below the bottom of the ice or surface water in August at each monitoring station using a Niskin water sampler. Water samples were collected into opaque 1 litre (L) bottles. Opaque bottles were used to prevent light from progressing the growth of phytoplankton in the sample. Water samples were kept dark and cold (not frozen) in a cooler with ice prior to filtering. On returning to the camp, each sample was vacuum filtered through a 0.45 µm membrane filter under subdued light conditions and the filter retained for analysis. Triplicate samples were collected from all stations.

As each 1 L water sample was filtered, the vacuum pressure was observed and kept below 5 pounds per square inch (PSI). When a few milliliters of sample remained to be filtered, the top of the filter was rinsed with deionized water and filtering continued. At the end of filtration, two to three drops of magnesium carbonate ($MgCO_3$) suspension were added to preserve the sample. The volume of water filtered for each sample was recorded.

With clean tweezers, each filter was carefully removed, placed into a labelled opaque vial and kept frozen. During sample transportation, all Chlorophyll *a* samples were stored in a cooler with ice packs so that they remained frozen for shipment to ALS Laboratories in Yellowknife, NT for analysis.

3.4 Sediment quality

Sediment quality samples were collected from the sea floor with a Petite Ponar sediment grab sampler deployed from the side of the boat. Three composite samples were collected at each monitoring station in parallel with sampling for benthic macroinvertebrates. Approximately 750 mL sediment was collected per composite sample.

Sediment was transferred with a stainless-steel spoon into laboratory-provided sample bottles. A total of 16 sediment samples were collected, including nine from the three MLA stations (3 from each station BRP-51, BRP-46 and BRP-48), six samples from the two reference stations (3 from both stations REF-05 and REF-04), and one quality control duplicate sample. Samples were placed into a cooler with ice packs and kept cool (but not frozen) and in the dark prior to shipment to ALS Laboratories in Yellowknife, NT for analysis.

3.5 Benthic Macroinvertebrates

Sediment for benthic macroinvertebrate samples were collected with the use of a Petite Ponar grab in parallel with the sediment sampling. Benthic macroinvertebrate samples were collected at each monitoring station after sifting the sediment through a 500-µm bucket sieve. The material remaining in the sieve was placed with a stainless-steel spoon into 1-L wide mouth jars. Any residual sample left in the sieve bucket was washed into the jar with a squirt bottle filled with seawater. The benthic samples were preserved in 10% buffered formalin before being sealed. Samples were placed into a cooler with ice packs and kept cool (but not frozen) and in the dark prior to shipment to Stantec's benthic laboratory in Kitchener, Ontario.

In the laboratory, benthic invertebrate sorting was facilitated by staining each sample with a solution of Eosin-B and Biebrich scarlet, which preferentially stains organisms but leaves organic debris and sediment unstained. Excess formalin from each sample was removed prior to sorting using a 500 µm sieve. The screening of material through 3.35 mm and 500 µm sieves separated macroinvertebrates and detritus into a set of density and size-based fractions that were then sorted at 10 X to 40 X magnification using a binocular dissecting microscope. The benthos was systematically sorted from the debris by placing small quantities (no more than 5 mL) onto a gridded petri dish and examined under a stereomicroscope. Each petri dish of sample was scanned twice. Organisms were then identified to the lowest practical taxonomic level using available keys and the most recent publications.

3.6 Quality Assurance and Quality Control

Sampling was conducted following standard sampling practices by trained personnel using suitable sampling equipment. Water samples for laboratory analysis were filtered and preserved as necessary and stored in a cool environment before shipping to the laboratory. To avoid degradation, Chlorophyll *a* samples were collected in triplicate and were kept cold and dark until filtered, after which time they were kept dark and frozen until received by the laboratory. To avoid contamination, sediment samples were handled with only a stainless-steel spoon and put into laboratory provided containers. Benthic samples were preserved in 10% buffered formalin to avoid degradation.

Quality control samples (i.e., field replicates, field blank, and trip blank) were collected for water and sediment samples and represented approximately 10% of all samples collected. The following quality control samples were collected during the 2024 programs:

- Field Replicate: one field replicate sample was collected immediately after a routine field program sample at the same location and using the same equipment and sampling procedures. Field replicates are used to evaluate field precision, analytical precision, and within station variability.

- Field Blank: one field blank was prepared by filling laboratory-supplied containers with laboratory-supplied deionized water in the field at a water quality sampling location. The purpose of field blank samples is to assess the potential of contaminant introduction during field sampling and handling activities.
- Trip Blank: one trip blank consisting of laboratory-supplied deionized water was transported to the site with the remaining sample bottle order and remained unopened during field sampling. The purpose of the trip blank is to assess the potential of contaminant introduction from sample bottles, caps, and preservatives during sample transport, storage, and analysis.

3.7 Data Analysis

Data management and analysis was conducted using Microsoft Excel and ArcGIS Field Maps digital mapping software. Results were interpreted graphically or with reference to summary statistics such as mean and standard deviation. For parameters that had concentrations below the reportable detection limit (RDL), half of the value of the RDL was used for summary statistics. Data were compared to relevant CCME MAL guidelines (CCME, 1999) and, where any exceedances were observed, were compared to reference and/or historical conditions.

Field blank and trip blank samples were assessed by screening sample concentrations against the method detection limits to identify parameters with concentrations greater than five times the detection limit. At five times the detection limit, the analytical precision and accuracy is considered more robust. Measurable parameters that will always produce a value (e.g., pH, conductivity) are generally excluded from this evaluation.

For replicate samples, the precision of the replicate and parent samples was evaluated using relative percent difference (RPD), which is calculated using the following formula:

$$RPD = 100 \times [\ |A - B| / ((A + B) / 2)]$$

Where:

A = Parent sample concentration
B = Replicate sample concentration

RPD calculations were only completed when laboratory concentrations were greater than five times the laboratory (RDL). The calculated RPDs were compared to acceptable variance ranges for the program, as follows:

- RPDs greater than 20% were considered significant.
- RPDs greater than 100% were subjected to professional judgement.

Overall analytical precision was determined based on the cumulative number of exceedances of the above criteria compared to the total number of parameters analyzed. Data were determined to be of high quality if less than 10% of all the parameters analyzed were considered outside the criteria listed above.

4.0 Results and Discussion

4.1 Physical Oceanography

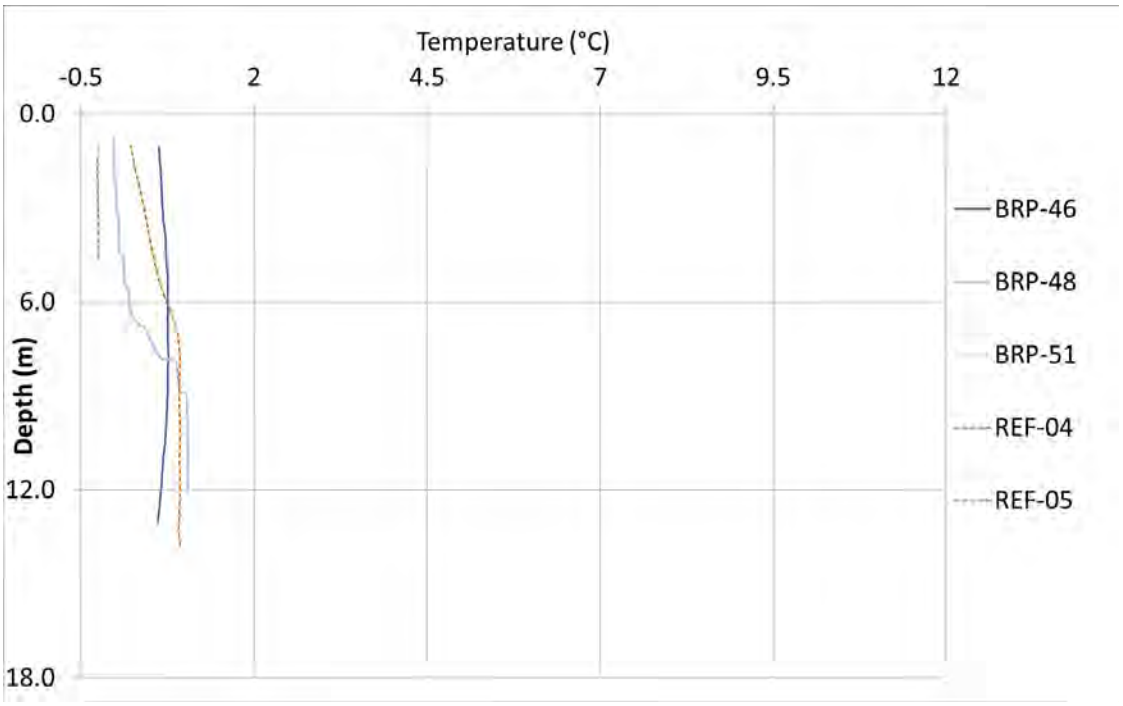
Water column profiling data collected during the April sampling showed relatively constant temperatures at all depths ranging from -0.27 to 1.05 °C. The temperature profiles collected in the August sampling showed that the shallow stations had little variation with less than a 1 °C difference between the top and bottom of the water column. The deep stations had warmer temperatures near the surface ranging from 7.49 to 11.02 °C and decreased near the bottom to 1.01 to 2.23 °C. The August BRP-46 and BRP-51 stations had lower temperatures near the surface water compared to the other stations; this may be a result of these two stations being sampled on the same day which could have been influenced by meteorological weather conditions. The Bathurst Inlet water was less saline near the surface to a depth of about 5 m and increased at deeper depths during both sampling events in 2024. April sampling had slight variation with all profiles ranging between 17.94 and 19.21 practical salinity units (psu). The August sampling event had a higher variation, with all profiles ranging between 17.55 and 28.53 psu. Temperature and salinity profiles from each station monitored in April and August 2024 are presented on Figure 3 and Figure 4, respectively. August 2024 temperature profiles follow a similar trend but were cooler than what was observed in the August 2022 sampling event (Nunami Stantec, 2023). April 2024 temperature profiles are similar in range but are less uniform to what was observed in the April 2023 sampling event (Nunami Stantec, 2024). The range in salinity in 2024 was similar to what was observed in previous sampling events (Nunami Stantec 2023, 2024).

Dissolved oxygen (DO) concentrations were consistently above the CCME MAL recommended minimum concentration of 8.0 mg/L during both the April and August sampling events. DO concentrations were lowest near the bottom and increased steadily towards the surface at deep stations. April concentrations ranged from 10.58 to 11.47 mg/L near the surface and 8.61 to 8.73 mg/L near the bottom, and August concentrations ranged from 9.68 to 10.18 mg/L near the surface and 8.15 to 8.95 mg/L near the bottom. The shallow stations had little variation in dissolved oxygen levels from the surface to the bottom of the station. DO profiles from each station monitored in April and August 2024 are presented on Figure 5 and Figure 6, respectively. The range in DO for August 2024 was slightly different to what was observed in the August 2022 sampling event where August 2022 DO concentrations were lower overall and had higher concentrations near the bottom with lower concentrations near the surface (Nunami Stantec, 2023). The DO ranges for April 2024 are similar to those in April 2023 (Nunami Stantec, 2024).

The pH and turbidity remained relatively constant throughout the water column profiles during both sampling events in 2024, where pH ranged between 7.96 and 8.11 in April and 7.69 to 8.15 in August. The pH profiles are presented in Figure 7 and Figure 8. The pH values in 2024 were similar to what was observed in previous marine sampling events in 2022 and 2023 (Nunami Stantec 2023, 2024). Turbidity concentrations throughout all the profiles collected in August were 0.0 NTU and concentrations across profiles in April ranged from 0.00 to 0.36 NTU with the exception of REF-04, which ranged from 0.02 to 5.20 NTU. The Aqua Troll 600 multimeter used can only accurately measure turbidity concentrations above 0.5 NTU (In-situ, 2024). Laboratory water sample results for April turbidity concentrations had a max value of 0.31 NTU which is below the measuring capability of the Aqua Troll 600 instrument used (In-

situ,2024). It is assumed that the turbidity concentrations in the 2024 April CTD profiles were too low to be measured by the Aqua Troll 600. The April REF-04 turbidity measurements alternated between high and low values suggesting there may have been an issue with the probe while the profile was being recorded. The August 2024 water sample laboratory results had turbidity concentrations above 0.50 NTU for all the deeper stations which may indicate that there was an issue with the turbidity probe during the August sampling event.

A summary of the 2024 physical oceanographic data is presented in Appendix B. The stratified two-layer water column structure for temperature, salinity and DO for the deeper MLA and reference stations is noticeable in April and is more strongly stratified in August during the open-water season. In August this is attributed to the warmer, fresher and more oxygenated top layer above a colder, saltier and lower oxygen bottom layer (Rescan 2013). This stratification is weaker when ice is present in April due to the absence of freshwater inflow and the presence of salt extrusion during ice formation (Rescan 2013).



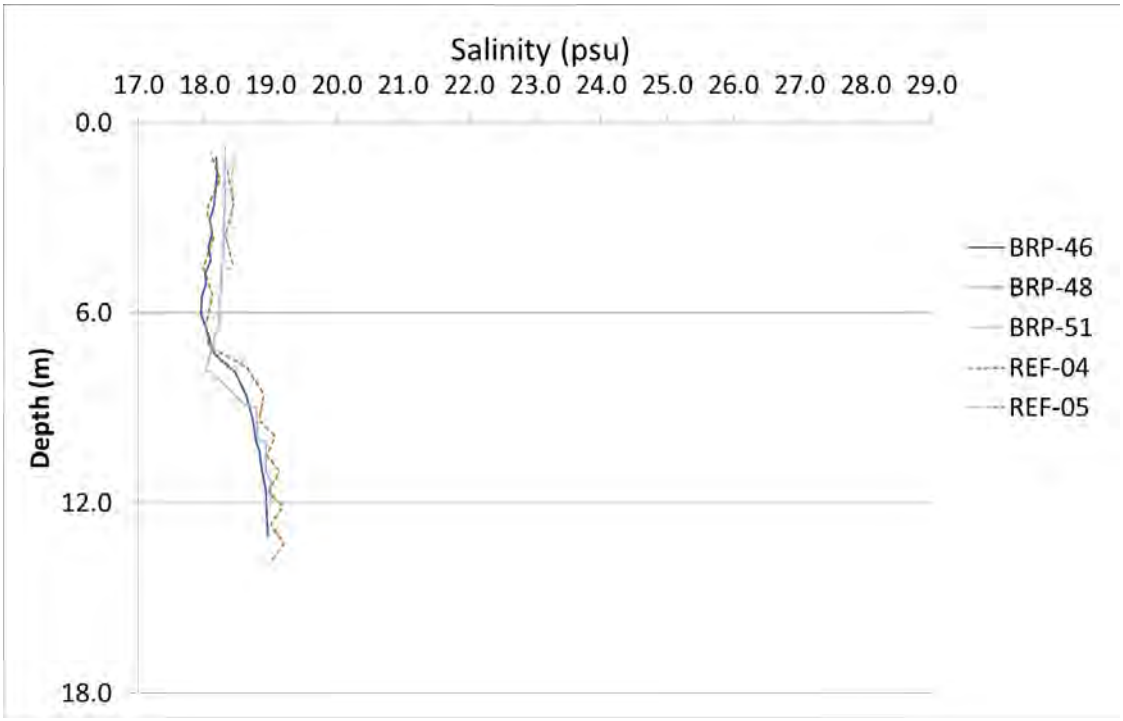
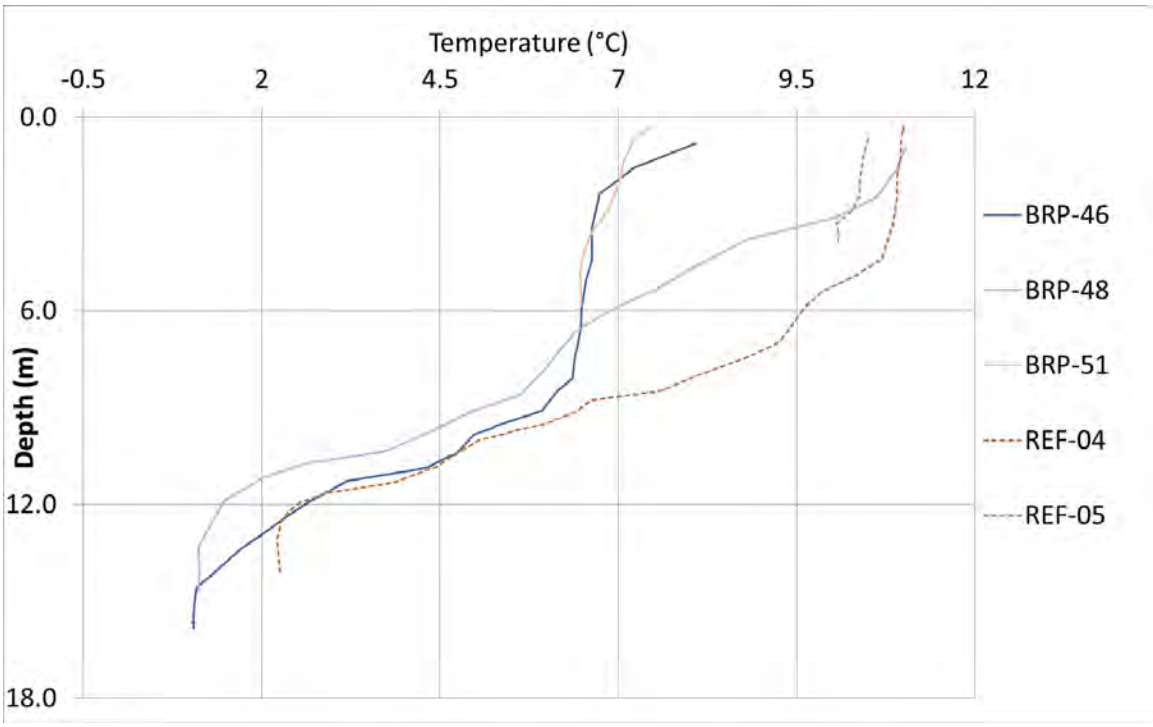


Figure 3 April 2024 Temperature and Salinity Profiles at the MLA and Reference Stations



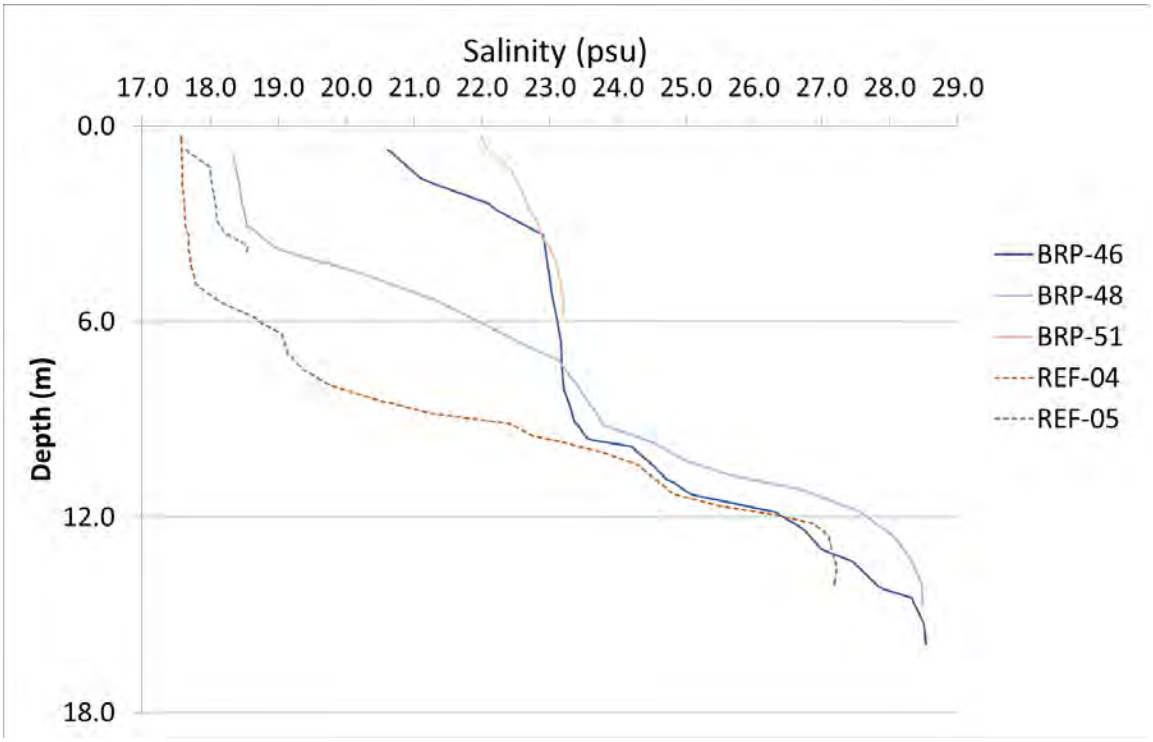
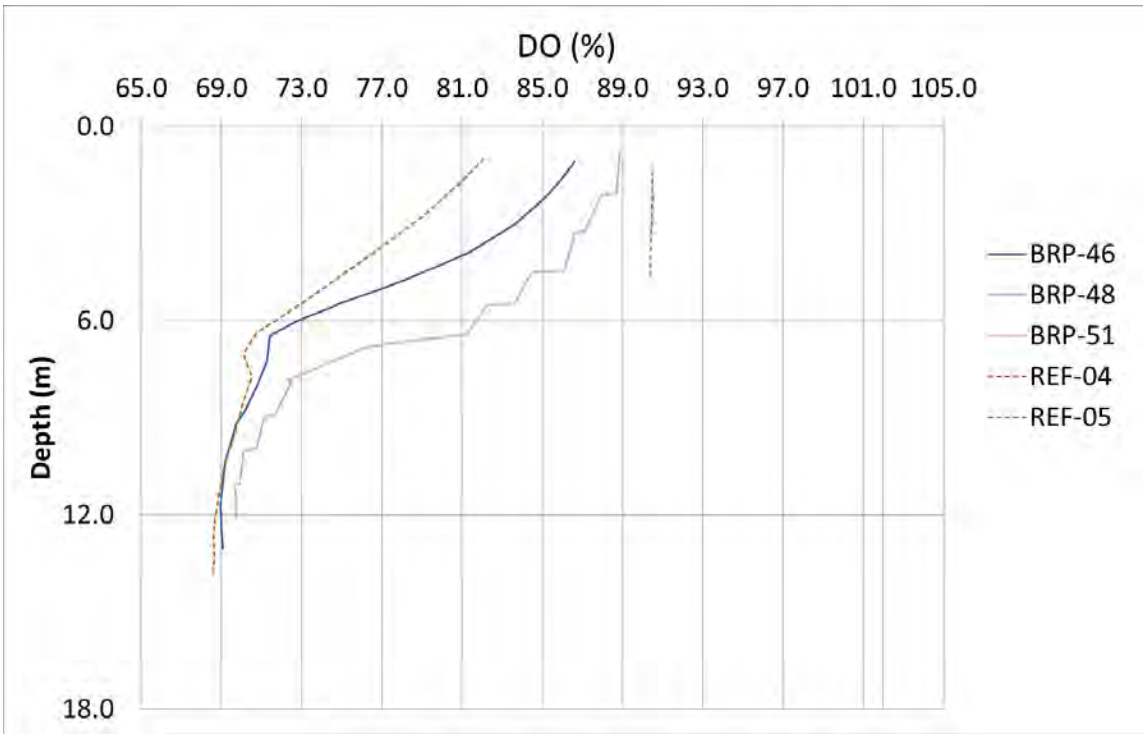


Figure 4 August 2024 Temperature and Salinity Profiles at the MLA and Reference Stations



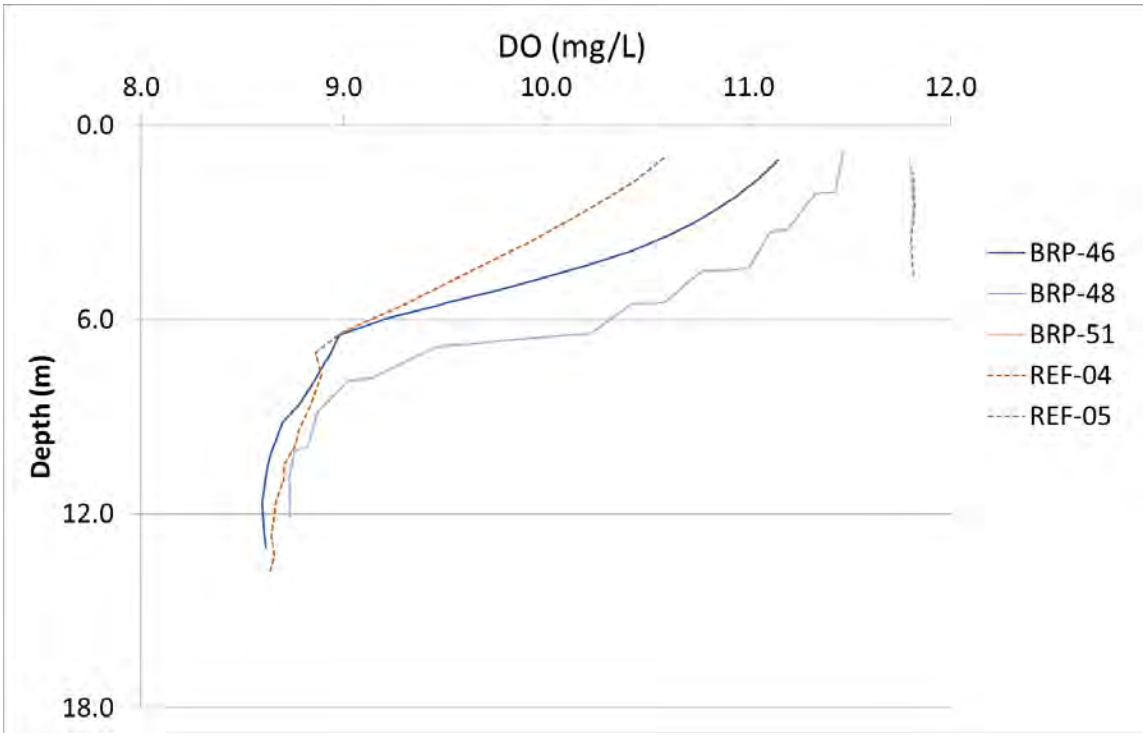


Figure 5 **April 2024 Dissolved Oxygen and Percent Saturation Profiles at the MLA and Reference Stations**

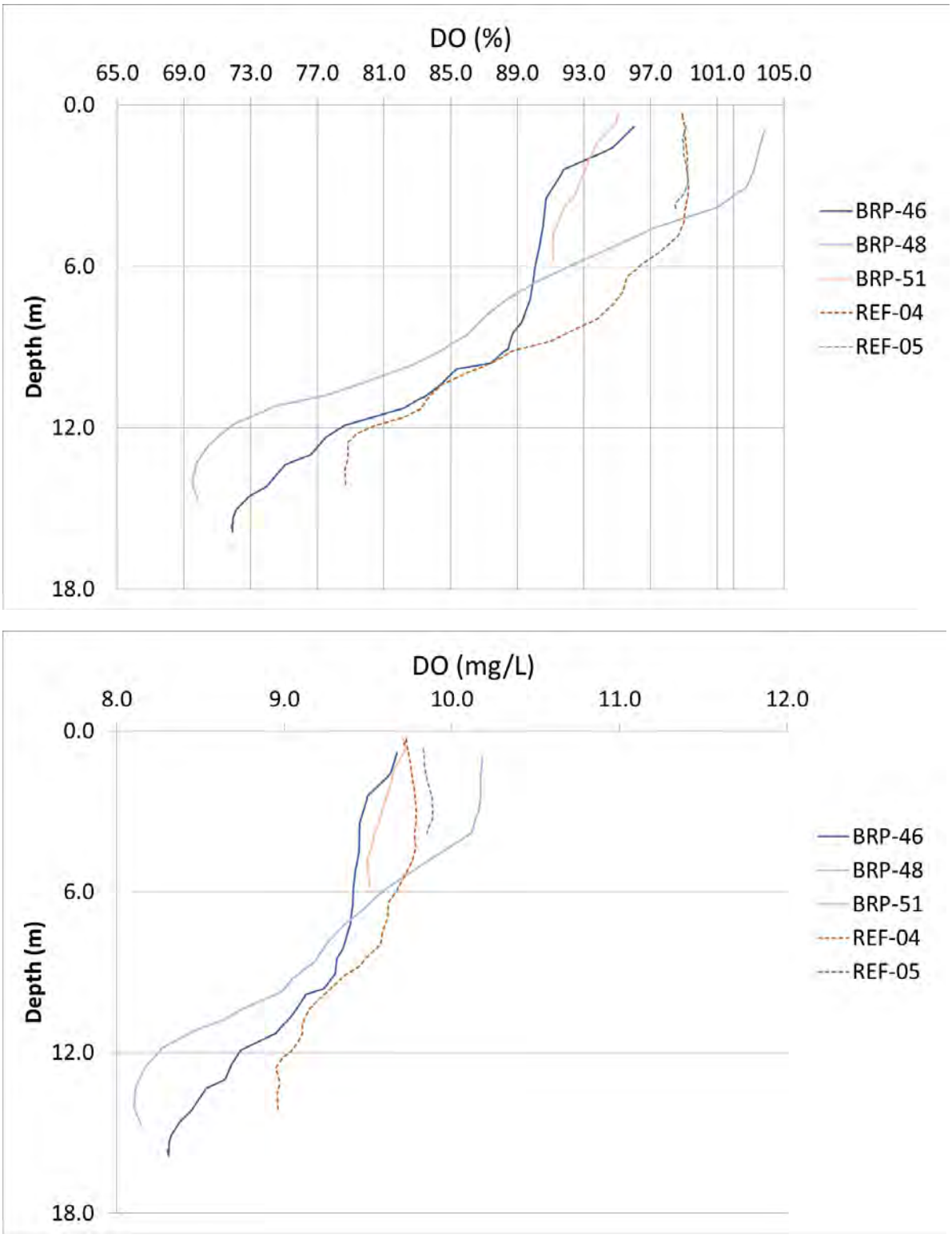


Figure 6 August 2024 Dissolved Oxygen and Percent Saturation Profiles at the MLA and Reference Stations

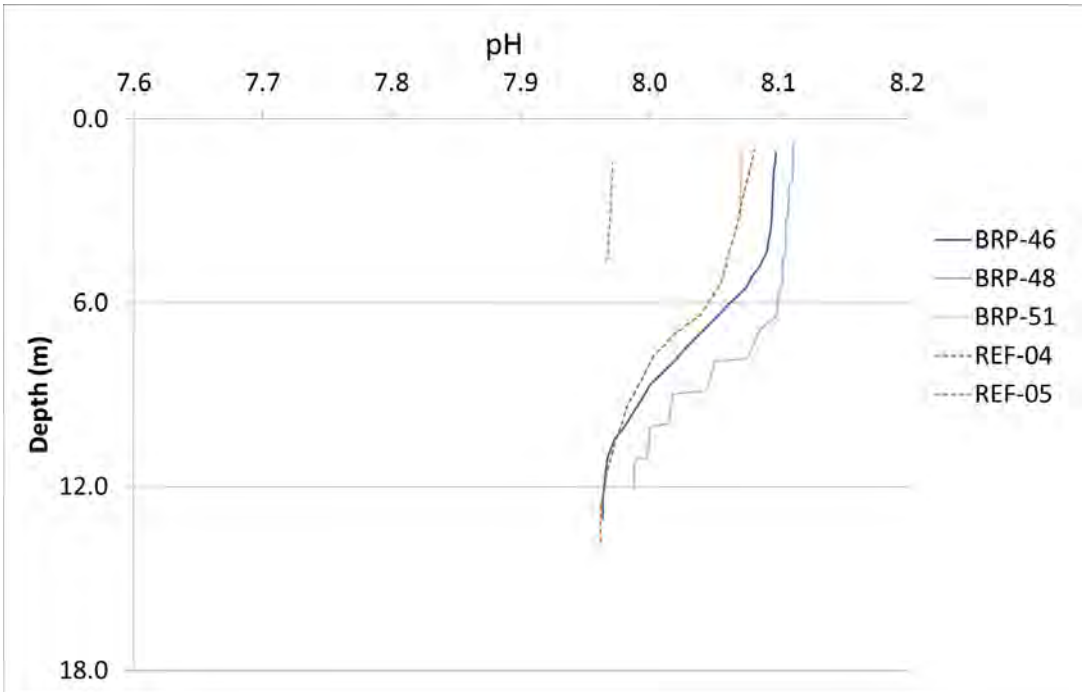


Figure 7 April 2024 Turbidity and pH Profiles at the MLA and Reference Stations

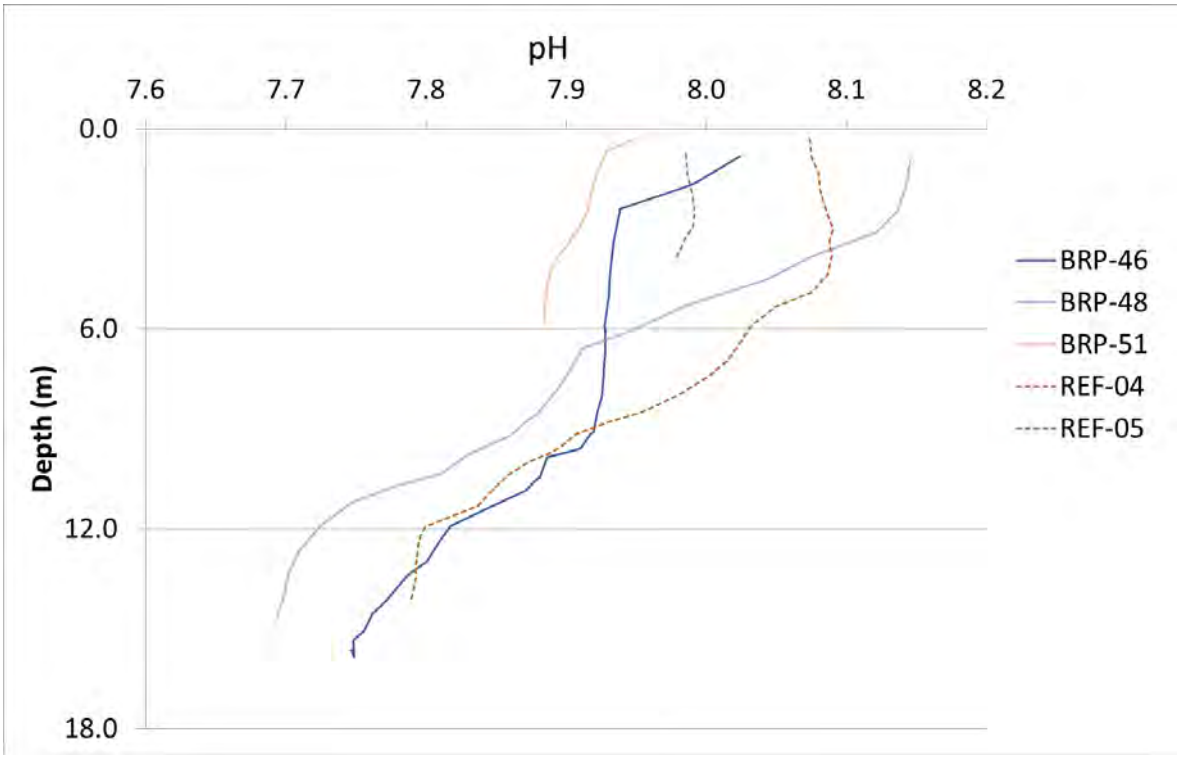


Figure 8 August 2024 pH Profiles at the MLA and Reference Stations

4.1.1 Secchi Depth

Secchi depths and calculated photic zone depths for August 2024 are presented in Table 4. Photic zone depths at both the MLA and reference stations ranged from 5.0 to 12.0 m. This range in photic zone depth may be a result of sampling occurring over multiple days with varying meteorological conditions (e.g., wind speed and direction and amount of sunlight).

Table 4 Photic Zone Depths for August 2024

Sampling Stations	Station Depth (m)	Secchi Depth (m)	Calculated Photic Zone Depths (m)
MLA			
BRP-46	15.7	1.8	5.0
BRP-48	15.4	4.4	12.0
BRP-51	5.6	2.4	6.4*
Reference			
REF-04	15.6	3.3	9.0
REF-05	5.3	3.7	10.0*
*Photic depth is lower than station depth because of photic depth calculation method (see Section 3.1.1)			

4.2 Water Quality

Water quality sampling was conducted at the MLA and reference stations during both sampling events. Samples were collected at the surface (1 m below the ice) and approximately 1 m above the sea floor at deeper stations. Individual analyte values as well as summary statistics including mean, minimum, maximum, and standard deviation are summarized by sampling location. The April water quality sampling can be compared to the mean concentrations from the April 2023 sampling program in Table 5 and the August water quality can be compared to the 2022 sampling program in Table 6. A summary of analytical results with the applicable CCME guidelines is provided in Appendix C. Laboratory certificates of analysis (COA) are provided in Appendix D.

There were no exceedances of CCME MAL guidelines at the MLA or the reference stations in any samples collected in 2024 (refer to Appendix C).

Table 5 April 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2023 MLA Mean Shallow Zone Concetrations	Reference (REF04S-WQ, REF05-WQ)				2023 Reference Mean Shallow Zone Concetrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2023 MLA Mean Deep Zone Concetrations	Reference (REF04D-WQ)	2023 REF-04D Concetrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Physical Tests (Matrix: Water)																				
Conductivity	2.0	µS/cm		39933.3	57.7	39900.0	40000.0	41600.0	40100.0	282.8	39900.0	40300.0	41500	40750.0	212.1	40600.0	40900.0	41700.0	40500.0	41600.0
Hardness (as CaCO3), dissolved	0.60	mg/L		4893.33	40.41	4850.00	4930.00	4910.00	4830.00	70.71	4780.00	4880.00	4845	4940.00	56.57	4900.00	4980.00	4860.00	4980.00	4840.00
Hardness (as CaCO3), from total Ca/Mg	0.60	mg/L		4906.67	15.28	4890.00	4920.00	5040.00	4860.00	0.00	4860.00	4860.00	4970	5135.00	63.64	5090.00	5180.00	5010.00	5000.00	4880.00
pH	0.10	pH units	7.0-8.7[A]	7.97	0.00	7.97	7.97	7.77	7.97	0.01	7.96	7.97	7.80	7.97	0.01	7.96	7.98	7.78	7.97	7.79
Solids, total dissolved (TDS)	10	mg/L		28833	404	28600	29300	28333	28750	71	28700	28800	28300	30100	141	30000	30200	27950	30100	27900
Solids, total suspended (TSS)	3.0	mg/L	C,D	1.5	0.0	1.5	1.5	4.5	1.5	0.0	1.5	1.5	2.4	1.5	0.0	1.5	1.5	1.5	1.5	1.5
Turbidity	0.10	NTU	E,F	0.19	0.07	0.13	0.27	0.12	0.31	0.00	0.31	0.31	0.14	0.18	0.06	0.14	0.22	0.10	0.16	0.18
Salinity	1.0	psu		26.4	0.1	26.4	26.5	26.6	26.6	0.2	26.4	26.7	26.6	27.1	0.2	26.9	27.2	26.3	26.9	26.8
Anions and Nutrients (Matrix: Water)																				
Ammonia, total (as N)	0.0050	mg/L		0.003	0.000	0.003	0.003	0.007	0.003	0.000	0.003	0.003	0.005	0.004	0.002	0.003	0.006	0.006	0.003	0.003
Bromide	0.050	mg/L		49.267	4.735	43.800	52.100	48.500	51.950	0.495	51.600	52.300	47.2	51.600	2.546	49.800	53.400	47.900	53.300	48.000
Chloride	0.50	mg/L		13966.67	1274.10	12500.00	14800.00	14266.67	14600.00	141.42	14500.00	14700.00	13950	14550.00	777.82	14000.00	15100.00	14100.00	15000.00	14100.00
Fluoride	0.020	mg/L		1.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.0	1.000	0.000	1.000	1.000	1.000	1.000	1.000
Nitrate (as N)	0.0050	mg/L	1,500[A], 200[B]	0.2500	0.0000	0.2500	0.2500	0.2500	0.2500	0.0000	0.2500	0.2500	0.250	0.2500	0.0000	0.2500	0.2500	0.2500	0.2500	0.2500
Nitrite (as N)	0.0010	mg/L		0.0500	0.0000	0.0500	0.0500	0.0500	0.0500	0.0000	0.0500	0.0500	0.050	0.0500	0.0000	0.0500	0.0500	0.0500	0.0500	0.0500
Nitrogen, total	0.030	mg/L		0.075	0.000	0.075	0.075	0.075	0.075	0.000	0.075	0.075	0.075	0.075	0.000	0.075	0.075	0.075	0.075	0.075
Phosphate, ortho-, dissolved (as P)	0.0010	mg/L		0.0353	0.0002	0.0351	0.0355	0.0296	0.0348	0.0022	0.0332	0.0363	0.0322	0.0419	0.0009	0.0412	0.0425	0.0324	0.0399	0.0324
Phosphorous, total	0.0020	mg/L		0.0409	0.0001	0.0409	0.0410	0.0395	0.0421	0.0016	0.0409	0.0432	0.0381	0.0471	0.0004	0.0468	0.0474	0.0395	0.0465	0.0391
Silicate (as SiO2)	0.50	mg/L		1.30	0.03	1.26	1.32	1.16	1.41	0.15	1.30	1.51	1.12	1.48	0.01	1.47	1.49	1.15	1.50	1.16
Sulfate (as SO4)	0.30	mg/L		1996.67	170.98	1800.00	2110.00	1966.67	2090.00	28.28	2070.00	2110.00	1925.00	2065.00	120.21	1980.00	2150.00	1945.00	2120.00	1970.00
Organic / Inorganic Carbon (Matrix: Water)																				
Carbon, total organic (TOC)	0.50	mg/L		1.56	0.17	1.45	1.75	1.76	1.69	0.13	1.59	1.78	1.79	1.25	0.22	1.09	1.40	1.69	1.10	1.67
Total Metals (Matrix: Water)																				
Aluminum, total	0.0030	mg/L		0.0300	0.0000	0.0300	0.0300	0.0750	0.0300	0.0000	0.0300	0.0300	0.0750	0.0300	0.0000	0.0300	0.0300	0.0750	0.0300	0.0750
Antimony, total	0.00010	mg/L		0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00250
Arsenic, total	0.00010	mg/L	0.0125[B]	0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00000	0.00100	0.00100	0.00250	0.00100	0.00250
Barium, total	0.00010	mg/L		0.01187	0.00006	0.01180	0.01190	0.01163	0.01190	0.00042	0.01160	0.01220	0.01140	0.01070	0.00000	0.01070	0.01070	0.01125	0.01040	0.01110
Beryllium, total	0.000100	mg/L		0.00020	0.00000	0.00020	0.00020	0.00050	0.00020	0.00000	0.00020	0.00020	0.00050	0.00020	0.00000	0.00020	0.00020	0.00050	0.00020	0.00050
Bismuth, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Boron, total	0.010	mg/L		3.603	0.050	3.550	3.650	3.447	3.585	0.007	3.580	3.590	3.440	3.745	0.007	3.740	3.750	3.405	3.650	3.340
Cadmium, total	0.0000050	mg/L	0.00012[B]	0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000125
Calcium, total	0.050	mg/L		316.667	6.028	311.000	323.000	325.000	311.500	0.707	311.000	312.000	317.0	332.500	9.192	326.000	339.000	317.500	319.000	310.000
Cesium, total	0.000010	mg/L		0.00017	0.00006	0.00010	0.00022	0.00025	0.00015	0.00008	0.00010	0.00021	0.00025	0.00021	0.00000	0.00021	0.00021	0.00025	0.00021	0.00025
Chromium, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0025
Cobalt, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Copper, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0125
Iron, total	0.010	mg/L		0.100	0.000	0.100	0.100	0.250	0.100	0.000	0.100	0.100	0.250	0.100	0.000	0.100	0.100	0.250	0.100	0.250
Lead, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Lithium, total	0.0010	mg/L		0.1350	0.0010	0.1340	0.1360	0.1387	0.1320	0.0000	0.1320	0.1320	0.1365	0.1410	0.0014	0.1400	0.1420	0.1375	0.1350	0.1330
Magnesium, total	0.0050	mg/L		1026.6667	30.5505	1000.0000	1060.0000	1026.6667	1014.0000	22.6274	998.0000	1030.0000	1014	1025.0000	21.2132	1010.0000	1040.0000	1025.0000	996.0000	996.0000
Manganese, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0029	0.0008	0.0023	0.0034	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Mercury, total	0.0000050	mg/L	0.000016	0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000025
Molybdenum, total	0.000050	mg/L		0.00824	0.00022	0.00800	0.00842	0.00892	0.00816	0.00008	0.00810	0.00821	0.00871	0.00880	0.00037	0.00853	0.00906	0.00827	0.00898	0.00840
Nickel, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0125
Phosphorous, total	0.050	mg/L	Guidance Framework[B]	0.041	0.000	0.041	0.041	0.039	0.042	0.002	0.041	0.043	0.038	0.047	0.000	0.047	0.047	0.040	0.047	0.039
Potassium, total	0.050	mg/L		317.000	7.211	311.000	325.000	317.000	315.500	2.121	314.000	317.000	315.5	316.500	0.707	316.000	317.000	316.500	311.000	311.000
Rubidium, total	0.00020	mg/L		0.07973	0.00114	0.07880	0.08100	0.08523	0.08020	0.00240	0.07850	0.08190	0.08725	0.08005	0.00049	0.07970	0.08040	0.08745	0.08190	0.08200
Selenium, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Silicon, total	0.10	mg/L		1.00	0.00	1.00	1.00	2.50	1.00	0.00	1.00	1.00	2.50	1.00	0.00	1.00	1.00	2.50	1.00	2.50

Table 5 April 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2023 MLA Mean Shallow Zone Concetrations	Reference (REF04S-WQ, REF05-WQ)				2023 Reference Mean Shallow Zone Concetrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2023 MLA Mean Deep Zone Concetrations	Reference (REF04D-WQ)	2023 REF-04D Concetrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Silver, total	0.000010	mg/L	0.0075[A]	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00025
Sodium, total	0.050	mg/L		8510.000	100.000	8410.000	8610.000	8206.667	8400.000	42.426	8370.000	8430.000	8005	8905.000	106.066	8830.000	8980.000	8105.000	8580.000	7910.000
Strontium, total	0.00020	mg/L		5.8267	0.0586	5.7600	5.8700	6.0600	5.7300	0.0283	5.7100	5.7500	5.880	6.1950	0.0212	6.1800	6.2100	5.9300	5.9600	5.8100
Sulfur, total	0.50	mg/L		774.00	7.55	767.00	782.00	764.67	768.00	5.66	764.00	772.00	747	819.00	5.66	815.00	823.00	764.50	768.00	731.00
Tellurium, total	0.00020	mg/L		0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0050
Thallium, total	0.000010	mg/L		0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00025
Thorium, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Tin, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Titanium, total	0.00030	mg/L		0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0075
Tungsten, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Uranium, total	0.000010	mg/L		0.00227	0.00008	0.00219	0.00235	0.00259	0.00237	0.00003	0.00235	0.00239	0.00238	0.00230	0.00008	0.00224	0.00235	0.00248	0.00243	0.00244
Vanadium, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0125
Zinc, total	0.0030	mg/L		0.030	0.000	0.030	0.030	0.075	0.030	0.000	0.030	0.030	0.075	0.030	0.000	0.030	0.030	0.075	0.030	0.075
Zirconium, total	0.00020	mg/L		0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.005
Dissolved Metals (Matrix: Water)																				
Aluminum, dissolved	0.0010	mg/L		0.010	0.000	0.010	0.010	0.025	0.010	0.000	0.010	0.010	0.025	0.010	0.000	0.010	0.010	0.025	0.010	0.025
Antimony, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Arsenic, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Barium, dissolved	0.00010	mg/L		0.0116	0.0002	0.0114	0.0118	0.0109	0.0113	0.0004	0.0110	0.0116	0.0113	0.0103	0.0002	0.0101	0.0104	0.0111	0.0100	0.0107
Beryllium, dissolved	0.000100	mg/L		0.0002	0.0000	0.0002	0.0002	0.0005	0.0002	0.0000	0.0002	0.0002	0.0005	0.0002	0.0000	0.0002	0.0002	0.0005	0.0002	0.0005
Bismuth, dissolved	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Boron, dissolved	0.010	mg/L		3.307	0.012	3.300	3.320	3.805	3.250	0.057	3.210	3.290	3.78	3.305	0.007	3.300	3.310	3.730	3.400	3.870
Cadmium, dissolved	0.0000050	mg/L		0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000000	0.000050	0.000050	0.000125	0.000050	0.000125
Calcium, dissolved	0.050	mg/L		309.00	4.58	304.00	313.00	324.00	302.50	6.36	298.00	307.00	320.0	313.00	2.83	311.00	315.00	317.00	312.00	328.00
Cesium, dissolved	0.000010	mg/L		0.00030	0.00001	0.00029	0.00032	0.00025	0.00022	0.00002	0.00021	0.00023	0.00025	0.00028	0.00001	0.00027	0.00029	0.00025	0.00026	0.00025
Chromium, dissolved	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0000	0.0050	0.0050	0.0025	0.0050	0.0025
Cobalt, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Copper, dissolved	0.00020	mg/L		0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.005
Iron, dissolved	0.010	mg/L		0.100	0.000	0.100	0.100	0.250	0.100	0.000	0.100	0.100	0.250	0.100	0.000	0.100	0.100	0.250	0.100	0.250
Lead, dissolved	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Lithium, dissolved	0.0010	mg/L		0.139	0.001	0.138	0.139	0.147	0.140	0.002	0.138	0.141	0.145	0.139	0.001	0.138	0.140	0.144	0.145	0.149
Magnesium, dissolved	0.0050	mg/L		995.333	3.055	992.000	998.000	995.333	983.000	8.485	977.000	989.000	983	988.000	1.414	987.000	989.000	988.000	976.000	976.000
Manganese, dissolved	0.00010	mg/L		0.001	0.000	0.001	0.001	0.003	0.002	0.001	0.001	0.003	0.0025	0.001	0.000	0.001	0.001	0.003	0.001	0.003
Mercury, dissolved	0.0000050	mg/L		0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000000	0.0000025	0.0000025	0.0000025	0.0000025	0.0000025
Molybdenum, dissolved	0.000050	mg/L		0.00835	0.00003	0.00832	0.00838	0.00843	0.00850	0.00029	0.00829	0.00870	0.00877	0.00865	0.00030	0.00844	0.00886	0.00835	0.00875	0.00795
Nickel, dissolved	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0125
Phosphorous, dissolved	0.050	mg/L		0.50	0.00	0.50	0.50	1.25	0.50	0.00	0.50	0.50	1.25	0.50	0.00	0.50	0.50	1.25	0.50	1.25
Potassium, dissolved	0.050	mg/L		319.333	4.041	315.000	323.000	317.333	311.500	6.364	307.000	316.000	317.5	322.500	2.121	321.000	324.000	309.500	321.000	319.000
Rubidium, dissolved	0.00020	mg/L		0.0839	0.0013	0.0831	0.0854	0.0820	0.0818	0.0010	0.0811	0.0825	0.0815	0.0848	0.0001	0.0847	0.0849	0.0819	0.0826	0.0845
Selenium, dissolved	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00000	0.00050	0.00050	0.00125	0.00050	0.00125
Silicon, dissolved	0.050	mg/L		0.50	0.00	0.50	0.50	1.25	0.50	0.00	0.50	0.50	1.25	0.50	0.00	0.50	0.50	1.25	0.50	1.25
Silver, dissolved	0.000010	mg/L		0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00025
Sodium, dissolved	0.050	mg/L		8310.00	78.10	8260.00	8400.00	8160.00	8245.00	77.78	8190.00	8300.00	8105	8340.00	98.99	8270.00	8410.00	8070.00	8560.00	8130.00
Strontium, dissolved	0.00020	mg/L		5.900	0.026	5.880	5.930	5.797	5.800	0.113	5.720	5.880	5.850	6.060	0.042	6.030	6.090	5.670	6.000	5.800
Sulfur, dissolved	0.50	mg/L		817.00	6.08	813.00	824.00	735.67	794.00	16.97	782.00	806.00	737.5	813.50	14.85	803.00	824.00	716.00	827.00	741.00
Tellurium, dissolved	0.00020	mg/L		0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.000	0.002	0.002	0.005	0.002	0.005
Thallium, dissolved	0.000010	mg/L		0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00000	0.00010	0.00010	0.00025	0.00010	0.00025
Thorium, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Tin, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Titanium, dissolved	0.00030	mg/L		0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0000	0.0030	0.0030	0.0075	0.0030	0.0075
Tungsten, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0000	0.0010	0.0010	0.0025	0.0010	0.0025
Uranium, dissolved	0.000010	mg/L		0.00245	0.00007	0.00237	0.00251	0.00227	0.00247	0.00005	0.00243	0.00250	0.00230	0.00252	0.00002	0.00250	0.00253	0.00228	0.00249	0.00236
Vanadium, dissolved	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0000	0.0050	0.0050	0.0125	0.0050	0.0125
Zinc, dissolved	0.0010	mg/L		0.010	0.000	0.010	0.010	0.025	0.010	0.000	0.010	0.010	0.025	0.010	0.000	0.010	0.010	0.025	0.010	0.025
Zirconium, dissolved	0.00020	mg/L		0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0000	0.0020	0.0020	0.0050	0.0020	0.0050

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Table 5 April 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2023 MLA Mean Shallow Zone Concetrations	Reference (REF04S-WQ, REF05-WQ)				2023 Reference Mean Shallow Zone Concetrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2023 MLA Mean Deep Zone Concetrations	Reference (REF04D-WQ)	2023 REF-04D Concetrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Hydrocarbons (Matrix: Water)																				
F1 (C6-C10)	100	µg/L		50	0	50	50	50	50	0	50	50	50	50	0	50	50	50	50	50
F2 (C10-C16)	100	µg/L		50	0	50	50	50	50	0	50	50	50	50	0	50	50	50	50	50
F3 (C16-C34)	250	µg/L		125	0	125	125	125	125	0	125	125	125	125	0	125	125	125	125	125
F4 (C34-C50)	250	µg/L		125	0	125	125	125	125	0	125	125	125	125	0	125	125	125	125	125
F1-BTEX	100	µg/L		50	0	50	50	50	50	0	50	50	50	50	0	50	50	50	50	50

Notes:

Canadian water quality guidelines for the protection of marine aquatic life, Canadian Council of Marine Environement

A = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Short Term

B = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Long Term

C= NarrativeB - Clear flow: Maximum increase of 25 mg/L from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for a longer term exposure (e.g., 30-d period).

D= High flow or turbid waters: Maximum increase of 25 mg/L from background levels at any one time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L.

E= NarrativeB - Clear flow: Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period).

F= High flow or turbid waters: Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs.

For analytes with concentrations below the detection limit, half the detection limit was used for calculation purposes.

Std Dev = Standard Deviation of the mean

Table 6 August 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2022 MLA Mean Shallow Zone Concentrations	Reference (REF04S-WQ, REF05-WQ)				2022 Reference Mean Shallow Zone Concentrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2022 MLA Mean Deep Zone Concentrations	Reference (REF04D-WQ)	2022 REF-04D Concentrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Physical Tests (Matrix: Water)																				
Conductivity	2.0	µS/cm		26933.3	251.7	26700.0	27200.0	31033.3	26900.0	282.8	26700.0	27100.0	30900.0	37000.0	4101.2	34100.0	39900.0	34950.0	39300.0	34100.0
Hardness (as CaCO3), dissolved	0.60	mg/L		3023.33	49.33	2990.00	3080.00	3856.67	3085.00	49.50	3050.00	3120.00	3760.00	4305.00	629.33	3860.00	4750.00	4235.00	4700.00	4250.00
Hardness (as CaCO3), from total Ca/Mg	0.60	mg/L		3356.67	40.41	3320.00	3400.00	3686.67	3370.00	127.28	3280.00	3460.00	3745.00	4740.00	579.83	4330.00	5150.00	4160.00	5150.00	3940.00
pH	0.10	pH units	7.0-8.7[B]	7.87	0.01	7.86	7.87	7.90	7.86	0.03	7.84	7.88	7.90	7.86	0.01	7.85	7.86	7.88	7.86	7.90
Solids, total dissolved (TDS)	10	mg/L		17433	1457	15800	18600	23933	22850	212	22700	23000	23600	27000	4808	23600	30400	27250	30900	26300
Solids, total suspended (TSS)	3.0	mg/L	C,D	1.5	0.0	1.5	1.5	<3.0	2.6	1.6	1.5	3.7	<3.0	2.6	1.6	1.5	3.7	<3.0	1.5	<3.0
Turbidity	0.10	NTU	E,F	0.76	0.27	0.48	1.01	1.40	0.62	0.11	0.54	0.70	1.16	0.65	0.37	0.38	0.91	0.31	0.74	0.26
Salinity	1.0	psu		17.0	0.2	16.8	17.2	19.3	17.0	0.2	16.8	17.1	19.4	24.2	2.9	22.1	26.2	22.2	25.8	21.5
Anions and Nutrients (Matrix: Water)																				
Ammonia, total (as N)	0.0050	mg/L		0.003	0.000	0.003	0.003	<0.0050	0.006	0.005	0.003	0.009	<0.0050	0.004	0.002	0.003	0.005	<0.0050	0.017	<0.0050
Bromide	0.050	mg/L		30.700	0.608	30.300	31.400	41.033	30.400	0.849	29.800	31.000	42.300	42.700	6.364	38.200	47.200	46.550	46.200	45.800
Chloride	0.50	mg/L		9383.33	137.96	9280.00	9540.00	10833.33	9330.00	155.56	9220.00	9440.00	10850.00	13000.00	1838.48	11700.00	14300.00	12300.00	14000.00	12100.00
Fluoride	0.020	mg/L		1.000	0.000	1.000	1.000	<0.020	1.000	0.000	1.000	1.000	<0.020	1.000	0.000	1.000	1.000	<0.020	1.000	<2.00
Nitrate (as N)	0.0050	mg/L	1,500[A], 200[B]	0.2500	0.0000	0.2500	0.2500	<0.0050	0.2500	0.0000	0.2500	0.2500	<0.0050	0.2500	0.0000	0.2500	0.2500	<0.0050	0.2500	<0.500
Nitrite (as N)	0.0010	mg/L		0.0500	0.0000	0.0500	0.0500	<0.0010	0.0500	0.0000	0.0500	0.0500	<0.0010	0.0500	0.0000	0.0500	0.0500	<0.0010	0.0500	<0.100
Nitrogen, total	0.030	mg/L		0.062	0.013	0.048	0.073	0.053	0.102	0.063	0.057	0.146	0.061	0.077	0.021	0.062	0.091	0.044	0.082	0.043
Phosphate, ortho-, dissolved (as P)	0.0010	mg/L		0.0111	0.0006	0.0106	0.0118	0.0156	0.0094	0.0015	0.0083	0.0104	0.0148	0.0344	0.0126	0.0255	0.0433	0.0204	0.0413	0.0187
Phosphorous, total	0.0020	mg/L		0.0172	0.0007	0.0164	0.0177	0.0182	0.0191	0.0041	0.0162	0.0220	0.0184	0.0389	0.0080	0.0332	0.0445	0.0221	0.0429	0.0206
Silicate (as SiO2)	0.50	mg/L		0.66	0.03	0.63	0.69	0.52	0.63	0.04	0.60	0.65	<0.50	1.29	0.34	1.05	1.53	0.51	1.31	<0.50
Sulfate (as SO4)	0.30	mg/L		1246.67	20.82	1230.00	1270.00	1476.67	1230.00	14.14	1220.00	1240.00	1445.00	1755.00	275.77	1560.00	1950.00	1675.00	1880.00	1680.00
Organic / Inorganic Carbon (Matrix: Water)																				
Carbon, total organic (TOC)	0.50	mg/L		1.63	0.07	1.58	1.71	1.45	1.93	0.10	1.86	2.00	1.40	1.22	0.24	1.05	1.39	1.20	1.16	1.41
Total Metals (Matrix: Water)																				
Aluminum, total	0.0030	mg/L		0.0300	0.0000	0.0300	0.0300	0.0686	0.0242	0.0130	0.0150	0.0334	<0.0030	0.0525	0.0318	0.0300	0.0750	<0.0030	0.0750	<0.150
Antimony, total	0.00010	mg/L		0.00100	0.00000	0.00100	0.00100	<0.00010	0.00050	0.00000	0.00050	0.00050	<0.00010	0.00175	0.00106	0.00100	0.00250	<0.00010	0.00250	<0.00500
Arsenic, total	0.00010	mg/L	0.0125[B]	0.00100	0.00000	0.00100	0.00100	<0.00010	0.00050	0.00000	0.00050	0.00050	<0.00010	0.00175	0.00106	0.00100	0.00250	<0.00010	0.00250	<0.00500
Barium, total	0.00010	mg/L		0.00889	0.00078	0.00800	0.00945	0.01028	0.00910	0.00003	0.00908	0.00912	0.01020	0.00906	0.00062	0.00862	0.00949	0.00925	0.00993	0.00872
Beryllium, total	0.000100	mg/L		0.00020	0.00000	0.00020	0.00020	<0.000100	0.00010	0.00000	0.00010	0.00010	<0.000100	0.00035	0.00021	0.00020	0.00050	<0.000100	0.00050	<0.00500
Bismuth, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00125	<0.00250
Boron, total	0.010	mg/L		2.383	0.051	2.340	2.440	2.507	2.300	0.057	2.260	2.340	2.560	3.525	0.460	3.200	3.850	2.920	3.700	2.840
Cadmium, total	0.0000050	mg/L	0.00012[B]	0.000050	0.000000	0.000050	0.000050	<0.0000050	0.000025	0.000000	0.000025	0.000025	<0.0000050	0.000088	0.000053	0.000050	0.000125	<0.0000050	0.000125	<0.000250
Calcium, total	0.050	mg/L		205.667	2.517	203.000	208.000	242.500	206.000	7.071	201.000	211.000	248.500	290.500	34.648	266.000	315.000	274.500	313.000	267.000
Cesium, total	0.000010	mg/L		0.00010	0.00000	0.00010	0.00010	<0.000010	0.00014	0.00000	0.00013	0.00014	<0.000010	0.00023	0.00003	0.00021	0.00025	<0.000010	0.00025	<0.000500
Chromium, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0125	<0.0250
Cobalt, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0025	<0.00500
Copper, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0125	<0.0250
Iron, total	0.010	mg/L		0.100	0.000	0.100	0.100	<0.010	0.050	0.000	0.050	0.050	<0.010	0.175	0.106	0.100	0.250	<0.010	0.250	<0.500
Lead, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00125	<0.00250
Lithium, total	0.0010	mg/L		0.0860	0.0038	0.0817	0.0885	0.0967	0.0845	0.0013	0.0836	0.0854	0.0996	0.1280	0.0170	0.1160	0.1400	0.1120	0.1360	0.1110
Magnesium, total	0.0050	mg/L		1026.6667	30.5505	1000.0000	1060.0000	749.6667	1014.0000	22.6274	998.0000	1030.0000	759.5000	1025.0000	21.2132	1010.0000	1040.0000	843.5000	996.0000	794.0000
Manganese, total	0.00010	mg/L		0.0024	0.0015	0.0010	0.0040	0.0031	0.0027	0.0001	0.0026	0.0028	0.0031	0.0025	0.0001	0.0024	0.0025	<0.00010	0.0025	<0.00500
Mercury, total	0.0000050	mg/L	0.000016	0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	<0.0000050
Molybdenum, total	0.000050	mg/L		0.00557	0.00006	0.00551	0.00562	0.00620	0.00546	0.00008	0.00540	0.00551	0.00632	0.00747	0.00076	0.00693	0.00801	0.00687	0.00809	0.00690
Nickel, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0125	<0.0250
Phosphorous, total	0.050	mg/L	Guidance FrameworkB	0.017	0.001	0.016	0.018	0.018	0.019	0.004	0.016	0.022	0.018	0.039	0.008	0.033	0.045	0.022	0.043	0.021
Potassium, total	0.050	mg/L		317.000	7.211	311.000	325.000	235.667	315.500	2.121	314.000	317.000	239.500	316.500	0.707	316.000	317.000	270.500	311.000	257.000
Rubidium, total	0.00020	mg/L		0.05437	0.00042	0.05390	0.05470	0.06523	0.05505	0.00035	0.05480	0.05530	0.06695	0.07800	0.00707	0.07300	0.08300	<0.00020	0.08700	0.06970
Selenium, total	0.000050	mg/L		0.00050	0.00000	0.00050	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00125	<0.00250

Table 6 August 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2022 MLA Mean Shallow Zone Concentrations	Reference (REF04S-WQ, REF05-WQ)				2022 Reference Mean Shallow Zone Concentrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2022 MLA Mean Deep Zone Concentrations	Reference (REF04D-WQ)	2022 REF-04D Concentrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Silicon, total	0.10	mg/L		1.00	0.00	1.00	1.00	<0.10	0.50	0.00	0.50	0.50	<0.10	1.75	1.06	1.00	2.50	<0.10	2.50	<5.00
Silver, total	0.000010	mg/L	0.0075[A]	0.00010	0.00000	0.00010	0.00010	<0.000010	0.00005	0.00000	0.00005	0.00005	<0.000010	0.00018	0.00011	0.00010	0.00025	<0.000010	0.00025	<0.000500
Sodium, total	0.050	mg/L		5446.667	194.251	5280.000	5660.000	6265.000	5500.000	98.995	5430.000	5570.000	6170.000	7645.000	572.756	7240.000	8050.000	7030.000	8490.000	6700.000
Strontium, total	0.00020	mg/L		3.5667	0.0115	3.5600	3.5800	4.4367	3.5750	0.0071	3.5700	3.5800	4.5450	5.0400	0.5233	4.6700	5.4100	4.9450	5.5200	4.90
Sulfur, total	0.50	mg/L		479.67	5.13	474.00	484.00	602.67	515.00	4.24	512.00	518.00	590.00	705.50	65.76	659.00	752.00	672.00	713.00	642.00
Tellurium, total	0.00020	mg/L		0.0020	0.0000	0.0020	0.0020	<0.00020	0.0010	0.0000	0.0010	0.0010	<0.00020	0.0035	0.0021	0.0020	0.0050	<0.00020	0.0050	<0.0100
Thallium, total	0.000010	mg/L		0.00010	0.00000	0.00010	0.00010	<0.000010	0.00005	0.00000	0.00005	0.00005	<0.000010	0.00018	0.00011	0.00010	0.00025	<0.000010	0.00025	<0.000500
Thorium, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0025	<0.00500
Tin, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0025	<0.00500
Titanium, total	0.00030	mg/L		0.0030	0.0000	0.0030	0.0030	<0.00030	0.0015	0.0000	0.0015	0.0015	<0.00030	0.0053	0.0032	0.0030	0.0075	<0.00030	0.0075	<0.0150
Tungsten, total	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0025	<0.00500
Uranium, total	0.000010	mg/L		0.00145	0.00005	0.00140	0.00150	0.00181	0.00142	0.00001	0.00141	0.00142	0.00182	0.00210	0.00035	0.00185	0.00235	0.00213	0.00221	0.00193
Vanadium, total	0.00050	mg/L		0.0050	0.0000	0.0050	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0125	<0.0250
Zinc, total	0.0030	mg/L		0.030	0.000	0.030	0.030	<0.0030	0.015	0.000	0.015	0.015	<0.0030	0.053	0.032	0.030	0.075	<0.0030	0.075	<0.150
Zirconium, total	0.00020	mg/L		0.002	0.000	0.002	0.002	<0.00020	0.001	0.000	0.001	0.001	<0.00020	0.004	0.002	0.002	0.005	<0.00020	0.005	<0.0100
Dissolved Metals (Matrix: Water)																				
Aluminum, dissolved	0.0010	mg/L		0.008	0.003	0.005	0.010	<0.0010	0.005	0.000	0.005	0.005	<0.0010	0.018	0.011	0.010	0.025	<0.0010	0.010	<0.0500
Antimony, dissolved	0.00010	mg/L		0.0008	0.0003	0.0005	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Arsenic, dissolved	0.00010	mg/L		0.0010	0.0000	0.0010	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Barium, dissolved	0.00010	mg/L		0.0090	0.0002	0.0087	0.0092	0.0090	0.0096	0.0004	0.0093	0.0099	0.0087	0.0098	0.0006	0.0094	0.0103	0.0067	0.0100	0.0067
Beryllium, dissolved	0.000100	mg/L		0.0002	0.0001	0.0001	0.0002	<0.000100	0.0001	0.0000	0.0001	0.0001	<0.000100	0.0004	0.0002	0.0002	0.0005	<0.000100	0.0002	<0.00100
Bismuth, dissolved	0.000050	mg/L		0.00042	0.00014	0.00025	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00050	<0.00250
Boron, dissolved	0.010	mg/L		2.280	0.135	2.130	2.390	2.217	2.290	0.042	2.260	2.320	2.175	3.345	0.516	2.980	3.710	2.530	3.520	2.500
Cadmium, dissolved	0.0000050	mg/L		0.000042	0.000014	0.000025	0.000050	<0.0000050	0.000072	0.000017	0.000060	0.000085	<0.0000050	0.000088	0.000053	0.000050	0.000125	<0.0000050	0.000050	<0.000250
Calcium, dissolved	0.050	mg/L		202.67	5.86	196.00	207.00	238.33	212.50	2.12	211.00	214.00	233.50	292.50	51.62	256.00	329.00	261.00	316.00	254.00
Cesium, dissolved	0.000010	mg/L		0.00012	0.00003	0.00010	0.00016	<0.000010	0.00015	0.00002	0.00013	0.00016	<0.000010	0.00024	0.00001	0.00024	0.00025	<0.000010	0.00024	<0.000500
Chromium, dissolved	0.00050	mg/L		0.0042	0.0014	0.0025	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0050	<0.00500
Cobalt, dissolved	0.00010	mg/L		0.0008	0.0003	0.0005	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Copper, dissolved	0.00020	mg/L		0.002	0.001	0.001	0.002	<0.00020	0.002	0.001	0.001	0.003	<0.00020	0.004	0.002	0.002	0.005	<0.00020	0.002	<0.0100
Iron, dissolved	0.010	mg/L		0.083	0.029	0.050	0.100	<0.010	0.050	0.000	0.050	0.050	<0.010	0.175	0.106	0.100	0.250	<0.010	0.100	<0.500
Lead, dissolved	0.000050	mg/L		0.00042	0.00014	0.00025	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00050	<0.00250
Lithium, dissolved	0.0010	mg/L		0.086	0.001	0.085	0.087	0.101	0.089	0.001	0.088	0.089	0.098	0.124	0.020	0.110	0.138	0.111	0.134	0.109
Magnesium, dissolved	0.0050	mg/L		995.333	3.055	992.000	998.000	791.667	983.000	8.485	977.000	989.000	771.500	988.000	1.414	987.000	989.000	870.000	976.000	878.000
Manganese, dissolved	0.00010	mg/L		0.001	0.000	0.001	0.001	<0.00010	0.001	0.000	0.001	0.002	0.003	0.002	0.001	0.001	0.003	<0.00010	0.001	<0.00500
Mercury, dissolved	0.0000050	mg/L		0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	0.0000000	0.0000025	0.0000025	<0.0000050	0.0000025	<0.0000050
Molybdenum, dissolved	0.000050	mg/L		0.00557	0.00023	0.00532	0.00577	0.00689	0.00567	0.00009	0.00560	0.00573	0.00705	0.00787	0.00086	0.00726	0.00847	0.00716	0.00842	0.00742
Nickel, dissolved	0.00050	mg/L		0.0042	0.0014	0.0025	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0050	<0.0250
Phosphorous, dissolved	0.050	mg/L		0.42	0.14	0.25	0.50	<0.050	0.25	0.00	0.25	0.25	<0.050	0.88	0.53	0.50	1.25	<0.050	0.50	<2.50
Potassium, dissolved	0.050	mg/L		198.667	5.686	194.000	205.000	244.667	205.000	4.243	202.000	208.000	244.000	286.500	37.477	260.000	313.000	262.000	312.000	258.000
Rubidium, dissolved	0.00020	mg/L		0.0549	0.0020	0.0533	0.0571	0.0677	0.0556	0.0021	0.0541	0.0570	0.0689	0.0762	0.0129	0.0671	0.0853	0.0771	0.0782	0.0651
Selenium, dissolved	0.000050	mg/L		0.00042	0.00014	0.00025	0.00050	<0.000050	0.00025	0.00000	0.00025	0.00025	<0.000050	0.00088	0.00053	0.00050	0.00125	<0.000050	0.00050	<0.00250
Silicon, dissolved	0.050	mg/L		0.42	0.14	0.25	0.50	<0.050	0.25	0.00	0.25	0.25	<0.050	0.88	0.53	0.50	1.25	<0.050	0.50	<2.50
Silver, dissolved	0.000010	mg/L		0.00008	0.00003	0.00005	0.00010	<0.000010	0.00005	0.00000	0.00005	0.00005	<0.000010	0.00018	0.00011	0.00010	0.00025	<0.000010	0.00010	<0.000500
Sodium, dissolved	0.050	mg/L		5020.00	120.00	4900.00	5140.00	6193.33	5120.00	169.71	5000.00	5240.00	5995.00	7235.00	954.59	6560.00	7910.00	6740.00	7890.00	6610.00
Strontium, dissolved	0.00020	mg/L		3.787	0.121	3.650	3.880	4.727	3.915	0.049	3.880	3.950	4.525	5.325	0.898	4.690	5.960	5.055	6.040	5.140
Sulfur, dissolved	0.50	mg/L		472.67	15.01	458.00	488.00	594.67	485.50	14.85	475.00	496.00	605.00	678.50	115.26	597.00	760.00	649.50	734.00	658.00
Tellurium, dissolved	0.00020	mg/L		0.002	0.001	0.001	0.002	<0.00020	0.001	0.000	0.001	0.001	<0.00020	0.004	0.002	0.002	0.005	<0.00020	0.002	<0.0100
Thallium, dissolved	0.000010	mg/L		0.00008	0.00003	0.00005	0.00010	<0.000010	0.00005	0.00000	0.00005	0.00005	<0.000010	0.00018	0.00011	0.00010	0.00025	<0.000010	0.00010	<0.000500
Thorium, dissolved	0.00010	mg/L		0.0008	0.0003	0.0005	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Tin, dissolved	0.00010	mg/L		0.0008	0.0003	0.0005	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Titanium, dissolved	0.00030	mg/L		0.0025	0.0009	0.0015	0.0030	<0.00030	0.0015	0.0000	0.0015	0.0015	<0.00030	0.0053	0.0032	0.0030	0.0075	<0.00030	0.0030	<0.0150

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Table 6 August 2024 Water Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Guideline for the protection of aquatic life	Shallow Depth Zones										Deep Depth zones						
				MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ)				2022 MLA Mean Shallow Zone Concentrations	Reference (REF04S-WQ, REF05-WQ)				2022 Reference Mean Shallow Zone Concentrations	MLA (BRP-48D-WQ, BRP-46D-WQ)				2022 MLA Mean Deep Zone Concentrations	Reference (REF04D-WQ)	2022 REF-04D Concentrations
				MLA	MLA	MLA	MLA		Reference	Reference	Reference	Reference		MLA	MLA	MLA	MLA		Reference	
				Shallow	Shallow	Shallow	Shallow		Shallow	Shallow	Shallow	Shallow		Deep	Deep	Deep	Deep		REF04D-WQ	
				Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Mean	Std Dev	Min	Max		Sample value	
Tungsten, dissolved	0.00010	mg/L		0.0008	0.0003	0.0005	0.0010	<0.00010	0.0005	0.0000	0.0005	0.0005	<0.00010	0.0018	0.0011	0.0010	0.0025	<0.00010	0.0010	<0.00500
Uranium, dissolved	0.000010	mg/L		0.00153	0.00007	0.00147	0.00160	0.00188	0.00145	0.00003	0.00143	0.00147	0.00180	0.00205	0.00024	0.00188	0.00222	0.00209	0.00214	0.00210
Vanadium, dissolved	0.00050	mg/L		0.0042	0.0014	0.0025	0.0050	<0.00050	0.0025	0.0000	0.0025	0.0025	<0.00050	0.0088	0.0053	0.0050	0.0125	<0.00050	0.0050	<0.0250
Zinc, dissolved	0.0010	mg/L		0.008	0.003	0.005	0.010	<0.0010	0.013	0.011	0.005	0.021	<0.0010	0.018	0.011	0.010	0.025	<0.0010	0.010	<0.0500
Zirconium, dissolved	0.00020	mg/L		0.0017	0.0006	0.0010	0.0020	<0.00020	0.0010	0.0000	0.0010	0.0010	<0.00020	0.0035	0.0021	0.0020	0.0050	<0.00020	0.0020	<0.0100
Hydrocarbons (Matrix: Water)																				
F1 (C6-C10)	100	µg/L		50	0	50	50	<100	50	0	50	50	<100	50	0	50	50	<100	50	<100
F2 (C10-C16)	100	µg/L		50	0	50	50	<300	50	0	50	50	<300	50	0	50	50	<300	50	<300
F3 (C16-C34)	250	µg/L		125	0	125	125	<300	125	0	125	125	<300	125	0	125	125	<300	125	<300
F4 (C34-C50)	250	µg/L		125	0	125	125	<300	125	0	125	125	<300	125	0	125	125	<300	125	<300
F1-BTEX	100	µg/L		50	0	50	50	<100	50	0	50	50	<100	50	0	50	50	<100	50	<100

Notes:

Canadian water quality guidelines for the protection of marine aquatic life, Canadian Council of Marine Environement

A = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Short Term

B = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Long Term

C= NarrativeB - Clear flow: Maximum increase of 25 mg/L from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for a longer term exposure (e.g., 30-d period).

D= High flow or turbid waters: Maximum increase of 25 mg/L from background levels at any one time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L.

E= NarrativeB - Clear flow: Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period).

F= High flow or turbid waters: Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs.

For analytes with concentrations below the detection limit, half the detection limit was used for calculation purposes.

Std Dev = Standard Deviation of the mean

4.3 Phytoplankton Biomass

Phytoplankton biomass (concentration as Chlorophyll *a*) samples were collected in triplicate at the MLA and reference stations during both sampling events in April and August for the 2024 program. Results with standard error bars are presented in Figure 9 (April 2024) and Figure 10 (August 2024). Supporting data are summarized in Appendix E and laboratory reports are provided in Appendix D.

The April 2024 Chlorophyll *a* concentrations were similar to what was observed in winter 2023 and with background values in winter 2018 (Sabina 2019). Most of the mean Chlorophyll *a* concentrations in April 2024 ranged between 0.182 and 0.239 µg/L. Station BRP-48 was higher than the other samples with a mean Chlorophyll *a* concentration of 0.423 µg/L and a greater standard error.

The August 2024 Chlorophyll *a* concentrations were higher than in April 2024, similar in range to what was observed in the summer 2021 program (RainCoast, 2022) and higher than what was observed in summer 2022. This difference in results with summer 2022 may be a result of issues that occurred with the filter apparatus in 2022 (Nunami Stantec 2023, 2024) that could have reduced the Chlorophyll *a* measurement and underestimated the true Chlorophyll *a* concentrations. BRP-51 and BRP-46 in August 2024 had higher mean concentrations of 1.850 and 1.613 µg/L, respectively, for Chlorophyll *a* than the other stations that ranged from 0.921 to 1.081 µg/L (Figure 10). This range of higher summer Chlorophyll *a* concentrations for BRP-51 and BRP-46 and lower concentrations for BRP-48 is very similar to that observed in September 2021 (RainCoast, 2022). The differences in Chlorophyll *a* concentration may reflect natural variability across stations. It is not clear what factors contributed to the observed differences.

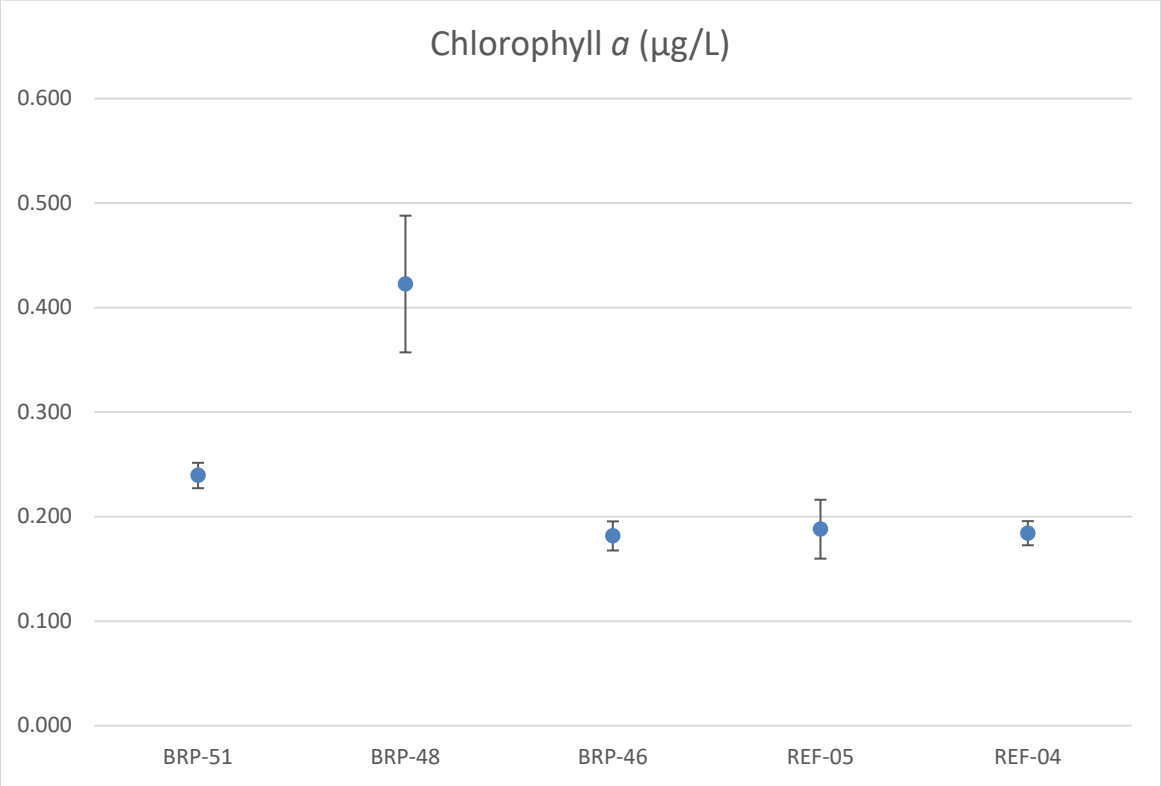


Figure 9 2024 April Chlorophyll *a* Concentrations at the MLA and Reference Stations

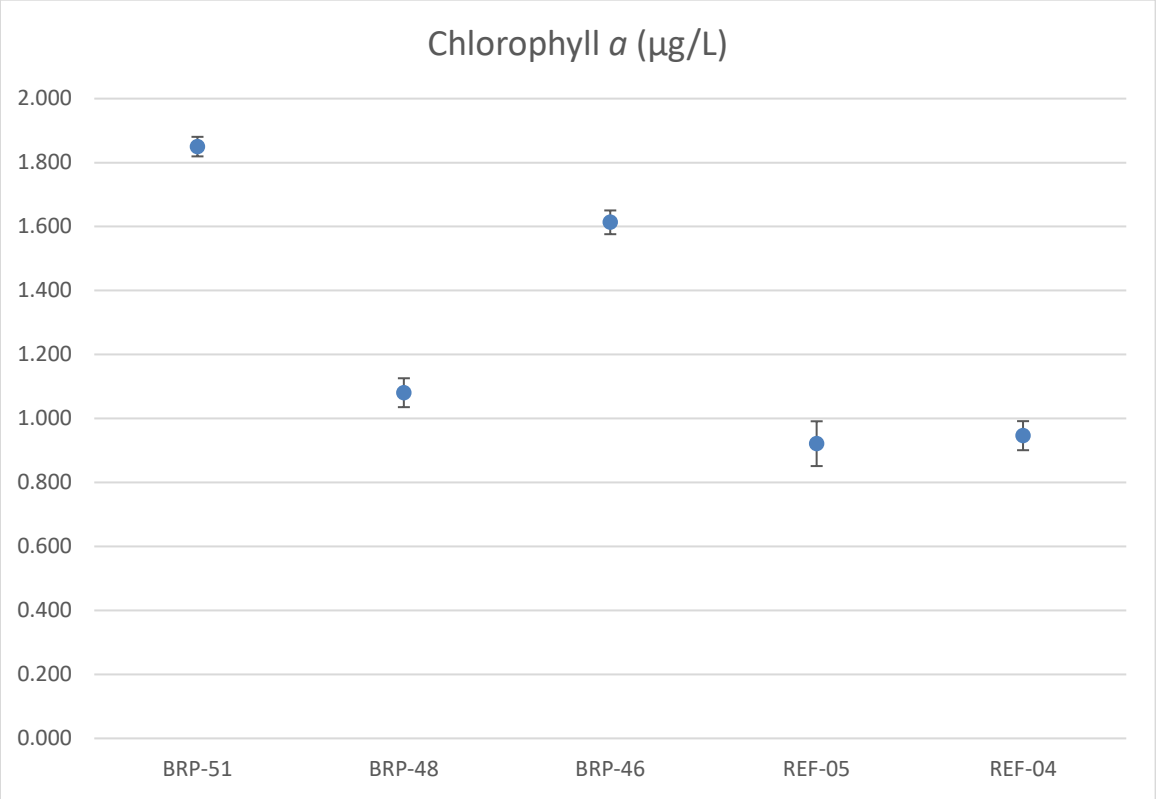


Figure 10 2024 August Chlorophyll *a* Concentrations at the MLA and Reference Stations

4.4 Sediment Quality

Sediment quality sampling was conducted at the MLA and reference stations during the August 2024 sampling event. Samples were collected in triplicate at each station with the use of a Petite Ponar grab sampler. Individual analyte values as well as summary statistics including mean, minimum, maximum, and standard deviation are summarized by sampling location and provided in Table 7. There were no exceedances of CCME ISQG or PEL guidelines at the MLA or the reference stations in any samples collected in 2024. The only historic sampling in the current MLA site was conducted as part of the 2013 baseline sampling, which also had no exceedances of CCME ISQG or PEL guidelines (Rescan, 2013).

Analytical results with the applicable CCME guidelines are provided in Appendix F. Laboratory certificates of analysis (COA) are provided in Appendix D.

Table 7 Sediment Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Sediment Quality Guidelines (Marine/Estuarine)		Shallow Depth Zones								Deep Depth zones							
					MLA (BRP-51)				Reference (REF05)				MLA (BRP-48 and BRP-46)				Reference (REF04)			
					MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference	MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference
			ISQG	PEL	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
					Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max
Physical Tests (Matrix: Soil/Solid)																				
Moisture	0.25	%	-	-	19.6	1.3	18.6	21.1	19.9	0.2	19.7	20.1	22.5	5.2	18.6	32.8	29.2	8.1	20.3	36.1
pH (1:2 soil:water)	0.1	pH units	-	-	7.7	0.0	7.6	7.7	7.5	0.2	7.3	7.7	7.9	0.2	7.6	8.1	8.1	0.2	7.9	8.3
Particle Size (Matrix: Soil/Solid)																				
Gravel (>2mm)	1	%	-	-	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	3.0	0.5	2.4	3.4
Sand (2.0mm - 0.063mm)	1	%	-	-	95.0	0.3	94.7	95.3	97.8	0.4	97.4	98.1	87.5	4.7	79.4	92.1	70.2	21.1	49.7	91.8
Silt (0.063mm - 0.004mm)	1	%	-	-	3.5	0.4	3.1	3.8	2.0	0.3	1.6	2.2	9.0	3.0	6.1	14.5	17.1	12.7	3.7	29.0
Clay (<0.004mm)	1	%	-	-	1.5	0.2	1.2	1.6	0.5	0.0	0.5	0.5	3.5	1.7	1.8	6.1	9.7	8.9	1.1	18.9
Organic / Inorganic Carbon (Matrix: Soil/Solid)																				
Carbon, total organic [TOC]	0.05	%	-	-	0.15	0.01	0.13	0.16	0.13	0.00	0.12	0.13	0.17	0.07	0.10	0.31	0.43	0.25	0.21	0.70
Metals (Matrix: Soil/Solid)																				
Aluminum	50	mg/kg	-	-	1860.0	95.4	1750.0	1920.0	1543.3	126.6	1430.0	1680.0	2356.7	784.8	1820.0	3890.0	6333.3	3598.6	2180.0	8520.0
Antimony	0.1	mg/kg	-	-	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.06	0.02	0.05	0.11	0.11	0.05	0.05	0.14
Arsenic	0.1	mg/kg	7.24	41.6	1.3	0.3	1.1	1.7	0.8	0.1	0.8	1.0	1.4	0.4	1.1	2.1	2.9	1.3	1.5	4.0
Barium	0.5	mg/kg	-	-	15.1	6.8	10.6	23.0	6.2	3.0	4.1	9.6	17.3	4.1	12.0	23.0	33.1	21.1	8.7	45.5
Beryllium	0.1	mg/kg	-	-	0.08	0.03	0.05	0.10	0.05	0.00	0.05	0.05	0.10	0.05	0.05	0.18	0.29	0.15	0.11	0.38
Bismuth	0.2	mg/kg	-	-	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10
Boron	5	mg/kg	-	-	2.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	5.1	3.4	2.5	11.0	16.0	11.8	2.5	24.4
Cadmium	0.02	mg/kg	0.7	4.2	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.03	0.06	0.05	0.01	0.12
Calcium	50	mg/kg	-	-	977.7	119.6	852.0	1090.0	1233.0	223.6	979.0	1400.0	1173.0	234.1	988.0	1630.0	7106.7	7474.0	2120.0	15700.0
Chromium	0.5	mg/kg	52.3	160	4.7	0.7	3.9	5.3	3.7	0.6	3.2	4.3	5.9	2.0	4.4	9.7	16.2	9.1	5.7	21.7
Cobalt	0.1	mg/kg	-	-	1.4	0.1	1.4	1.5	1.2	0.1	1.1	1.4	1.6	0.4	1.3	2.3	3.7	1.7	1.7	4.8
Copper	0.5	mg/kg	18.7	108	2.6	0.5	2.2	3.2	2.3	0.4	2.0	2.7	3.8	2.2	2.2	8.2	8.8	5.7	2.3	12.6
Iron	50	mg/kg	-	-	3573.3	315.3	3250.0	3880.0	3133.3	345.3	2900.0	3530.0	4011.7	969.2	3390.0	5940.0	9053.3	4075.6	4360.0	11700.0
Lead	0.5	mg/kg	30.2	112	1.5	0.2	1.3	1.7	0.8	0.1	0.7	0.9	1.7	1.0	1.2	3.7	3.3	1.9	1.2	4.5
Lithium	2	mg/kg	-	-	3.3	0.3	3.0	3.5	2.9	0.4	2.6	3.3	4.3	1.7	2.9	7.4	12.7	6.8	4.8	16.8
Magnesium	20	mg/kg	-	-	1503.3	50.3	1450.0	1550.0	1673.3	144.7	1580.0	1840.0	1770.0	443.7	1410.0	2620.0	4386.7	2019.1	2060.0	5680.0
Manganese	1	mg/kg	-	-	38.5	3.9	36.0	43.0	37.3	5.9	32.4	43.8	40.6	7.7	33.7	55.3	91.8	34.2	52.4	113.0
Mercury	0.05	mg/kg	0.13	0.7	0.03	0.000	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.000	0.025	0.025
Molybdenum	0.1	mg/kg	-	-	0.10	0.05	0.05	0.15	0.08	0.05	0.05	0.13	0.32	0.35	0.11	1.03	0.77	0.51	0.20	1.20
Nickel	0.5	mg/kg	-	-	2.9	0.1	2.7	3.0	2.6	0.2	2.5	2.9	3.5	1.2	2.7	5.8	9.5	5.1	3.6	12.8
Phosphorus	50	mg/kg	-	-	205.0	7.8	196.0	210.0	132.0	34.6	112.0	172.0	219.3	42.6	199.0	306.0	399.7	116.8	268.0	491.0
Potassium	100	mg/kg	-	-	516.7	32.1	480.0	540.0	340.0	40.0	300.0	380.0	671.7	246.9	500.0	1150.0	1803.3	1138.1	490.0	2500.0
Selenium	0.2	mg/kg	-	-	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10	0.10	0.00	0.10	0.10
Silver	0.1	mg/kg	-	-	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05
Sodium	50	mg/kg	-	-	1426.7	218.3	1190.0	1620.0	930.0	321.5	719.0	1300.0	1430.2	391.9	931.0	2020.0	3579.3	2259.8	988.0	5140.0
Strontium	0.5	mg/kg	-	-	8.0	0.7	7.6	8.8	6.6	0.5	6.0	7.1	10.5	3.1	8.2	16.6	37.5	31.2	11.9	72.3
Sulfur	1000	mg/kg	-	-	500.0	0.0	500.0	500.0	500.0	0.0	500.0	500.0	500.0	0.0	500.0	500.0	500.0	0.0	500.0	500.0
Thallium	0.05	mg/kg	-	-	0.025	0.000	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.000	0.025	0.025	0.065	0.035	0.025	0.088
Tin	2	mg/kg	-	-	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0
Titanium	1	mg/kg	-	-	101.7	16.3	83.2	114.0	72.8	9.4	66.1	83.6	118.9	34.3	95.5	187.0	253.9	151.7	78.8	342.0
Tungsten	0.5	mg/kg	-	-	0.25	0.00	0.25	0.25	0.25	0.00	0.25	0.25	0.25	0.00	0.25	0.25	0.25	0.00	0.25	0.25
Uranium	0.05	mg/kg	-	-	0.36	0.03	0.32	0.38	0.31	0.06	0.27	0.37	0.44	0.11	0.35	0.66	0.91	0.45	0.40	1.19
Vanadium	0.2	mg/kg	-	-	7.1	0.9	6.1	7.9	5.6	0.8	5.0	6.5	8.0	2.4	6.4	12.7	18.5	10.6	6.3	24.8
Zinc	2	mg/kg	124	271	5.4	0.4	5.0	5.7	4.5	0.3	4.2	4.8	6.5	2.1	4.9	10.4	17.4	10.1	5.8	23.6
Zirconium	1	mg/kg	-	-	3.5	0.3	3.2	3.7	2.5	0.2	2.4	2.7	4.3	1.0	3.6	6.2	5.7	4.4	1.9	10.5
Speciated Metals (Matrix: Soil/Solid)																				
Chromium, hexavalent [Cr VI]	0.1	mg/kg	-	-	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.05

Table 7 Sediment Quality Summary

Parameters	Lowest Detection Limit	Units	CCME Sediment Quality Guidelines (Marine/Estuarine)		Shallow Depth Zones								Deep Depth zones							
					MLA (BRP-51)				Reference (REF05)				MLA (BRP-48 and BRP-46)				Reference (REF04)			
					MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference	MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference
			ISQG	PEL	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
					Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max
Polycyclic Aromatic Hydrocarbons (Matrix: Soil/Solid)																				
Acenaphthene	0.005	mg/kg	0.00671	0.0889	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025
Acenaphthylene	0.005	mg/kg	0.00587	0.128	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025
Acridine	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Anthracene	0.004	mg/kg	0.0469	0.245	0.0020	0.0000	0.0020	0.0020	0.0020	0.0000	0.0020	0.0020	0.0020	0.0000	0.0020	0.0020	0.0021	0.0001	0.0020	0.0022
Benz(a)anthracene	0.01	mg/kg	0.0748	0.693	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Benzo(a)pyrene	0.01	mg/kg	0.0888	0.763	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Benzo(b+j)fluoranthene	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Benzo(b+j+k)fluoranthene	0.015	mg/kg	-	-	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075
Benzo(g,h,i)perylene	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Benzo(k)fluoranthene	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Chrysene	0.01	mg/kg	0.108	0.846	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Dibenz(a,h)anthracene	0.005	mg/kg	0.00622	0.135	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025	0.0025	0.0000	0.0025	0.0025
Fluoranthene	0.01	mg/kg	0.113	1.494	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Fluorene	0.01	mg/kg	0.0212	0.144	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Indeno(1,2,3-c,d)pyrene	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Methylnaphthalene, 1+2-	0.015	mg/kg	-	-	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075	0.0075	0.0000	0.0075	0.0075
Methylnaphthalene, 1-	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Methylnaphthalene, 2-	0.01	mg/kg	0.0202	0.201	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Naphthalene	0.01	mg/kg	0.0346	0.391	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Phenanthrene	0.01	mg/kg	0.0867	0.544	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Pyrene	0.01	mg/kg	0.153	1.398	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
Quinoline	0.01	mg/kg	-	-	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050	0.0050	0.0000	0.0050	0.0050
B(a)P total potency equivalents [B(a)P TPE]	0.02	mg/kg	-	-	0.0100	0.0000	0.0100	0.0100	0.0100	0.0000	0.0100	0.0100	0.0100	0.0000	0.0100	0.0100	0.0100	0.0000	0.0100	0.0100
IACR (CCME)	0.15		-	-	0.0750	0.0000	0.0750	0.0750	0.0750	0.0000	0.0750	0.0750	0.0750	0.0000	0.0750	0.0750	0.0750	0.0000	0.0750	0.0750
Polycyclic Aromatic Hydrocarbons Surrogates (Matrix: Soil/Solid)																				
Acridine-d9	0.1	%	-	-	76.4	1.8	74.4	78.0	77.9	5.3	72.1	82.5	75.6	3.4	70.8	80.3	86.1	1.4	84.5	87.2
Chrysene-d12	0.1	%	-	-	80.4	1.6	78.6	81.3	83.2	3.8	78.9	85.9	80.6	3.2	76.6	84.5	88.3	2.0	86.6	90.5
Naphthalene-d8	0.1	%	-	-	88.3	2.6	85.9	91.1	89.4	3.9	86.3	93.8	90.2	4.3	84.5	96.8	93.4	3.7	89.8	97.1
Phenanthrene-d10	0.1	%	-	-	79.5	1.7	77.6	81.0	84.6	4.7	79.2	87.8	80.5	3.4	75.1	84.4	88.8	2.3	86.3	90.6

Notes:

For analytes with concentrations below the detection limit, half the detection limit was used for calculation purposes.

Std Dev = Standard Deviation of the mean

4.5 Benthic Macroinvertebrates

The total density, taxa richness, and Simpson's Evenness Index of the benthic macroinvertebrates sampled for each station are presented in Table 8. Benthic community species identified and data for each sample are provided in Appendix G.

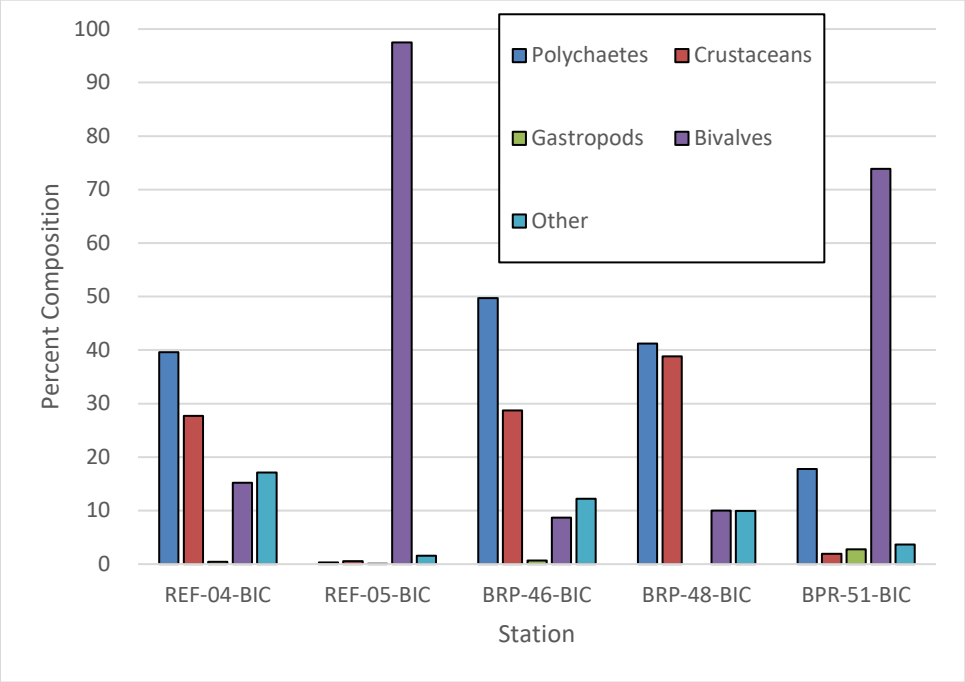
Table 8 Benthic Invertebrate Community Descriptive Statistics, August 2024

Statistic	Density (#/m^2)	Taxa Richness (Family Level)	Simpson's Evenness Index
REF-04-BIC (Deeper Station, 15.6 m)			
Minimum	9914	22	0.27
Maximum	30517	31	0.38
Median	12802	24	0.35
Mean	17744	25.7	0.34
Standard Error	6441	2.73	0.03
Standard Deviation	11156	4.73	0.06
REF-05-BIC (Shallower Station, 5.3 m)			
Minimum	38448	7	0.12
Maximum	74569	9	0.18
Median	45431	7	0.14
Mean	52816	7.7	0.15
Standard Error	11062	0.67	0.02
Standard Deviation	19159	1.15	0.03
BRP-46-BIC (Deeper Station, 15.7 m)			
Minimum	1638	12	0.19
Maximum	4440	24	0.63
Median	4440	14	0.44
Mean	3506	16.7	0.42
Standard Error	934	3.71	0.13
Standard Deviation	1618	6.43	0.22
BRP-48-BIC (Deeper Station, 15.4 m)			
Minimum	2414	13	0.16
Maximum	9914	15	0.38
Median	3491	15	0.34
Mean	5273	14.3	0.30
Standard Error	2341	0.67	0.07
Standard Deviation	4055	1.15	0.12
BRP-51-BIC (Shallower Station, 5.6 m)			
Minimum	3147	5	0.15

Statistic	Density (#/m^2)	Taxa Richness (Family Level)	Simpson's Evenness Index
Maximum	9828	18	0.30
Median	5647	9	0.19
Mean	6207	10.7	0.21
Standard Error	1949	3.84	0.04
Standard Deviation	3376	6.66	0.08

Bivalves dominated the benthic communities at the shallow stations REF-05-BIC and BPR-51-BIC where they accounted for 97.5% and 73.8% of the benthic assemblages, respectively (Figure 11), and where *Macoma balthica* was the dominate bivalve species (see Appendix G). Polychaetes dominated the benthic communities in the deeper stations REF-04-BIC, BRP-46-BIC and BRP-48-BIC where they accounted for 40%, 50%, and 41% of the benthic assemblages, respectively (Figure 11). As a result, community composition between shallow and deep stations was different, with those differences mainly attributed to physico-chemical differences between shallow and deep marine environments (e.g., shallow intertidal areas typically have more variable light, temperature, salinity and oxygen than deeper marine habitats).

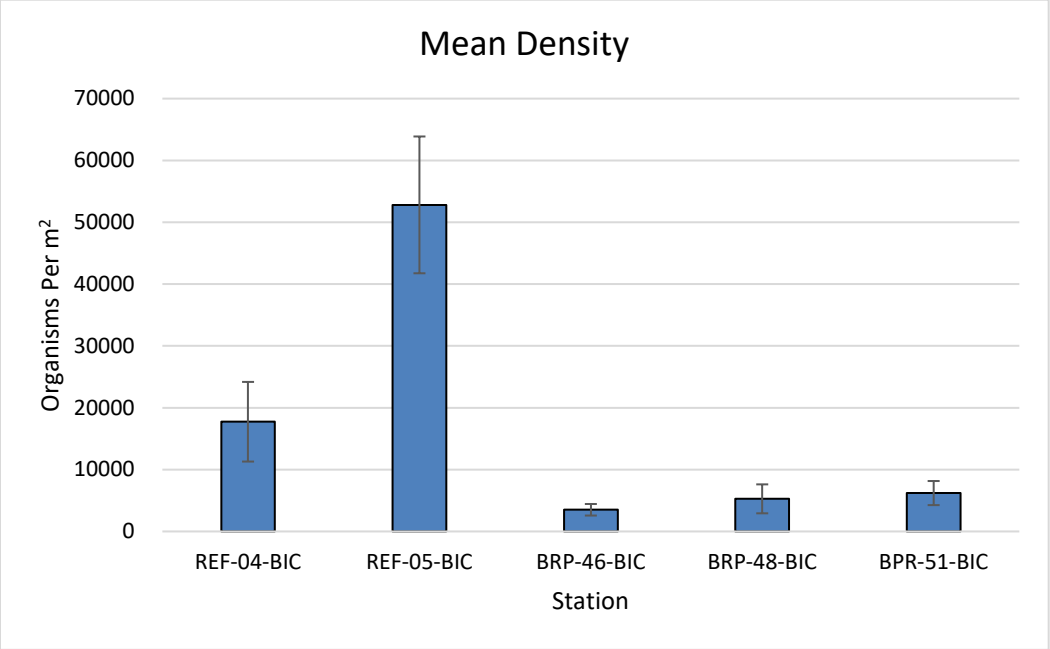
Differences in community composition among reference and MLA stations within each depth regime were relatively small by comparison, with similar relative proportions of broad taxonomic groups found in both shallow areas and all three deep areas (Figure 11).



Note: shallower stations REF-05 and BPR-51; deeper stations REF-04, BRP-46, and BRP-48

Figure 11 Percent Composition of Benthic Invertebrate Communities for August 2024

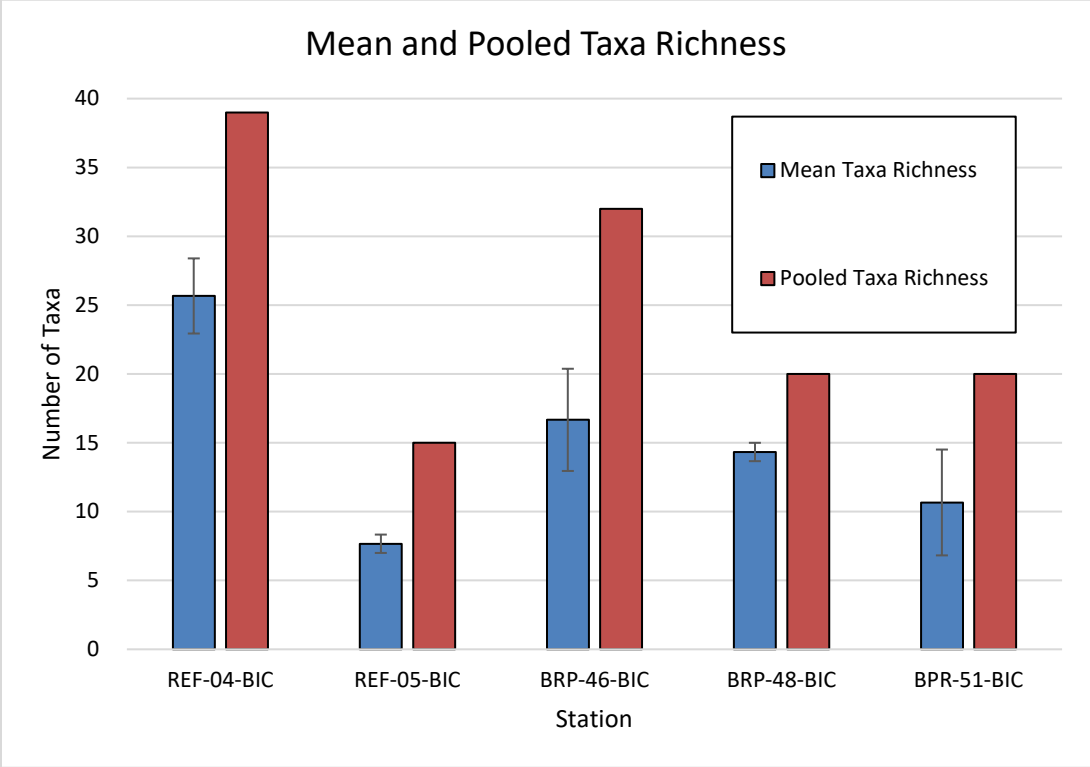
Organism density was dissimilar between the reference and the MLA station samples. Mean density in reference communities ranged between 17,744 organisms per m^2 and 52,816 organisms per m^2 and the mean density of benthic communities from MLA stations was lower and ranged between 5,273 organisms per m^2 and 6,207 organisms per m^2 (Figure 12). The differences in density likely reflects natural variability in grain size composition and total organic carbon in the sediment among the stations (see Table 7). It is not clear if there are other factors contributing to the observed differences in density.



Note: shallower stations REF-05 and BPR-51; deeper stations REF-04, BRP-46, and BRP-48

Figure 12 Benthic Invertebrate Community Density (number of organisms per m^2)

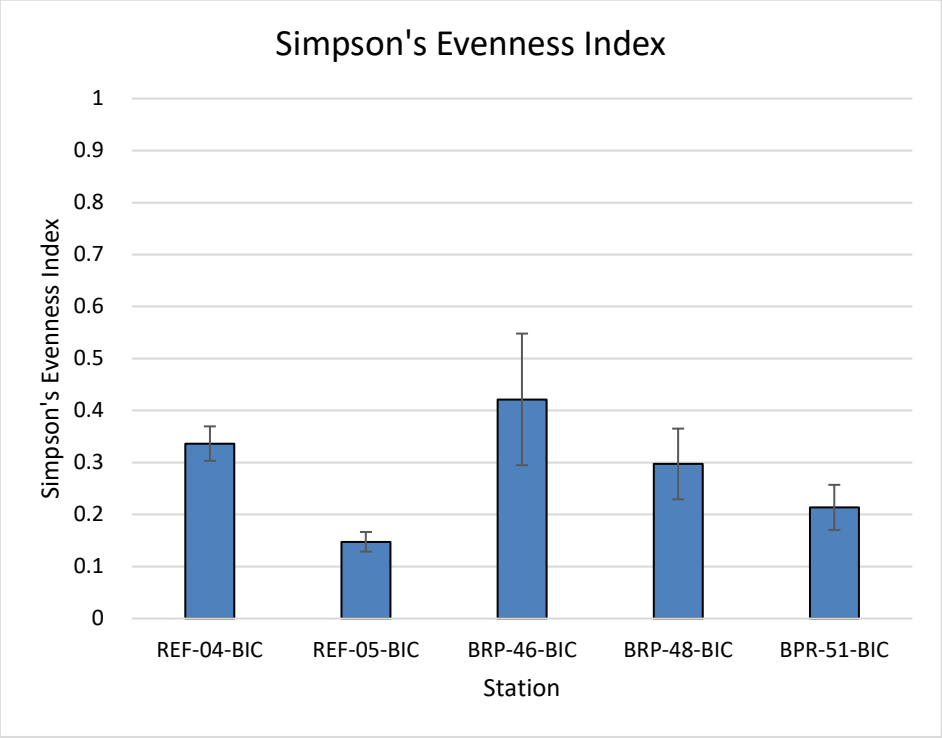
Taxa richness across all sampling stations ranged from 11 to 26 species. REF-04-BIC had the highest taxa richness with an average of 26 different taxa per replicate sample and a total of 39 distinct taxa identified in the station when replicates were pooled. REF-05-BIC had the lowest taxa richness with an average of 8 different taxa per replicate sample and a total of 15 taxa identified in the station when replicates were pooled (Figure 13). The difference in taxa richness between REF-04-BIC and REF-05-BIC is likely attributed to water depths and the grain size of sediments present at these two stations; REF-04-BIC is comprised of more silts and clays with less sand content for this deeper station compared to REF-05-BIC that is shallower and had the highest sand content, ranging from 97.4% to 98.1% sand among the replicate samples, which also had the highest sand content among all stations sampled (see Appendix F).



Note: shallower stations REF-05 and BPR-51; deeper stations REF-04, BRP-46, and BRP-48

Figure 13 Richness of Benthic Invertebrate Community

Evenness across all sampling stations ranged from 0.14 to 0.42 per sample with lowest evenness at shallow stations (Figure 14). Higher evenness values suggest that benthic communities are more diverse and stable and less likely to be impacted by environmental stressors, including pollutants.



Note: shallower stations REF-05 and BPR-51; deeper stations REF-04, BRP-46, and BRP-48

Figure 14 Simpsons Evenness Index for August 2024

4.6 Quality Assurance and Quality Control

QA/QC samples constituted approximately 20% of all water quality and sediment quality samples collected during the 2024 sampling program. A summary of QA/QC results and evaluation can be found in Appendix H and analytical laboratory reports are provided in Appendix D. The field replicate samples, field blank sample and trip blank sample were assessed as described in Section 3.6. Concentrations of all parameters analyzed in the water quality field blank and trip blank samples were below the laboratory RDLs. The exception is pH, which was reported at a level that is expected for deionized water and where pH can change depending on the holding time (field blank 6.46, trip blank 5.43 during the April sampling and field blank 5.4, trip blank 5.2 during the August sampling).

Calculated RPDs between the parent samples and its corresponding field replicate sample (Field DUP) for the April 2024 water quality sampling event were below 20% for all parameters analyzed, except for turbidity and dissolved organic carbon, and generally indicating acceptable analytical precision and field sampling technique.

Calculated RPDs between the parent samples and its corresponding field replicate sample (Field DUP) for the August 2024 water sampling event were below 20% for all parameters with the exception of total dissolved solids, turbidity, dissolved organic carbon, and total manganese. This may be due to disturbed sediment from taking consecutive samples close to the sea floor. Overall, QAQC indicating acceptable analytical precision and field sampling technique.

Calculated RPDs between the parent samples and its corresponding field replicate sample (Field DUP) for the August 2024 sediment sampling program were below 20% for all parameters with the exception of silt and barium; the barium field duplicate of 12.1 mg/kg and parent sample of 23 mg/kg had a significant difference of 47%.

Based on these QA/QC results, the water quality and sediment quality data collected are considered representative of the sites' marine water and sediment quality data for the assessment and comparison to CCME guidelines for the protection of marine aquatic life. QA/QC results indicate that the MLA and reference area samples are representative of the water and sediment being sampled and were not significantly influenced by field or laboratory methodologies.

5.0 References

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Appendix A Sampling Details of the 2024 BRP Marine Monitoring Program

Table A1 **Sampling Details of the 2024 BRP Marine Monitoring Program**

Area	site ID	Date Sampled	Latitude	Longitude	Water Depth (m)	Depth Zone	Number of Water Quality Samples Taken	Water Quality Sample Depth (m)	April 2024 Ice Depth (m)	Number of Phytoplankton Biomass Samples Taken	Water Profile Taken (Y/N)	Number of Sediment Samples Taken	Numer of Benthic Samples Taken
MLA	BRP-46	25-Apr-24	66°38'58.46"N	107°40'47.13"W	14.9	deep	2	1, 14.4	1.65	3	Y	-	-
MLA	BRP-48	25-Apr-24	66°39'0.06"N	107°40'49.99"W	13	deep	2	1, 12	1.45	3	Y	-	-
MLA	BRP-51	24-Apr-24	66°39'4.08"N	107°40'58.49"W	5.2	shallow	1	1	1.14	3	Y	-	-
Reference	REF-04	24-Apr-24	66°41'29.80"N	107°44'45.15"W	15.3	deep	2	1, 14.3	1.09	3	Y	-	-
Reference	REF-05	24-Apr-24	66°41'29.41"N	107°44'48.83"W	4.7	shallow	1	1	1.13	3	Y	-	-
MLA	BRP-46	25-Aug-24	66°38'58.46"N	107°40'47.13"W	15.7	deep	2	0, 14.9	-	3	Y	-	-
MLA	BRP-48	25-Aug-24	66°39'0.06"N	107°40'49.99"W	15.4	deep	2	0, 14.9	-	3	Y	-	-
MLA	BRP-51	25-Aug-24	66°39'4.08"N	107°40'58.49"W	5.6	shallow	1	5	-	3	Y	-	-
Reference	REF-04	25-Aug-24	66°41'29.80"N	107°44'45.15"W	15.6	deep	2	0, 14.8	-	3	Y	-	-
Reference	REF-05	25-Aug-24	66°41'29.41"N	107°44'48.83"W	5.3	shallow	1	5.2	-	3	Y	-	-
MLA	BRP-46	23-Aug-24	66°38'58.46"N	107°40'47.13"W	15.7	deep	-	-	-	-	-	3	3
MLA	BRP-48	26-Aug-24	66°39'0.06"N	107°40'49.99"W	15.4	deep	-	-	-	-	-	3	3
MLA	BRP-51	24-Aug-24	66°39'4.08"N	107°40'58.49"W	5.6	shallow	-	-	-	-	-	3	3
Reference	REF-04	22-Aug-24	66°41'29.80"N	107°44'45.15"W	15.6	deep	-	-	-	-	-	3	3
Reference	REF-05	22-Aug-24	66°41'29.41"N	107°44'48.83"W	5.3	shallow	-	-	-	-	-	3	3

Appendix B Physical Oceanographic Profile Data

Table B1 April 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
		13.03	0.61	18.96	69.05	8.62	0.00	7.96
		12.45	0.63	18.94	69.01	8.61	0.00	7.96
		12.42	0.64	18.94	69.01	8.61	0.00	7.96
		12.40	0.64	18.94	69.01	8.61	0.00	7.96
		12.37	0.64	18.94	69.01	8.60	0.00	7.96
		11.74	0.66	18.93	68.97	8.60	0.00	7.97
		11.62	0.67	18.93	68.97	8.60	0.00	7.97
		11.05	0.69	18.87	69.07	8.61	0.00	7.97
		10.98	0.69	18.87	69.08	8.61	0.00	7.97
		10.49	0.71	18.84	69.16	8.63	0.00	7.97
		10.39	0.72	18.83	69.17	8.63	0.00	7.97
		10.16	0.73	18.79	69.28	8.64	0.23	7.98
		10.10	0.73	18.79	69.30	8.64	0.26	7.98
		9.28	0.75	18.72	69.68	8.69	0.03	7.99
		9.24	0.75	18.71	69.70	8.70	0.02	7.99
		9.19	0.75	18.71	69.72	8.70	0.01	7.99
		8.74	0.76	18.65	70.21	8.77	0.01	8.00
		8.67	0.76	18.64	70.27	8.78	0.00	8.00
		7.99	0.76	18.49	70.78	8.85	0.00	8.02
		7.88	0.76	18.47	70.87	8.86	0.00	8.02
		7.28	0.76	18.15	71.24	8.91	0.00	8.03
		7.24	0.76	18.13	71.27	8.92	0.00	8.03
		7.20	0.76	18.12	71.29	8.92	0.00	8.03
		6.54	0.76	18.04	71.40	8.98	0.00	8.05
		6.50	0.76	18.03	71.41	8.98	0.00	8.05
		6.46	0.76	18.02	71.42	8.98	0.00	8.05
		6.02	0.76	17.95	72.72	9.19	0.00	8.06
MLA	BRP-46	5.99	0.76	17.94	72.78	9.20	0.00	8.06
		5.56	0.76	17.96	74.54	9.46	0.00	8.07
		5.48	0.76	17.96	74.85	9.51	0.00	8.08
		5.15	0.75	18.01	76.36	9.72	0.00	8.08
		5.10	0.75	18.02	76.56	9.75	0.00	8.08
		5.08	0.75	18.02	76.66	9.77	0.00	8.08
		4.77	0.73	18.01	78.08	9.96	0.00	8.09
		4.37	0.73	18.09	79.58	10.18	0.00	8.09
		4.34	0.73	18.09	79.67	10.19	0.00	8.09
		4.30	0.73	18.10	79.84	10.21	0.00	8.09
		3.95	0.72	18.06	81.12	10.39	0.00	8.09
		3.89	0.72	18.06	81.36	10.42	0.00	8.09
		3.48	0.69	18.11	82.44	10.57	0.00	8.09
		3.43	0.69	18.12	82.58	10.59	0.00	8.09
		3.10	0.68	18.09	83.40	10.70	0.00	8.09
		3.06	0.68	18.09	83.52	10.72	0.00	8.09
		3.04	0.68	18.09	83.57	10.72	0.00	8.10
		2.60	0.67	18.14	84.40	10.84	0.00	8.10
		2.58	0.67	18.15	84.45	10.85	0.00	8.10
		2.55	0.67	18.15	84.50	10.85	0.00	8.10
		2.53	0.67	18.15	84.55	10.86	0.00	8.10
		2.16	0.66	18.16	85.19	10.95	0.00	8.10
		2.11	0.66	18.16	85.28	10.96	0.00	8.10
		1.66	0.64	18.19	85.90	11.05	0.00	8.10
		1.58	0.64	18.19	86.02	11.06	0.00	8.10
		1.13	0.63	18.18	86.53	11.14	0.00	8.10
		1.10	0.63	18.18	86.57	11.14	0.00	8.10
		1.07	0.63	18.18	86.60	11.15	0.00	8.10

Table B1 April 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
MLA	BRP-48	12.09	1.04	19.01	69.71	8.73	0.00	7.99
		11.30	1.04	19.00	69.71	8.73	0.00	7.99
		11.24	1.04	19.00	69.71	8.73	0.00	7.99
		11.11	1.04	18.95	69.67	8.73	0.00	7.99
		11.05	1.05	18.95	69.66	8.73	0.00	7.99
		11.06	1.05	18.93	69.90	8.73	0.00	8.00
		10.12	1.04	18.93	70.07	8.75	0.00	8.00
		10.08	1.04	18.93	70.08	8.76	0.00	8.00
		10.04	1.04	18.93	70.09	8.76	0.00	8.00
		10.01	1.05	18.84	70.35	8.78	0.00	8.01
		9.99	1.05	18.84	70.37	8.78	0.00	8.01
		9.96	1.04	18.81	70.74	8.82	0.00	8.01
		9.01	1.03	18.78	71.11	8.86	0.00	8.02
		8.97	1.03	18.78	71.13	8.87	0.00	8.02
		8.86	0.92	18.61	71.70	8.87	0.00	8.04
		7.97	0.88	18.15	72.43	9.01	0.00	8.05
		7.89	0.87	18.11	72.53	9.02	0.00	8.05
		7.83	0.66	18.02	72.31	9.14	0.00	8.08
		6.91	0.44	18.13	75.93	9.44	0.00	8.09
		6.87	0.43	18.14	76.02	9.46	0.00	8.09
		6.83	0.43	18.14	76.12	9.47	0.00	8.09
		6.73	0.34	18.15	77.24	9.69	0.00	8.09
		6.71	0.34	18.15	77.32	9.70	0.00	8.09
		6.69	0.33	18.15	77.39	9.72	0.00	8.09
		6.45	0.23	18.22	80.99	10.18	0.00	8.10
		6.42	0.22	18.23	81.27	10.22	0.00	8.10
		5.58	0.18	18.23	82.19	10.41	0.00	8.10
		5.54	0.18	18.23	82.25	10.42	0.00	8.10
		5.50	0.17	18.23	82.32	10.44	0.00	8.10
		5.48	0.13	18.24	83.50	10.58	0.00	8.10
		5.45	0.13	18.24	83.64	10.59	0.00	8.10
		4.61	0.11	18.25	84.37	10.75	0.00	8.10
		4.58	0.11	18.26	84.43	10.76	0.00	8.10
		4.54	0.11	18.26	84.48	10.77	0.00	8.10
		4.50	0.11	18.26	84.53	10.78	0.00	8.10
		4.49	0.08	18.27	85.13	10.88	0.00	8.10
		4.45	0.05	18.28	86.10	11.00	0.00	8.11
		3.38	0.04	18.29	86.59	11.10	0.00	8.11
		3.33	0.04	18.29	86.63	11.11	0.00	8.11
		3.28	0.04	18.29	86.66	11.11	0.00	8.11
		3.24	0.02	18.29	87.11	11.19	0.00	8.11
		2.19	-0.01	18.31	87.92	11.32	0.00	8.11
		2.15	-0.01	18.31	87.94	11.32	0.00	8.11
		2.10	-0.01	18.31	87.96	11.33	0.00	8.11
		2.09	-0.02	18.29	88.34	11.37	0.00	8.11
		2.07	-0.02	18.30	88.71	11.43	0.00	8.11
		0.77	-0.03	18.32	88.87	11.47	0.00	8.11
	BRP-51	3.32	-0.25	18.44	90.38	11.80	0.00	8.07
		3.14	-0.26	18.39	90.46	11.81	0.00	8.07
		3.12	-0.26	18.39	90.47	11.81	0.00	8.07
		2.45	-0.26	18.44	90.51	11.82	0.00	8.07
		2.38	-0.26	18.44	90.52	11.82	0.00	8.07
		1.83	-0.25	18.41	90.48	11.80	0.00	8.07
		1.75	-0.25	18.41	90.48	11.80	0.00	8.07
		1.72	-0.25	18.41	90.48	11.80	0.00	8.07
		1.06	-0.25	18.44	90.44	11.80	0.00	8.07
		1.02	-0.24	18.44	90.44	11.80	0.00	8.07

Table B1 April 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
MLA	REF-04	13.79	0.93	19.02	68.58	8.64	0.06	7.96
		13.32	0.91	19.19	68.63	8.66	2.24	7.96
		13.28	0.91	19.20	68.63	8.66	2.43	7.96
		12.71	0.92	19.02	68.62	8.64	0.26	7.96
		12.64	0.92	19.01	68.62	8.64	0.14	7.96
		12.18	0.93	19.16	68.66	8.66	4.69	7.96
		12.09	0.93	19.17	68.67	8.66	5.20	7.96
		11.66	0.93	18.99	68.82	8.67	0.54	7.97
		11.60	0.93	18.97	68.83	8.67	0.29	7.97
		11.08	0.92	19.12	68.97	8.70	4.10	7.97
		11.05	0.92	19.12	68.97	8.70	4.19	7.97
		11.01	0.92	19.12	68.98	8.70	4.28	7.97
		10.98	0.92	19.13	68.99	8.70	4.37	7.97
		10.49	0.93	18.94	69.12	8.71	0.46	7.97
		9.96	0.93	19.05	69.43	8.76	4.11	7.98
		9.86	0.93	19.06	69.48	8.76	4.43	7.98
		9.40	0.92	18.83	69.68	8.78	0.46	7.98
		8.67	0.92	18.89	70.00	8.83	2.47	7.99
		8.63	0.92	18.89	70.02	8.84	2.50	7.99
		8.59	0.92	18.89	70.04	8.84	2.52	7.99
		8.55	0.92	18.89	70.05	8.84	2.55	7.99
		7.82	0.93	18.67	70.45	8.89	0.27	8.00
		7.77	0.93	18.66	70.48	8.89	0.21	8.00
		7.72	0.93	18.65	70.50	8.89	0.15	8.00
		7.14	0.90	18.15	70.15	8.87	1.17	8.02
		7.10	0.90	18.12	70.14	8.87	1.18	8.02
		7.06	0.90	18.09	70.13	8.86	1.18	8.02
		7.01	0.90	18.07	70.12	8.86	1.18	8.02
		6.40	0.81	18.02	70.71	8.99	0.13	8.04
		5.55	0.66	18.10	72.78	9.30	0.49	8.05
		5.50	0.65	18.10	72.88	9.31	0.49	8.05
		5.46	0.64	18.11	72.99	9.33	0.48	8.05
		5.41	0.64	18.11	73.10	9.35	0.48	8.06
		4.60	0.55	17.99	74.96	9.60	0.05	8.06
		4.55	0.55	17.99	75.08	9.61	0.04	8.06
		4.50	0.54	17.99	75.21	9.63	0.03	8.06
		3.77	0.47	18.12	76.86	9.87	0.30	8.07
		3.72	0.47	18.12	76.97	9.88	0.30	8.07
		3.67	0.46	18.13	77.08	9.90	0.31	8.07
		3.62	0.46	18.13	77.19	9.91	0.31	8.07
		2.82	0.39	18.04	78.95	10.15	0.03	8.07
		2.77	0.39	18.04	79.06	10.16	0.03	8.07
		2.71	0.38	18.04	79.18	10.18	0.02	8.07
		1.89	0.30	18.21	80.62	10.39	3.53	8.08
		1.84	0.29	18.22	80.72	10.41	3.69	8.08
		1.79	0.28	18.22	80.82	10.42	3.86	8.08
		1.73	0.28	18.23	80.92	10.44	4.02	8.08
		1.00	0.22	18.09	82.03	10.58	0.44	8.08
	REF-05	4.63	-0.26	18.33	90.43	11.81	0.00	7.97
		4.49	-0.24	18.43	90.38	11.81	0.29	7.97
		3.62	-0.25	18.33	90.40	11.81	0.04	7.97
		3.58	-0.24	18.32	90.40	11.80	0.03	7.97
		3.53	-0.24	18.32	90.41	11.80	0.02	7.97
		3.49	-0.24	18.32	90.41	11.80	0.02	7.97
		2.68	-0.26	18.43	90.45	11.82	0.01	7.97
		2.62	-0.26	18.43	90.45	11.82	0.00	7.97
		2.57	-0.26	18.43	90.45	11.82	0.00	7.97
		1.65	-0.26	18.36	90.48	11.82	0.00	7.97
		1.59	-0.26	18.36	90.48	11.82	0.00	7.97
		1.53	-0.27	18.35	90.48	11.82	0.00	7.97
		1.47	-0.27	18.35	90.48	11.82	0.00	7.97

Table B2 August 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
MLA	BRP-46	15.65	1.01	28.53	71.83	8.30	0.00	7.75
		15.63	1.05	28.51	71.86	8.30	0.00	7.75
		15.87	1.05	28.53	71.91	8.31	0.00	7.75
		15.34	1.04	28.51	71.94	8.31	0.00	7.75
		15.05	1.05	28.45	72.13	8.33	0.00	7.76
		14.56	1.09	28.34	72.89	8.38	0.00	7.76
		14.18	1.30	27.89	73.95	8.44	0.00	7.77
		13.44	1.67	27.50	74.96	8.52	0.00	7.79
		13.35	1.73	27.44	75.11	8.53	0.00	7.79
		13.04	1.94	27.05	76.49	8.64	0.00	7.80
		12.99	1.96	27.01	76.63	8.65	0.00	7.80
		12.43	2.32	26.76	77.39	8.69	0.00	7.81
		12.33	2.39	26.70	77.59	8.70	0.00	7.81
		11.91	2.66	26.36	78.62	8.74	0.00	7.82
		11.36	3.13	25.19	81.76	8.92	0.00	7.85
		11.28	3.19	25.05	82.16	8.95	0.00	7.85
		10.93	4.17	24.83	83.11	9.00	0.00	7.87
		10.85	4.34	24.73	83.45	9.01	0.00	7.87
		10.50	4.63	24.57	84.20	9.06	0.00	7.88
		10.44	4.72	24.53	84.34	9.07	0.00	7.88
		9.91	4.94	24.24	85.21	9.12	0.00	7.89
		9.83	4.98	24.20	85.35	9.13	0.00	7.89
		9.62	5.23	23.63	87.19	9.23	0.00	7.91
		9.57	5.28	23.54	87.45	9.25	0.00	7.91
		9.15	5.85	23.41	88.25	9.29	0.00	7.92
		9.09	5.93	23.36	88.44	9.30	0.00	7.92
		8.49	6.14	23.28	88.74	9.31	0.00	7.92
		8.15	6.33	23.21	89.20	9.35	0.00	7.92
		8.13	6.34	23.21	89.22	9.35	0.00	7.93
		8.11	6.35	23.21	89.24	9.35	0.00	7.93
		8.09	6.35	23.20	89.26	9.35	0.00	7.93
		7.33	6.40	23.18	89.71	9.39	0.00	7.93
		7.23	6.41	23.17	89.78	9.39	0.00	7.93
		6.65	6.46	23.16	89.92	9.40	0.00	7.93
		6.58	6.47	23.16	89.94	9.41	0.00	7.93
		6.02	6.48	23.11	90.07	9.41	0.00	7.93
		5.93	6.49	23.10	90.09	9.41	0.00	7.93
		5.13	6.54	23.03	90.38	9.43	0.00	7.93
		5.09	6.54	23.03	90.40	9.43	0.00	7.93
		4.50	6.62	22.99	90.56	9.45	0.00	7.93
		4.47	6.63	22.98	90.57	9.45	0.00	7.93
		3.48	6.63	22.91	90.75	9.45	0.00	7.93
		3.43	6.63	22.91	90.76	9.45	0.00	7.93
		2.58	6.72	22.22	91.65	9.49	0.00	7.94
		2.49	6.72	22.17	91.73	9.49	0.00	7.94
		2.44	6.73	22.14	91.76	9.50	0.00	7.94
		2.40	6.73	22.11	91.80	9.50	0.00	7.94
		1.71	7.14	21.22	94.37	9.62	0.00	7.99
		1.63	7.18	21.13	94.60	9.63	0.00	7.99
		1.59	7.19	21.08	94.71	9.63	0.00	7.99
		0.81	8.08	20.68	96.00	9.67	0.00	8.02

Table B2 August 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
		14.67	1.11	28.47	69.83	8.15	0.00	7.69
		14.14	1.13	28.48	69.50	8.11	0.00	7.70
		14.05	1.13	28.48	69.48	8.10	0.00	7.70
		13.41	1.12	28.34	69.72	8.11	0.00	7.70
		13.31	1.12	28.32	69.75	8.11	0.00	7.70
		12.73	1.26	28.11	70.39	8.16	0.00	7.71
		12.63	1.28	28.08	70.47	8.16	0.00	7.71
		11.94	1.47	27.64	71.85	8.26	0.00	7.72
		11.87	1.49	27.60	71.97	8.26	0.00	7.73
		11.32	1.92	26.90	74.05	8.42	0.00	7.74
		11.25	1.96	26.83	74.25	8.44	0.00	7.75
		11.19	2.00	26.76	74.46	8.45	0.00	7.75
		10.80	2.53	25.83	77.44	8.63	0.00	7.77
		10.73	2.61	25.69	77.88	8.65	0.00	7.78
		10.38	3.63	25.16	79.46	8.75	0.00	7.81
		10.32	3.78	25.05	79.78	8.77	0.00	7.81
		9.81	4.29	24.61	82.10	8.96	0.00	7.83
		9.73	4.40	24.53	82.45	8.99	0.00	7.83
		9.25	4.83	23.89	84.04	9.05	0.00	7.86
		9.17	4.90	23.79	84.32	9.06	0.00	7.86
		8.65	5.55	23.64	85.70	9.17	0.00	7.88
		8.57	5.65	23.59	85.94	9.19	0.00	7.88
		8.02	5.87	23.43	86.80	9.24	0.00	7.89
		7.93	5.92	23.40	86.97	9.25	0.00	7.89
MLA	BRP-48	7.33	6.14	23.18	88.14	9.35	0.00	7.90
		7.26	6.17	23.16	88.26	9.36	0.00	7.90
		6.68	6.39	22.59	89.84	9.46	0.00	7.91
		6.59	6.42	22.52	90.06	9.48	0.00	7.91
		6.07	6.82	22.02	91.90	9.57	0.00	7.95
		5.98	6.88	21.94	92.18	9.59	0.00	7.95
		5.41	7.46	21.37	94.26	9.72	0.00	7.98
		5.37	7.49	21.34	94.37	9.73	0.00	7.98
		5.28	7.57	21.25	94.70	9.75	0.00	7.99
		4.64	8.08	20.38	97.02	9.91	0.00	8.03
		4.54	8.16	20.25	97.39	9.94	0.00	8.04
		3.86	8.75	19.14	100.71	10.10	0.00	8.07
		3.79	8.81	19.02	101.04	10.12	0.00	8.08
		3.21	9.88	18.66	102.34	10.14	0.00	8.11
		3.18	9.93	18.63	102.44	10.15	0.00	8.12
		3.09	10.08	18.54	102.73	10.16	0.00	8.12
		2.51	10.59	18.49	103.16	10.17	0.00	8.14
		2.48	10.63	18.48	103.20	10.17	0.00	8.14
		1.78	10.84	18.43	103.47	10.17	0.00	8.14
		1.75	10.86	18.43	103.49	10.17	0.00	8.14
		1.71	10.87	18.42	103.50	10.17	0.00	8.14
		1.68	10.89	18.42	103.52	10.17	0.00	8.14
		1.05	11.00	18.36	103.80	10.18	0.00	8.15
		0.98	11.01	18.35	103.83	10.18	0.00	8.15
		0.94	11.02	18.35	103.84	10.18	0.00	8.15

Table B2 August 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
MLA	BRP-51	5.80	6.48	23.19	91.16	9.51	0.00	7.88
		5.81	6.48	23.20	91.17	9.51	0.00	7.88
		5.37	6.47	23.19	91.11	9.50	0.00	7.88
		5.33	6.47	23.19	91.10	9.50	0.00	7.88
		4.87	6.46	23.16	91.14	9.50	0.00	7.89
		4.82	6.46	23.16	91.14	9.50	0.00	7.89
		4.79	6.46	23.16	91.14	9.50	0.00	7.89
		4.30	6.51	23.11	91.52	9.52	0.00	7.89
		4.28	6.51	23.10	91.54	9.52	0.00	7.89
		4.25	6.51	23.10	91.55	9.52	0.00	7.89
		4.23	6.51	23.10	91.57	9.53	0.00	7.89
		3.88	6.57	23.03	91.76	9.53	0.00	7.89
		3.84	6.58	23.02	91.78	9.53	0.00	7.89
		3.80	6.58	23.02	91.81	9.54	0.00	7.89
		3.46	6.66	22.90	92.37	9.57	0.00	7.90
		3.40	6.68	22.88	92.44	9.57	0.00	7.90
		2.98	6.83	22.82	92.67	9.58	0.00	7.91
		2.91	6.85	22.80	92.72	9.59	0.00	7.91
		2.54	6.92	22.69	93.02	9.61	0.00	7.91
		2.50	6.93	22.67	93.06	9.61	0.00	7.91
		2.48	6.94	22.67	93.07	9.61	0.00	7.92
		1.97	7.02	22.58	93.35	9.63	0.00	7.92
		1.89	7.03	22.57	93.40	9.64	0.00	7.92
		1.43	7.07	22.45	93.78	9.65	0.00	7.92
		1.40	7.07	22.45	93.80	9.66	0.00	7.92
		1.38	7.08	22.44	93.82	9.66	0.00	7.92
		1.35	7.08	22.43	93.84	9.66	0.00	7.92
		0.74	7.20	22.10	94.83	9.72	0.00	7.93
		0.71	7.21	22.08	94.87	9.72	0.00	7.93
		0.68	7.21	22.07	94.92	9.72	0.00	7.93
		0.65	7.22	22.05	94.96	9.72	0.00	7.93
		0.27	7.49	21.99	95.07	9.71	0.00	7.95
	REF-04	14.10	2.26	27.19	78.70	8.96	0.00	7.79
		13.58	2.24	27.22	78.66	8.96	0.00	7.79
		13.54	2.24	27.22	78.66	8.96	0.00	7.79
		13.52	2.24	27.23	78.66	8.96	0.00	7.79
		13.17	2.22	27.17	78.83	8.97	0.00	7.79
		13.15	2.22	27.17	78.84	8.97	0.00	7.79
		13.08	2.22	27.16	78.85	8.97	0.00	7.79
		12.62	2.26	27.11	78.83	8.95	0.00	7.79
		12.55	2.27	27.10	78.83	8.95	0.00	7.79
		12.27	2.36	26.92	79.31	8.98	0.00	7.80
		12.22	2.38	26.90	79.36	8.98	0.00	7.80
		11.98	2.52	26.45	80.26	9.04	0.00	7.80
		11.94	2.54	26.38	80.38	9.04	0.00	7.80
		11.68	2.88	25.59	81.82	9.07	0.00	7.82
		11.63	2.94	25.43	82.11	9.08	0.00	7.82
		11.35	3.75	24.93	83.02	9.10	0.00	7.83
		11.31	3.86	24.83	83.20	9.11	0.00	7.84
		10.91	4.35	24.60	83.61	9.11	0.00	7.85
		10.84	4.45	24.54	83.71	9.11	0.00	7.85
		10.46	4.70	24.34	84.37	9.14	0.00	7.86
		10.44	4.72	24.32	84.40	9.14	0.00	7.86
		10.40	4.76	24.30	84.47	9.15	0.00	7.86
		10.08	4.99	23.86	85.57	9.20	0.00	7.87
		10.06	5.00	23.83	85.62	9.20	0.00	7.87
		10.04	5.02	23.81	85.67	9.20	0.00	7.87
		10.02	5.03	23.79	85.73	9.21	0.00	7.87
		9.79	5.45	23.34	86.71	9.25	0.00	7.89
		9.77	5.47	23.32	86.77	9.25	0.00	7.89
		9.73	5.54	23.24	86.94	9.26	0.00	7.89
		9.53	5.93	22.80	87.69	9.29	0.00	7.90
		9.50	5.98	22.75	87.78	9.29	0.00	7.90
		9.18	6.34	22.46	88.57	9.35	0.00	7.91
		9.14	6.40	22.41	88.70	9.36	0.00	7.91
		8.82	6.59	21.30	90.78	9.44	0.00	7.93
		8.80	6.60	21.25	90.88	9.44	0.00	7.93
		8.77	6.63	21.15	91.06	9.45	0.00	7.93
		8.48	7.54	20.62	91.97	9.49	0.00	7.95
		8.43	7.66	20.50	92.18	9.50	0.00	7.96

Table B2 August 2024 Physical Oceanographic Profile Data

Area	Station	Depth (m)	Temp (°C)	Salinity (PSU)	DO (%)	DO (mg/L)	Turbidity (NTU)	pH
MLA	REF-04 (cont'd)	8.02	8.08	19.88	93.62	9.57	0.00	7.98
		7.95	8.18	19.77	93.84	9.58	0.00	7.98
		7.51	8.73	19.41	94.56	9.58	0.00	8.00
		7.44	8.81	19.34	94.72	9.59	0.00	8.00
		7.03	9.19	19.18	95.24	9.61	0.00	8.01
		6.97	9.26	19.14	95.34	9.62	0.00	8.02
		6.46	9.42	19.07	95.56	9.62	0.00	8.02
		6.38	9.46	19.05	95.61	9.62	0.00	8.03
		6.00	9.57	18.73	96.35	9.67	0.00	8.03
		5.94	9.59	18.69	96.44	9.67	0.00	8.03
		5.91	9.60	18.68	96.47	9.67	0.00	8.03
		5.45	9.83	18.20	97.58	9.71	0.00	8.05
		5.40	9.85	18.15	97.69	9.72	0.00	8.05
		5.38	9.86	18.13	97.74	9.72	0.00	8.05
		4.93	10.31	17.85	98.53	9.76	0.00	8.07
		4.88	10.35	17.81	98.63	9.76	0.00	8.08
		4.86	10.37	17.79	98.68	9.76	0.00	8.08
		4.45	10.64	17.75	98.93	9.78	0.00	8.08
		4.43	10.66	17.74	98.96	9.78	0.00	8.08
		4.40	10.68	17.74	98.98	9.78	0.00	8.09
		4.38	10.70	17.73	99.00	9.78	0.00	8.09
		3.91	10.76	17.69	99.07	9.78	0.00	8.09
		3.89	10.76	17.69	99.07	9.78	0.00	8.09
		3.86	10.77	17.69	99.08	9.78	0.00	8.09
		3.84	10.78	17.69	99.09	9.78	0.00	8.09
		3.46	10.83	17.69	99.22	9.79	0.00	8.09
		3.39	10.84	17.68	99.24	9.79	0.00	8.09
		3.37	10.85	17.68	99.25	9.79	0.00	8.09
		3.06	10.87	17.64	99.27	9.79	0.00	8.09
		3.01	10.87	17.63	99.28	9.79	0.00	8.09
		2.49	10.90	17.62	99.23	9.78	0.00	8.09
		2.41	10.91	17.62	99.22	9.78	0.00	8.09
		1.94	10.90	17.60	99.21	9.77	0.00	8.08
		1.89	10.90	17.59	99.21	9.77	0.00	8.08
		1.86	10.90	17.59	99.20	9.77	0.00	8.08
		1.42	10.95	17.59	99.12	9.76	0.00	8.08
		1.39	10.95	17.59	99.11	9.76	0.00	8.08
		1.34	10.96	17.59	99.11	9.76	0.00	8.08
		0.88	10.96	17.58	99.04	9.74	0.00	8.08
		0.81	10.97	17.58	99.02	9.74	0.00	8.08
		0.78	10.97	17.58	99.02	9.74	0.00	8.08
		0.37	10.99	17.58	98.94	9.73	0.00	8.07
		0.35	10.99	17.58	98.94	9.73	0.00	8.07
		0.32	10.99	17.58	98.93	9.73	0.00	8.07
		0.30	10.99	17.58	98.93	9.73	0.00	8.07
	REF-05	3.84	10.08	18.54	98.50	9.85	0.00	7.98
		3.83	10.08	18.54	98.52	9.85	0.00	7.98
		3.70	10.09	18.55	98.48	9.85	0.00	7.98
		3.68	10.09	18.55	98.48	9.85	0.00	7.98
		3.33	10.06	18.25	98.97	9.88	0.00	7.98
		3.32	10.06	18.24	98.99	9.88	0.00	7.98
		3.30	10.06	18.23	99.01	9.88	0.00	7.98
		3.28	10.06	18.22	99.03	9.88	0.00	7.98
		2.96	10.25	18.12	99.20	9.88	0.00	7.99
		2.92	10.26	18.10	99.23	9.89	0.00	7.99
		2.90	10.27	18.09	99.24	9.89	0.00	7.99
		2.52	10.36	18.09	99.21	9.88	0.00	7.99
		2.48	10.38	18.09	99.21	9.88	0.00	7.99
		1.95	10.39	18.04	99.03	9.86	0.00	7.99
		1.88	10.39	18.03	99.00	9.85	0.00	7.99
		1.35	10.43	18.00	98.95	9.84	0.00	7.99
		1.29	10.43	18.00	98.94	9.83	0.00	7.99
		0.77	10.49	17.67	99.15	9.83	0.00	7.99
		0.71	10.50	17.64	99.17	9.83	0.00	7.99
		0.68	10.50	17.63	99.17	9.83	0.00	7.99
		0.66	10.50	17.62	99.18	9.83	0.00	7.99

Appendix C Water Quality Analytical Results Summary

Table C1 April 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field DUP	FB	REF04S-WQ	REF04D-WQ	REF05-WQ	TB
Date Sampled				4/24/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/24/2024	4/24/2024	4/24/2024	4/24/2024
Time Sampled				2:15:00 PM	3:15:00 PM	3:45:00 PM	9:00:00 AM	9:35:00 AM	8:30:00 AM	8:15:00 AM	10:35:00 AM	11:30:00 AM	9:15:00 AM	
ALS Sample ID				YL2400339-004	YL2400339-007	YL2400339-008	YL2400339-005	YL2400339-006	YL2400339-009	YL2400339-010	YL2400339-001	YL2400339-002	YL2400339-003	YL2400339-011
Analyte	**Limit of Reporting**	**Units**	**CCME Guideline for the Protection of Aquatic Life (Marine)**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**
Physical Tests (Matrix: Water)														
Alkalinity, total (as $CaCO_3$)	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Conductivity	2.0	µS/cm		40000	39900	40900	39900	40600	40000	<2.0	40300	40500	39900	<2.0
Hardness (as $CaCO_3$), dissolved	0.60	mg/L		4850	4900	4900	4930	4980	4800	<0.60	4780	4980	4880	<0.60
Hardness (as $CaCO_3$), from total Ca/Mg	0.60	mg/L		4890	4920	5090	4910	5180	4830	<0.60	4860	5000	4860	<0.60
pH	0.10	pH units	7.0-8.7[B]	7.97	7.97	7.98	7.97	7.96	7.97	6.46	7.96	7.97	7.97	5.43
Solids, total dissolved (TDS)	10	mg/L		28600	29300	30000	28600	30200	27900	<10	28700	30100	28800	<10
Solids, total suspended (TSS)	3.0	mg/L	Narrative[B] - Clear flow: Maximum increase of 25 mg/L from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for a longer term exposure (e.g., 30-d period). High flow or turbid waters: Maximum increase of 25 mg/L from background levels at any one time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L.	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Turbidity	0.10	NTU	Narrative[B] - Clear flow: Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period). High flow or turbid waters: Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs.	0.27	0.16	0.22	0.13	0.14	0.18	<0.10	0.31	0.16	0.31	<0.10
Salinity	1.0	psu		26.5	26.4	27.2	26.4	26.9	26.5	<1.0	26.7	26.9	26.4	<1.0
Anions and Nutrients (Matrix: Water)														
Ammonia, total (as N)	0.0050	mg/L		<0.0050	<0.0050	0.0057	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide	0.050	mg/L		52.1	43.8	49.8	51.9	53.4	50.6	<0.050	51.6	53.3	52.3	<0.050
Chloride	0.50	mg/L		14800	12500	14000	14600	15100	14600	<0.50	14500	15000	14700	<0.50
Fluoride	0.020	mg/L		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.020	<2.00	<2.00	<2.00	<0.020
Nitrate (as N)	0.0050	mg/L	1,500[A], 200[B]	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.0050	<0.500	<0.500	<0.500	<0.0050
Nitrite (as N)	0.0010	mg/L		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.0010	<0.100	<0.100	<0.100	<0.0010
Nitrogen, total	0.030	mg/L		<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.030	<0.150	<0.150	<0.150	<0.030
Phosphate, ortho-, dissolved (as P)	0.0010	mg/L		0.0355	0.0353	0.0412	0.0351	0.0425	0.035	<0.0010	0.0332	0.0399	0.0363	<0.0010
Phosphorous, total	0.0020	mg/L		0.041	0.0409	0.0468	0.0409	0.0474	0.0406	<0.0020	0.0409	0.0465	0.0432	<0.0020
Silicate (as SiO2)	0.50	mg/L		1.32	1.26	1.47	1.32	1.49	1.25	<0.50	1.3	1.5	1.51	<0.50
Sulfate (as SO_4)	0.30	mg/L		2110	1800	1980	2080	2150	2050	<0.30	2070	2120	2110	<0.30
Organic / Inorganic Carbon (Matrix: Water)														
Carbon, dissolved organic (DOC)	0.50	mg/L		1.55	1.79	2.48	1.31	1.31	2.18	<0.50	1.74	1.22	1.69	<0.50
Carbon, total organic (TOC)	0.50	mg/L		1.75	1.45	1.09	1.48	1.4	1.45	<0.50	1.78	1.1	1.59	<0.50
Total Sulfides (Matrix: Water)														
Sulfide, total (as S)	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide, total (as H_2S)	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C1 April 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field DUP	FB	REF04S-WQ	REF04D-WQ	REF05-WQ	TB
Date Sampled				4/24/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/24/2024	4/24/2024	4/24/2024	4/24/2024
Time Sampled				2:15:00 PM	3:15:00 PM	3:45:00 PM	9:00:00 AM	9:35:00 AM	8:30:00 AM	8:15:00 AM	10:35:00 AM	11:30:00 AM	9:15:00 AM	
ALS Sample ID				YL2400339-004	YL2400339-007	YL2400339-008	YL2400339-005	YL2400339-006	YL2400339-009	YL2400339-010	YL2400339-001	YL2400339-002	YL2400339-003	YL2400339-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Total Metals (Matrix: Water)														
Aluminum, total	0.0030	mg/L		<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0030	<0.0600	<0.0600	<0.0600	<0.0030
Antimony, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Arsenic, total	0.00010	mg/L	0.0125[B]	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Barium, total	0.00010	mg/L		0.0119	0.0119	0.0107	0.0118	0.0107	0.0114	<0.00010	0.0116	0.0104	0.0122	<0.00010
Beryllium, total	0.000100	mg/L		<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000100	<0.000400	<0.000400	<0.000400	<0.000100
Bismuth, total	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Boron, total	0.010	mg/L		3.61	3.55	3.74	3.65	3.75	3.64	<0.010	3.59	3.65	3.58	<0.010
Cadmium, total	0.0000050	mg/L	0.00012[B]	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.0000050	<0.000100	<0.000100	<0.000100	<0.0000050
Calcium, total	0.050	mg/L		311	323	339	316	326	315	<0.050	311	319	312	<0.050
Cesium, total	0.000010	mg/L		0.000216	0.000206	0.000205	<0.000200	0.000205	<0.000200	<0.000010	0.000208	0.000212	<0.000200	<0.000010
Chromium, total	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Cobalt, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Copper, total	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Gallium, total	-	-												
Iron, total	0.010	mg/L		<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.010	<0.200	<0.200	<0.200	<0.010
Lead, total	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Lithium, total	0.0010	mg/L		0.136	0.135	0.142	0.134	0.14	0.136	<0.0010	0.132	0.135	0.132	<0.0010
Magnesium, total	0.0050	mg/L		1000	1000	1030	1000	1060	982	<0.0050	991	1020	991	<0.0050
Manganese, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	0.00232	<0.00200	0.00343	<0.00010
Mercury, total	0.0000050	mg/L	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	0.000050	mg/L		0.008	0.00842	0.00853	0.00829	0.00906	0.00869	<0.000050	0.0081	0.00898	0.00821	<0.000050
Nickel, total	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Phosphorous, total	0.050	mg/L	Guidance Framework[B]	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.050	<1.00	<1.00	<1.00	<0.050
Potassium, total	0.050	mg/L		324	333	338	323	342	317	<0.050	314	331	318	<0.050
Rhenium, total	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rubidium, total	0.00020	mg/L		0.0794	0.081	0.0797	0.0788	0.0804	0.0767	<0.00020	0.0819	0.0819	0.0785	<0.00020
Selenium, total	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Silicon, total	0.10	mg/L		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.10	<2.00	<2.00	<2.00	<0.10
Silver, total	0.000010	mg/L	0.0075[A]	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000010	<0.000200	<0.000200	<0.000200	<0.000010
Sodium, total	0.050	mg/L		8410	8610	8830	8510	8980	8450	<0.050	8370	8580	8430	<0.050
Strontium, total	0.00020	mg/L		5.85	5.87	6.21	5.76	6.18	5.94	<0.00020	5.71	5.96	5.75	<0.00020
Sulfur, total	0.50	mg/L		782	767	815	773	823	770	<0.50	764	768	772	<0.50
Tellurium, total	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00020	<0.00400	<0.00400	<0.00400	<0.00020
Thallium, total	0.000010	mg/L		<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000010	<0.000200	<0.000200	<0.000200	<0.000010
Thorium, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Tin, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Titanium, total	0.00030	mg/L		<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00030	<0.00600	<0.00600	<0.00600	<0.00030
Tungsten, total	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Uranium, total	0.000010	mg/L		0.00235	0.00219	0.00235	0.00228	0.00224	0.00226	<0.000010	0.00239	0.00243	0.00235	<0.000010
Vanadium, total	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Yttrium, total	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc, total	0.0030	mg/L		<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0030	<0.0600	<0.0600	<0.0600	<0.0030
Zirconium, total	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00020	<0.00400	<0.00400	<0.00400	<0.00020

Table C1 April 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field DUP	FB	REF04S-WQ	REF04D-WQ	REF05-WQ	TB
Date Sampled				4/24/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/24/2024	4/24/2024	4/24/2024	4/24/2024
Time Sampled				2:15:00 PM	3:15:00 PM	3:45:00 PM	9:00:00 AM	9:35:00 AM	8:30:00 AM	8:15:00 AM	10:35:00 AM	11:30:00 AM	9:15:00 AM	
ALS Sample ID				YL2400339-004	YL2400339-007	YL2400339-008	YL2400339-005	YL2400339-006	YL2400339-009	YL2400339-010	YL2400339-001	YL2400339-002	YL2400339-003	YL2400339-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Dissolved Metals (Matrix: Water)														
Aluminum, dissolved	0.0010	mg/L		<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0010	<0.0200	<0.0200	<0.0200	<0.0010
Antimony, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Arsenic, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Barium, dissolved	0.00010	mg/L		0.0114	0.0118	0.0104	0.0117	0.0101	0.0114	<0.00010	0.011	0.01	0.0116	<0.00010
Beryllium, dissolved	0.000100	mg/L		<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000100	<0.000400	<0.000400	<0.000400	<0.000100
Bismuth, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Boron, dissolved	0.010	mg/L		3.3	3.3	3.3	3.32	3.31	3.2	<0.010	3.21	3.4	3.29	<0.010
Cadmium, dissolved	0.0000050	mg/L		<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.0000050	<0.000100	<0.000100	<0.000100	<0.0000050
Calcium,dissolved	0.050	mg/L		304	313	315	310	311	304	<0.050	298	312	307	<0.050
Cesium, dissolved	0.000010	mg/L		0.000292	0.000321	0.000274	0.000301	0.00029	0.000287	<0.000010	0.00021	0.000256	0.000232	<0.000010
Chromium, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Cobalt, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Copper, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00020	<0.00400	<0.00400	<0.00400	<0.00020
Gallium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron, dissolved	0.010	mg/L		<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.010	<0.200	<0.200	<0.200	<0.010
Lead, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Lithium, dissolved	0.0010	mg/L		0.138	0.139	0.138	0.139	0.14	0.134	<0.0010	0.138	0.145	0.141	<0.0010
Magnesium, dissolved	0.0050	mg/L		993	1000	1000	1010	1020	981	<0.0050	981	1020	998	<0.0050
Manganese, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00218	<0.00010	<0.00200	<0.00200	0.00259	<0.00010
Mercury, dissolved	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	0.000050	mg/L		0.00836	0.00832	0.00886	0.00838	0.00844	0.00847	<0.000050	0.00829	0.00875	0.0087	<0.000050
Nickel, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Phosphorous, dissolved	0.050	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.050	<1.00	<1.00	<1.00	<0.050
Potassium, dissolved	0.050	mg/L		315	320	321	323	324	316	<0.050	307	321	316	<0.050
Rhenium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rubidium, dissolved	0.00020	mg/L		0.0831	0.0833	0.0849	0.0854	0.0847	0.0844	<0.00020	0.0825	0.0826	0.0811	<0.00020
Selenium, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000050	<0.00100	<0.00100	<0.00100	<0.000050
Silicon, dissolved	0.050	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.050	<1.00	<1.00	<1.00	<0.050
Silver, dissolved	0.000010	mg/L		<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000010	<0.000200	<0.000200	<0.000200	<0.000010
Sodium, dissolved	0.050	mg/L		8260	8270	8270	8400	8410	8080	<0.050	8190	8560	8300	<0.050
Strontium, dissolved	0.00020	mg/L		5.89	5.93	6.09	5.88	6.03	5.83	<0.00020	5.72	6	5.88	<0.00020
Sulfur, dissolved	0.50	mg/L		824	814	803	813	824	815	<0.50	782	827	806	<0.50
Tellurium, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00020	<0.00400	<0.00400	<0.00400	<0.00020
Thallium, dissolved	0.000010	mg/L		<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000010	<0.000200	<0.000200	<0.000200	<0.000010
Thorium, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Tin, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Titanium, dissolved	0.00030	mg/L		<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00030	<0.00600	<0.00600	<0.00600	<0.00030
Tungsten, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00010	<0.00200	<0.00200	<0.00200	<0.00010
Uranium, dissolved	0.000010	mg/L		0.00251	0.00237	0.00253	0.00246	0.0025	0.00244	<0.000010	0.0025	0.00249	0.00243	<0.000010
Vanadium, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.00050	<0.0100	<0.0100	<0.0100	<0.00050
Yttrium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc, dissolved	0.0010	mg/L		<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0010	<0.0200	<0.0200	<0.0200	<0.0010
Zirconium, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00020	<0.00400	<0.00400	<0.00400	<0.00020

Table C1 April 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field DUP	FB	REF04S-WQ	REF04D-WQ	REF05-WQ	TB
Date Sampled				4/24/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/25/2024	4/24/2024	4/24/2024	4/24/2024	4/24/2024
Time Sampled				2:15:00 PM	3:15:00 PM	3:45:00 PM	9:00:00 AM	9:35:00 AM	8:30:00 AM	8:15:00 AM	10:35:00 AM	11:30:00 AM	9:15:00 AM	
ALS Sample ID				YL2400339-004	YL2400339-007	YL2400339-008	YL2400339-005	YL2400339-006	YL2400339-009	YL2400339-010	YL2400339-001	YL2400339-002	YL2400339-003	YL2400339-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Hydrocarbons (Matrix: Water)														
EPH (C10-C19)	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (C19-C32)	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F1 (C6-C10)	100	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	300	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	300	µg/L		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
F4 (C34-C50)	300	µg/L		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
TEH (C10-C30), BC	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VHw (C6-C10)	100	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F1-BTEX	100	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
LEPHw	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VPHw	100	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPHw	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds														
Benzene	0.50	µg/L	110[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	0.50	µg/L	25[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether (MBTE)	0.50	µg/L	5000[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	0.50	µg/L	215[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:

NA - Not Available

[A] = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Short Term

[B] = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Long Term

Table C2 August 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field Dup	Field Blank	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	TB
Date Sampled				25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024
Time Sampled				03:50	05:45	05:30	04:34	04:23	00:00	01:30	09:30	09:45	03:20	00:00
ALS Sample ID				YL2401307-005	YL2401307-003	YL2401307-004	YL2401307-001	YL2401307-002	YL2401307-009	YL2401307-010	YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-011
Analyte	**Limit of Reporting**	**Units**	**CCME Guideline for the Protection of Aquatic Life (Marine)**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**	**Sub-Matrix: Water**
Physical Tests (Matrix: Water)														
Alkalinity, total (as $CaCO_3$)	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Conductivity	2.0	µS/cm		26700	26900	39900	27200	34100	26900	<2.0	26700	39300	27100	<2.0
Hardness (as $CaCO_3$), dissolved	0.60	mg/L		2990	3000	4750	3080	3860	3100	<0.60	3050	4700	3120	<0.60
Hardness (as $CaCO_3$), from total Ca/Mg	0.60	mg/L		3400	3350	5150	3320	4330	3330	<0.60	3460	5150	3280	<0.60
pH	0.10	pH units	7.0-8.7[B]	7.87	7.87	7.85	7.86	7.86	7.86	5.4	7.84	7.86	7.88	5.20
Solids, total dissolved (TDS)	10	mg/L		18600	15800	30400	17900	23600	22800	<10	22700	30900	23000	<10
Solids, total suspended (TSS)	3.0	mg/L	Narrative[B] - Clear flow: Maximum increase of 25 mg/L from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for a longer term exposure (e.g., 30-d period). High flow or turbid waters: Maximum increase of 25 mg/L from background levels at any one time when background levels are between 25 and 250 mg/L. Should not increase more than 10% of background levels when background is ≥ 250 mg/L.	<3.0	<3.0	<3.0	<3.0	3.7	5.9	<3.0	<3.0	<3.0	3.7	<3.0
Turbidity	0.10	NTU	Narrative[B] - Clear flow: Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-d period). High flow or turbid waters: Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is > 80 NTUs.	0.48	0.78	0.38	1.01	0.91	0.72	<0.10	0.7	0.74	0.54	<0.10
Salinity	1.0	psu		16.8	17	26.2	17.2	22.1	17	<1.0	16.8	25.8	17.1	<1.0
Anions and Nutrients (Matrix: Water)														
Ammonia, total (as N)	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	0.0054	<0.0050	<0.0050	<0.0050	0.0171	0.0089	<0.0050
Bromide	0.050	mg/L		31.4	30.3	47.2	30.4	38.2	30.4	<0.050	31	46.2	29.8	<0.050
Chloride	0.50	mg/L		9540	9330	14300	9280	11700	9310	<0.50	9440	14000	9220	<0.50
Fluoride	0.020	mg/L		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.020	<2.00	<2.00	<2.00	<0.020
Nitrate (as N)	0.0050	mg/L	1,500[A], 200[B]	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.0050	<0.500	<0.500	<0.500	<0.0050
Nitrite (as N)	0.0010	mg/L		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.0010	<0.100	<0.100	<0.100	<0.0010
Nitrogen, total	0.030	mg/L		0.073	0.065	0.091	0.048	0.062	0.047	<0.030	0.057	0.082	0.146	<0.030
Phosphate, ortho-, dissolved (as P)	0.0010	mg/L		0.0108	0.0118	0.0433	0.0106	0.0255	0.0108	<0.0010	0.0104	0.0413	0.0083	<0.0010
Phosphorous, total	0.0020	mg/L		0.0175	0.0177	0.0445	0.0164	0.0332	0.0158	<0.0020	0.022	0.0429	0.0162	<0.0020
Silicate (as SiO2)	0.50	mg/L		0.63	0.69	1.53	0.66	1.05	0.64	<0.50	0.65	1.31	0.6	<0.50
Sulfate (as SO_4)	0.30	mg/L		1270	1230	1950	1240	1560	1240	<0.30	1240	1880	1220	<0.30
Organic / Inorganic Carbon (Matrix: Water)														
Carbon, dissolved organic (DOC)	0.50	mg/L		2.27	2.4	1.9	2.2900	1.42	1.69	<0.50	1.78	1.14	1.96	<0.50
Carbon, total organic (TOC)	0.50	mg/L		1.59	1.71	1.05	1.58	1.39	1.76	<0.50	1.86	1.16	2	<0.50
Total Sulfides (Matrix: Water)														
Sulfide, total (as S)	-	-		<0.010	<0.010	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulfide, total (as H_2S)	-	-		<0.011	<0.011	<0.011	0.014	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011

Table C2 August 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field Dup	Field Blank	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	TB
Date Sampled				25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024
Time Sampled				03:50	05:45	05:30	04:34	04:23	00:00	01:30	09:30	09:45	03:20	00:00
ALS Sample ID				YL2401307-005	YL2401307-003	YL2401307-004	YL2401307-001	YL2401307-002	YL2401307-009	YL2401307-010	YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Total Metals (Matrix: Water)														
Aluminum, total	0.0030	mg/L		<0.0600	<0.0600	<0.150	<0.0600	<0.0600	<0.0600	<0.0030	<0.0300	<0.150	0.0334	<0.0030
Antimony, total	0.00010	mg/L		<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Arsenic, total	0.00010	mg/L	0.0125[B]	<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Barium, total	0.00010	mg/L		0.00923	0.008	0.00862	0.00945	0.00949	0.00928	<0.00010	0.00908	0.00993	0.00912	<0.00010
Beryllium, total	0.000100	mg/L		<0.000400	<0.000400	<0.00100	<0.000400	<0.000400	<0.000400	<0.000100	<0.000200	<0.00100	<0.000200	<0.000100
Bismuth, total	0.000050	mg/L		<0.00100	<0.00100	<0.00250	<0.00100	<0.00100	<0.00100	<0.000050	<0.000500	<0.00250	<0.000500	<0.000050
Boron, total	0.010	mg/L		2.34	2.44	3.85	2.37	3.2	2.27	<0.010	2.26	3.7	2.34	<0.010
Cadmium, total	0.0000050	mg/L	0.00012[B]	<0.000100	<0.000100	<0.000250	<0.000100	<0.000100	<0.000100	<0.0000050	<0.0000500	<0.000250	<0.0000500	<0.0000050
Calcium, total	0.050	mg/L		206	208	315	203	266	204	<0.050	211	313	201	<0.050
Cesium, total	0.000010	mg/L		<0.000200	<0.000200	<0.000500	<0.000200	0.000212	<0.000200	<0.000010	0.000138	<0.000500	0.000134	<0.000010
Chromium, total	0.00050	mg/L		<0.0100	<0.0100	<0.0250	<0.0100	<0.0100	<0.0100	<0.00050	<0.00500	<0.0250	<0.00500	<0.00050
Cobalt, total	0.00010	mg/L		<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Copper, total	0.00050	mg/L		<0.0100	<0.0100	<0.0250	<0.0100	<0.0100	<0.0100	<0.00050	<0.00500	<0.0250	<0.00500	<0.00050
Gallium, total	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron, total	0.010	mg/L		<0.200	<0.200	<0.500	<0.200	<0.200	<0.200	<0.010	<0.100	<0.500	<0.100	<0.010
Lead, total	0.000050	mg/L		<0.00100	<0.00100	<0.00250	<0.00100	<0.00100	<0.00100	<0.000050	<0.000500	<0.00250	<0.000500	<0.000050
Lithium, total	0.0010	mg/L		0.0879	0.0885	0.14	0.0817	0.116	0.0829	<0.0010	0.0854	0.136	0.0836	<0.0010
Magnesium, total	0.0050	mg/L		702	688	1060	683	891	686	<0.0050	712	1060	675	<0.0050
Manganese, total	0.00010	mg/L		<0.00200	0.00204	<0.00500	0.00404	0.00242	0.00228	<0.00010	0.00263	<0.00500	0.00282	<0.00010
Mercury, total	0.0000050	mg/L	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	0.000050	mg/L		0.00551	0.00562	0.00801	0.00559	0.00693	0.00564	<0.000050	0.00551	0.00809	0.0054	<0.000050
Nickel, total	0.00050	mg/L		<0.0100	<0.0100	<0.0250	<0.0100	<0.0100	<0.0100	<0.00050	<0.00500	<0.0250	<0.00500	<0.00050
Phosphorous, total	0.050	mg/L	Guidance Framework[B]	<1.00	<1.00	<2.50	<1.00	<1.00	<1.00	<0.050	<0.500	<2.50	<0.500	<0.050
Potassium, total	0.050	mg/L		214	208	320	200	280	209	<0.050	215	324	212	<0.050
Rhenium, total	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rubidium, total	0.00020	mg/L		0.0547	0.0545	0.083	0.0539	0.073	0.0553	<0.00020	0.0553	0.087	0.0548	<0.00020
Selenium, total	0.000050	mg/L		<0.00100	<0.00100	<0.00250	<0.00100	<0.00100	<0.00100	<0.000050	<0.000500	<0.00250	<0.000500	<0.000050
Silicon, total	0.10	mg/L		<2.00	<2.00	<5.00	<2.00	<2.00	<2.00	<0.10	<1.00	<5.00	<1.00	<0.10
Silver, total	0.000010	mg/L	0.0075[A]	<0.000200	<0.000200	<0.000500	<0.000200	<0.000200	<0.000200	<0.000010	<0.000100	<0.000500	<0.000100	<0.000010
Sodium, total	0.050	mg/L		5400	5660	8050	5280	7240	5330	<0.050	5570	8490	5430	0.345
Strontium, total	0.00020	mg/L		3.56	3.56	5.41	3.58	4.67	3.62	<0.00020	3.57	5.52	3.58	<0.00020
Sulfur, total	0.50	mg/L		481	474	752	484	659	472	<0.50	512	713	518	<0.50
Tellurium, total	0.00020	mg/L		<0.00400	<0.00400	<0.0100	<0.00400	<0.00400	<0.00400	<0.00020	<0.00200	<0.0100	<0.00200	<0.00020
Thallium, total	0.000010	mg/L		<0.000200	<0.000200	<0.000500	<0.000200	<0.000200	<0.000200	<0.000010	<0.000100	<0.000500	<0.000100	<0.000010
Thorium, total	0.00010	mg/L		<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Tin, total	0.00010	mg/L		<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Titanium, total	0.00030	mg/L		<0.00600	<0.00600	<0.0150	<0.00600	<0.00600	<0.00600	<0.00030	<0.00300	<0.0150	<0.00300	<0.00030
Tungsten, total	0.00010	mg/L		<0.00200	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200	<0.00010	<0.00100	<0.00500	<0.00100	<0.00010
Uranium, total	0.000010	mg/L		0.0014	0.0015	0.00235	0.00145	0.00185	0.00146	<0.000010	0.00142	0.00221	0.00141	<0.000010
Vanadium, total	0.00050	mg/L		<0.0100	<0.0100	<0.0250	<0.0100	<0.0100	<0.0100	<0.00050	<0.00500	<0.0250	<0.00500	<0.00050
Yttrium, total	-	-												
Zinc, total	0.0030	mg/L		<0.0600	<0.0600	<0.150	<0.0600	<0.0600	<0.0600	<0.0030	<0.0300	<0.150	<0.0300	<0.0030
Zirconium, total	0.00020	mg/L		<0.00400	<0.00400	<0.0100	<0.00400	<0.00400	<0.00400	<0.00020	<0.00200	<0.0100	<0.00200	<0.00020

Table C2 August 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field Dup	Field Blank	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	TB
Date Sampled				25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024
Time Sampled				03:50	05:45	05:30	04:34	04:23	00:00	01:30	09:30	09:45	03:20	00:00
ALS Sample ID				YL2401307-005	YL2401307-003	YL2401307-004	YL2401307-001	YL2401307-002	YL2401307-009	YL2401307-010	YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Dissolved Metals (Matrix: Water)														
Aluminum, dissolved	0.0010	mg/L		<0.0200	<0.0200	<0.0200	<0.0100	<0.0500	<0.0200	<0.0010	<0.0100	<0.0200	<0.0100	<0.0010
Antimony, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00100	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Arsenic, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	0.001	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Barium, dissolved	0.00010	mg/L		0.00915	0.00872	0.0103	0.00901	0.00939	0.00909	<0.00010	0.00931	0.01	0.00989	<0.00010
Beryllium, dissolved	0.000100	mg/L		<0.000400	<0.000400	<0.000400	<0.000200	<0.00100	<0.000400	<0.000100	<0.000200	<0.000400	<0.000200	<0.000100
Bismuth, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.000500	<0.00250	<0.00100	<0.000050	<0.000500	<0.00100	<0.000500	<0.000050
Boron, dissolved	0.010	mg/L		2.13	2.39	3.71	2.32	2.98	2.28	<0.010	2.26	3.52	2.32	<0.010
Cadmium, dissolved	0.0000050	mg/L		<0.000100	<0.000100	<0.000100	<0.0000500	<0.000250	<0.000100	<0.0000050	0.0000846	<0.000100	0.0000602	<0.0000050
Calcium,dissolved	0.050	mg/L		205	196	329	207	256	214	<0.050	211	316	214	<0.050
Cesium, dissolved	0.000010	mg/L		<0.000200	<0.000200	0.000236	0.000155	<0.000500	<0.000200	<0.000010	0.000158	0.00024	0.000133	<0.000010
Chromium, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.00500	<0.0250	<0.0100	<0.00050	<0.00500	<0.0100	<0.00500	<0.00050
Cobalt, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00100	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Copper, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00200	<0.0100	<0.00400	<0.00020	<0.00200	<0.00400	0.00257	<0.00020
Gallium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron, dissolved	0.010	mg/L		<0.200	<0.200	<0.200	<0.100	<0.500	<0.200	<0.010	<0.100	<0.200	<0.100	<0.010
Lead, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.000500	<0.00250	<0.00100	<0.000050	<0.000500	<0.00100	<0.000500	<0.000050
Lithium, dissolved	0.0010	mg/L		0.085	0.0857	0.138	0.087	0.11	0.0886	<0.0010	0.0879	0.134	0.0894	<0.0010
Magnesium, dissolved	0.0050	mg/L		601	609	955	622	781	622	<0.0050	612	949	628	<0.0050
Manganese, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	0.00135	<0.00500	<0.00200	<0.00010	0.00135	<0.00200	0.00153	<0.00010
Mercury, dissolved	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	0.000050	mg/L		0.00577	0.00532	0.00847	0.00562	0.00726	0.00536	<0.000050	0.0056	0.00842	0.00573	<0.000050
Nickel, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.00500	<0.0250	<0.0100	<0.00050	<0.00500	<0.0100	<0.00500	<0.00050
Phosphorous, dissolved	0.050	mg/L		<1.00	<1.00	<1.00	<0.500	<2.50	<1.00	<0.050	<0.500	<1.00	<0.500	<0.050
Potassium, dissolved	0.050	mg/L		194	205	313	197	260	207	<0.050	202	312	208	<0.050
Rhenium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rubidium, dissolved	0.00020	mg/L		0.0571	0.0533	0.0853	0.0544	0.0671	0.0572	<0.00020	0.0541	0.0782	0.057	<0.00020
Selenium, dissolved	0.000050	mg/L		<0.00100	<0.00100	<0.00100	<0.000500	<0.00250	<0.00100	<0.000050	<0.000500	<0.00100	<0.000500	<0.000050
Silicon, dissolved	0.050	mg/L		<1.00	<1.00	<1.00	<0.500	<2.50	<1.00	<0.050	<0.500	<1.00	<0.500	<0.050
Silver, dissolved	0.000010	mg/L		<0.000200	<0.000200	<0.000200	<0.000100	<0.000500	<0.000200	<0.000010	<0.000100	<0.000200	<0.000100	<0.000010
Sodium, dissolved	0.050	mg/L		4900	5020	7910	5140	6560	5180	<0.050	5000	7890	5240	<0.050
Strontium, dissolved	0.00020	mg/L		3.88	3.65	5.96	3.83	4.69	3.93	<0.00020	3.95	6.04	3.88	<0.00020
Sulfur, dissolved	0.50	mg/L		458	472	760	488	597	484	<0.50	475	734	496	<0.50
Tellurium, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00200	<0.0100	<0.00400	<0.00020	<0.00200	<0.00400	<0.00200	<0.00020
Thallium, dissolved	0.000010	mg/L		<0.000200	<0.000200	<0.000200	<0.000100	<0.000500	<0.000200	<0.000010	<0.000100	<0.000200	<0.000100	<0.000010
Thorium, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00100	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Tin, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00100	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Titanium, dissolved	0.00030	mg/L		<0.00600	<0.00600	<0.00600	<0.00300	<0.0150	<0.00600	<0.00030	<0.00300	<0.00600	<0.00300	<0.00030
Tungsten, dissolved	0.00010	mg/L		<0.00200	<0.00200	<0.00200	<0.00100	<0.00500	<0.00200	<0.00010	<0.00100	<0.00200	<0.00100	<0.00010
Uranium, dissolved	0.000010	mg/L		0.0016	0.00147	0.00222	0.00151	0.00188	0.00152	<0.000010	0.00143	0.00214	0.00147	<0.000010
Vanadium, dissolved	0.00050	mg/L		<0.0100	<0.0100	<0.0100	<0.00500	<0.0250	<0.0100	<0.00050	<0.00500	<0.0100	<0.00500	<0.00050
Yttrium, dissolved	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc, dissolved	0.0010	mg/L		<0.0200	<0.0200	<0.0200	<0.0100	<0.0500	<0.0200	<0.0010	<0.0100	<0.0200	0.0209	<0.0010
Zirconium, dissolved	0.00020	mg/L		<0.00400	<0.00400	<0.00400	<0.00200	<0.0100	<0.00400	<0.00020	<0.00200	<0.00400	<0.00200	<0.00020

Table C2 August 2024 Water Quality Analytical Results and Relevant CCME Guidelines

Location				MLA	MLA	MLA	MLA	MLA	Field replicate	Field blank	Reference	Reference	Reference	Trip Blank
Station				BRP-51	BRP-48	BRP-48	BRP-46	BRP-46			REF04	REF04	REF05	
Client Sample ID				BRP-51-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-46S-WQ	BRP-46D-WQ	Field Dup	Field Blank	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	TB
Date Sampled				25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024
Time Sampled				03:50	05:45	05:30	04:34	04:23	00:00	01:30	09:30	09:45	03:20	00:00
ALS Sample ID				YL2401307-005	YL2401307-003	YL2401307-004	YL2401307-001	YL2401307-002	YL2401307-009	YL2401307-010	YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-011
Analyte	Limit of Reporting	Units	CCME Guideline for the Protection of Aquatic Life (Marine)	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Hydrocarbons (Matrix: Water)														
EPH (C10-C19)	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (C19-C32)	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F1 (C6-C10)	100	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	300	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	300	µg/L		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
F4 (C34-C50)	300	µg/L		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
TEH (C10-C30), BC	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VHw (C6-C10)	100	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F1-BTEX	100	µg/L		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
LEPHw	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VPHw	100	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPHw	250	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds														
Benzene	0.50	µg/L	110[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	0.50	µg/L	25[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether (MBTE)	0.50	µg/L	5000[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	0.50	µg/L	215[B]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:

NA - Not Available

[A] = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Short Term

[B] = Canadian Environmental Quality Guidelines, Canadian Water Quality Guidelines for the Protection of Aquatic Life - Long Term

Appendix D Laboratory Reports

ALS Canada Ltd.

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SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **YL2400339**		
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Paige Glenen	Contact	: Brent Mack
Address	: 102-40 Highfield Park Drive Dartmouth, NS Canada B3A0A3	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
E-mail	: Paige.Glenen@stantec.com	E-mail	: Brent.Mack@ALSGlobal.com
Telephone	: ----	Telephone	: 778-370-3279
Facsimile	: ----	Facsimile	:
Project	: 121417593	Page	: 1 of 8
Purchase order number	: ----	Quote number	: VA2019STAC1000001 (Standing Offer (BC, YK) 2024-2027)
C-O-C number	: ----	QC Level	: ALS Canada Standard Quality Control
Site	: ----		
Sampler	: SC/MW		

Dates

Date Samples Received	: 26-Apr-2024 16:00	Issue Date	: 29-Apr-2024
Client Requested Due Date	: 03-May-2024	Scheduled Reporting Date	: 03-May-2024

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 4 - Ice Bricks present
Receipt Detail	:	No. of samples received / analyzed	: 26 / 26

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances (if any)
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- ***Client Comment - "Sample ID's BRP-51-WQ, REF-04S-WQ, REF-04D-WQ, REF-05-WQ were not field filtered for dissolved nutrients. Please extract sample from the routine bottles and lab filter for dissolved nutrients."***
- **Sample(s) 003: Labeling Issue. Container sample ID does not match Chain of Custody (COC). Sample will be identified as per COC notation. COC lists sample ID as REF-05-WQ, sample containers labelled as REF-05S-WQ.**
- ***Sample(s) 004-AJ: One F2-F4 container received empty, other container is filled. Analysis will not be affected.***
- *Where possible, ALS will store samples for the following durations, measured from date of sample submission: 30 days for Soil and Water samples; 6 months for Tissue/Biota samples; 14 days for air samples collected on re-usable media; and 3 days for water samples submitted for microbiological testing. Longer storage times are available upon request.*
- **Temperature is recorded in °C unless otherwise noted.**

Sample Container(s)/Preservation Non-Compliances (if any)

All comparisons are made against pretreatment/preservation practices published by CCME, BC ENV, Ontario MOE, Environment Canada, Health Canada, US EPA, APHA Standard Methods, ASTM, or ISO, and comply with provincial requirements for the laboratory location.

- **No sample container/preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Matrix: **Water**

Laboratory sample ID	Client sampling date / time	Client sample ID	Water - BC10 Dissolved Metals/Hg+Hardness -	Water - BC11 Total Metals/Hg+Hardness -	Water - E100 Conductivity in Water (2µS/cm)	Water - E108 pH by Meter (Automated)	Water - E121 Turbidity by Nephelometry	Water - E160 TSS by Gravimetry (3mg/L)	Water - E162 TDS by Gravimetry (10mg/L)	Water - E298 Ammonia by Fluorescence	Water - E355-L Total Organic Carbon (Non-Purgeable) by	Water - E358-L Dissolved Organic Carbon by Combustion (0.5	Water - E366 Total Nitrogen by Colourimetry (0.03 mg/L)	Water - E372-U Total Phosphorus by Colourimetry (0.002 mg/L)	Water - E378-U Dissolved Orthophosphate by Colourimetry	Water - E392 Reactive Silica by Colourimetry (0.5 mg/L)	Water - E601 F2-F4 in Water	Water - E870A Chlorophyll-a by Fluorometry (Field Filtered µg)	Water - EC100S Salinity in Water (calculation)	Water - S235 Anions in Water by IC	Water - S655A-B BTEXSM/VPH in Water
YL2400339-001	24-Apr-2024 13:35	REF-04S-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-002	24-Apr-2024 14:30	REF-04D-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-003	24-Apr-2024 12:15	REF-05-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-004	24-Apr-2024 17:15	BRP-51-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-005	25-Apr-2024 12:00	BRP-46S-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-006	25-Apr-2024 12:35	BRP-46D-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-007	25-Apr-2024 18:15	BRP-48S-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-008	25-Apr-2024 18:45	BRP-48D-WQ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-009	25-Apr-2024 11:30	24QC100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-010	25-Apr-2024 11:15	Field-Blank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-011	24-Apr-2024 00:00	Trip-Blank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
YL2400339-012	24-Apr-2024 13:45	REF-04-PP01																✓			
YL2400339-013	24-Apr-2024 13:48	REF-04-PP02																✓			
YL2400339-014	24-Apr-2024 13:51	REF-04-PP03																✓			

			Water - BC10 Dissolved Metals/Hg+Hardness -	Water - BC11 Total Metals/Hg+Hardness -	Water - E100 Conductivity in Water (2µS/cm)	Water - E108 pH by Meter (Automated)	Water - E121 Turbidity by Nephelometry	Water - E160 TSS by Gravimetry (3mg/L)	Water - E162 TDS by Gravimetry (10mg/L)	Water - E298 Ammonia by Fluorescence	Water - E355-L Total Organic Carbon (Non-Purgeable) by	Water - E358-L Dissolved Organic Carbon by Combustion (0.5	Water - E366 Total Nitrogen by Colourimetry (0.03 mg/L)	Water - E372-U Total Phosphorus by Colourimetry (0.002 mg/L)	Water - E378-U Dissolved Orthophosphate by Colourimetry	Water - E392 Reactive Silica by Colourimetry (0.5 mg/L)	Water - E601 F2-F4 in Water	Water - E870A Chlorophyll-a by Fluorometry (Field Filtered µg)	Water - EC100S Salinity in Water (calculation)	Water - S235 Anions in Water by IC	Water - S655A.B BTEXSM/VPH in Water
YL2400339-015	24-Apr-2024 12:22	REF-05-PP01																✓			
YL2400339-016	24-Apr-2024 12:25	REF-05-PP02																✓			
YL2400339-017	24-Apr-2024 12:29	REF-05-PP03																✓			
YL2400339-018	24-Apr-2024 17:25	BRP-51-PP01																✓			
YL2400339-019	24-Apr-2024 17:28	BRP-51-PP02																✓			
YL2400339-020	24-Apr-2024 17:31	BRP-51-PP03																✓			
YL2400339-021	25-Apr-2024 18:28	BRP-48-PP01																✓			
YL2400339-022	25-Apr-2024 18:31	BRP-48-PP02																✓			
YL2400339-023	25-Apr-2024 18:34	BRP-48-PP03																✓			
YL2400339-024	25-Apr-2024 12:20	BRP-46-PP01																✓			
YL2400339-025	25-Apr-2024 12:23	BRP-46-PP02																✓			
YL2400339-026	25-Apr-2024 12:26	BRP-46-PP03																✓			

Proactive Holding Time Report

The following sample(s) were received with less than half the recommended holding time remaining for the indicated tests. ALS cannot guarantee analysis for these tests within holding times.

Client Sample ID	Test Method	Recommended Holding Time
REF-04S-WQ	E121	3 days
REF-04S-WQ	E235.NO2-L	3 days
REF-04S-WQ	E235.NO3-L	3 days
REF-04S-WQ	E358-L	3 days
REF-04S-WQ	E378-U	3 days
REF-04D-WQ	E121	3 days
REF-04D-WQ	E235.NO2-L	3 days
REF-04D-WQ	E235.NO3-L	3 days
REF-04D-WQ	E358-L	3 days
REF-04D-WQ	E378-U	3 days
REF-05-WQ	E121	3 days
REF-05-WQ	E235.NO2-L	3 days
REF-05-WQ	E235.NO3-L	3 days
REF-05-WQ	E358-L	3 days
REF-05-WQ	E378-U	3 days
BRP-51-WQ	E121	3 days
BRP-51-WQ	E235.NO2-L	3 days
BRP-51-WQ	E235.NO3-L	3 days
BRP-51-WQ	E358-L	3 days
BRP-51-WQ	E378-U	3 days
Trip-Blank	E121	3 days
Trip-Blank	E235.NO2-L	3 days
Trip-Blank	E235.NO3-L	3 days
Trip-Blank	E298	3 days
Trip-Blank	E355-L	3 days
Trip-Blank	E358-L	3 days
Trip-Blank	E366	3 days
Trip-Blank	E372-U	3 days
Trip-Blank	E378-U	3 days

The following samples were received beyond the recommended holding times for the indicated tests.

Client Sample ID	*Test Method*	*Recommended Holding Time*
REF-04S-WQ	E108	0.25 hours
REF-04D-WQ	E108	0.25 hours
REF-05-WQ	E108	0.25 hours
BRP-51-WQ	E108	0.25 hours
BRP-46S-WQ	E108	0.25 hours
BRP-46D-WQ	E108	0.25 hours
BRP-48S-WQ	E108	0.25 hours
BRP-48D-WQ	E108	0.25 hours
24QC100	E108	0.25 hours
Field-Blank	E108	0.25 hours
Trip-Blank	E108	0.25 hours

Requested Deliverables

Accounts Payable

Tax Invoice (INVOICE (CAN))	Email	SAPInvoices@stantec.com

Paige Glenen

ALS Excel Report (ALS_MTABXL_CAN)	Email	Paige.Glenen@stantec.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	Paige.Glenen@stantec.com
Interpretive Quality Control Report (QCI (CAN))	Email	Paige.Glenen@stantec.com
Quality Control (QC (CAN))	Email	Paige.Glenen@stantec.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	Paige.Glenen@stantec.com
Stantec Canada EQuIS format (STANTEC_EQUIS_CAN)	Email	Paige.Glenen@stantec.com
Tax Invoice (INVOICE (CAN))	Email	Paige.Glenen@stantec.com

Methods with Laboratory

Sale item

Method	Laboratory	Address	City	Province	Country
Ammonia by Fluorescence					
E298	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Anions in Water by IC					
E235.Br-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.Cl	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.F	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.NO2-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.NO3-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.SO4	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
BTEXSM/VPH in Water					
E581.VH+F1	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E611A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC580A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Chlorophyll-a by Fluorometry (Field Filtered µg)					
E870A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Conductivity in Water (2µS/cm)					
E100	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Mercury Water Filtration					
EP509	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals Water Filtration					
EP421	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals/Hg+Hardness - CSR,CCME,BCAWQG,CDW					
E421	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E509	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Organic Carbon by Combustion (0.5 mg/L) in Water					
E358-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Orthophosphate by Colourimetry (0.001 mg/L)					
E378-U	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
F2-F4 in Water					
E601	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
pH by Meter (Automated)					
E108	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

Reactive Silica by Colourimetry (0.5 mg/L)					
E392	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Salinity in Water (calculation)					
EC100S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
TDS by Gravimetry (10mg/L)					
E162	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Metals/Hg+Hardness - CSR,CCME,BCAWQG,CDW					
E420	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E508	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Nitrogen by Colourimetry (0.03 mg/L)					
E366	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Organic Carbon (Non-Purgeable) by Combustion (0.5 mg/L) in Water					
E355-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Phosphorus by Colourimetry (0.002 mg/L)					
E372-U	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
TSS by Gravimetry (3mg/L)					
E160	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Turbidity by Nephelometry					
E121	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affi

Telephone : +1 867 873 5593

COC Number: 14 -

Page 1 of 3

Report To		Report Format / Distribution	
Company:	Stantec Consulting Ltd.	Select Report Format:	☒ PDF ☒ EXCEL ☒ EDD (DIGITAL)
Contact:	Paige Glenen	Quality Control (QC) Report with Report	☑ Yes ☐ No
Address:	102-40 Highfield Park Dr., Dartmouth, NS B3A 0A3	☐ Criteria on Report - provide details below if box checked	
Phone:	(902) 468-7777	Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX
		Email 1 or Fax	paige.glenen@stantec.com
		Email 2	mac.whitehead@stantec.com

Invoice To	Same as Report To	☑ Yes ☐ No	Invoice Distribution	
	Copy of Invoice with Report	☑ Yes ☐ No	Select Invoice Distribution:	☒ EMAIL ☐ MAIL ☐ FAX
Company:			Email 1 or Fax	paige.glenen@stantec.com
Contact			Email 2	AccountsPayable@stantec.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:		Approver ID:	Cost Center:
Job #:	121417593	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only)		ALS Contact:	Sampler: SC/MW

(Rush Turnaround Time (TAT) is not available for all tests)

R ☐ Regular (...eived by 3 pm - business days)

P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT

E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT

E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge

Specify Date Required for E2, E or P:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BTEX, F1 - F4	Total Mercury (Low Level)	Dissolved Mercury (Low Level)	Total Metals (Low Level)	Dissolved Metals (Low Level)	Total Nutrients (including total nitrogen)	Dissolved Nutrients (including DOC)	Routine (including organic phosphorus, conductivity, anions, reactive silica)	Total Sulphide	Salinity in Seawater	[illegible]			Number of Containers
							F		F		F							
	REF-04S-WQ	24-Apr-24	10:35	Water	X	X	X	X	X	X	X	X	X	X	X			12
	REF-04D-WQ	24-Apr-24	11:30	Water	X	X	X	X	X	X	X	X	X	X	X			12
	REF-05-WQ	24-Apr-24	09:15	Water	X	X	X	X	X	X	X	X	X	X				12
	BRP-51-WQ	24-Apr-24	14:15	Water	X	X	X	X	X	X	X	X	X	X				12
	BRP-46S-WQ	25-Apr-24	09:00	Water	X	X	X	X	X	X	X	X	X	X				12
	BRP-46D-WQ	25-Apr-24	09:35	Water	X	X	X	X	X	X	X	X	X	X				12
	BRP-48S-WQ	25-Apr-24	15:15	Water	X	X	X	X	X	X	X	X	X	X				12
	BRP-48D-WQ	25-Apr-24	15:45	Water	X	X	X	X	X	X	X	X	X	X				12
	24QC100	25-Apr-24	08:30	Water	X	X	X	X	X	X	X	X	X	X				12
	Field-Blank	25-Apr-24	08:15	Water	X	X	X	X	X	X	X	X	X	X				12
	Trip-Blank	—	—	Water	X	X	X	X	X	X	X	X	X	X				12

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	***Sample ID's BRP-51-WQ, REF-04S-WQ, REF-04D-WQ, and REF-05-WQ were not field filtered for dissolved nutrients. Please extract sample from the routine bottles and lab filter for dissolved nutrients.
Are samples for human drinking water use? ☐ Yes ☑ No	*IMPORTANT

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☐ No ☐	Custody seal intact	Yes ☐	No ☐	
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
6.1					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Sam Caldwell	25-Apr-24	18:00		26/24 APR				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 2 of 3

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Stantec Consulting Ltd.	Select Report Format: ☒ PDF ☒ EXCEL ☒ EDD (DIGITAL)		R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Paige Glenen	Quality Control (QC) Report with Report ☑ Yes ☐ No		P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	102-40 Highfield Park Dr., Dartmouth, NS B3A 0A3	☐ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	(902) 468-7777	Email 1 or Fax paige.glenen@stantec.com		Specify Date Required for E2, E or P:
		Email 2 mac.whitehead@stantec.com		

Invoice To		Invoice Distribution	
	Same as Report To ☑ Yes ☐ No	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX	
	Copy of Invoice with Report ☑ Yes ☐ No	Email 1 or Fax paige.glenen@stantec.com	
Company:		Email 2 AccountsPayable@stantec.com	
Contact:			

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:		Approver ID:	Cost Center:
Job #:	19147593	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		ALS Contact:	Sampler: SC/MW

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BTEX, F1 - F4	Total Mercury (Low Level)	Dissolved Mercury (Low Level)	Total Metals (Low Level)	Dissolved Metals (Low Level)	Total Nutrients (including total nitrogen)	Dissolved Nutrients (including DOC)	Routine (including organic phosphorus, conductivity, anions, reactive silica)	Total Sulphide	Salinity in Seawater	Chlorophyll A			Number of Containers
	REF-04-PP01	24-Apr-24	10:45	Bio											X			1
	REF-04-PP02	24-Apr-24	10:48	Bio											X			1
	REF-04-PP03	24-Apr-24	10:51	Bio											X			1
	REF-05-PP01	24-Apr-24	09:22	Bio											X			1
	REF-05-PP02	24-Apr-24	09:25	Bio											X			1
	REF-05-PP03	24-Apr-24	09:29	Bio											X			1
	BRP-51-PP01	24-Apr-24	14:25	Bio											X			1
	BRP-51-PP02	24-Apr-24	14:28	Bio											X			1
	BRP-51-PP03	24-Apr-24	14:31	Bio											X			1
	BRP-48-PP01	25-Apr-24	15:28	Bio											X			1
	BRP-48-PP02	25-Apr-24	15:31	Bio											X			1
	BRP-48-PP03	25-Apr-24	15:34	Bio											X			1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No Are samples for human drinking water use? ☐ Yes ☑ No	***Sample ID's BRP-51-WQ, REF-04S-WQ, REF-04D-WQ, and REF-05-WQ were not field filtered for dissolved nutrients. Please extract sample from the routine bottles and lab filter for dissolved nutrients.

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐		SIF Observations	Yes ☐	No ☐
Ice packs	Yes ☐	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Sam Caldwell	25-Apr-24	18:00						

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-FM-0326e v09 Front04 January 2018

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1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 3 of 3

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Stantec Consulting Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Paige Glenen	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	102-40 Highfield Park Dr., Dartmouth, NS B3A 0A3	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	(902) 468-7777	Email 1 or Fax paige.glenen@stantec.com	Specify Date Required for E2,E or P:
		Email 2 mac.whitehead@stantec.com	

Invoice To	Same as Report To ☑ Yes ☐ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:		Email 1 or Fax paige.glenen@stantec.com	
Contact:		Email 2 AccountsPayable@stantec.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:		Approver ID:	Cost Center:
Job #:	1214175 93	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		ALS Contact:	Sampler: SC/MW

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BTEX, F1 - F4	Total Mercury (Low Level)	Dissolved Mercury (Low Level)	Total Metals (Low Level)	Dissolved Metals (Low Level)	Total Nutrients (including total nitrogen)	Dissolved Nutrients (including DOC)	Routine (including organic phosphorus, conductivity, anions, reactive silica)	Total Sulphide	Salinity in Seawater	Chlorophyll A			Number of Containers
	BRP-46-PP07	25-Apr-24	09:20	Biota											X			1
	BRP-46-PP02	25-Apr-24	09:23	Biota											X			1
	BRP-46-PP03	25-Apr-24	09:26	Biota											X			1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)	SAMPLE CONDITION AS RECEIVED (lab use only)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	***Sample ID's BRP-51-WQ, REF-04S-WQ, REF-040-WQ, and REF-05-WQ were not field filtered for dissolved nutrients. Please extract sample from the routine bottles and lab filter for dissolved nutrients.	Frozen ☐ SIF Observations Yes ☐ No ☐
Are samples for human drinking water use? ☐ Yes ☑ No		Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
		Cooling Initiated ☐
		INITIAL COOLER TEMPERATURES °C / FINAL COOLER TEMPERATURES °C

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Sam Caldwell	25-Apr-24	18:00						

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

ALS Canada Ltd.

right solutions. right partner.

CERTIFICATE OF ANALYSIS

Work Order	: **YL2401307**	Page	: 1 of 32
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Paige Glenen	Account Manager	: Brent Mack
Address	: 102-40 Highfield Park Drive Dartmouth NS Canada B3A0A3	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: ----	Telephone	: 778-370-3279
Project	: 121417593	Date Samples Received	: 27-Aug-2024 16:19
PO	: ----	Date Analysis Commenced	: 29-Aug-2024
C-O-C number	: 17-824810/809/808	Issue Date	: 05-Sep-2024 14:18
Sampler	: MW/AJ		
Site	: ----		
Quote number	: VA22-STAC100-001 (via ALS Yellowknife)		
No. of samples received	: 42		
No. of samples analysed	: 42		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Alex Drake	Lab Analyst	Inorganics, Edmonton, Alberta
Colby Bingham	Laboratory Supervisor	Inorganics, Saskatoon, Saskatchewan
Daniel Shabestani	Lab Assistant	Metals, Burnaby, British Columbia
Daniela Ruiz	Account Manager Assistant	Administration, Burnaby, British Columbia
George Huang	Supervisor - Inorganic	Metals, Calgary, Alberta
Hedy Lai	Team Leader - Inorganics	Inorganics, Saskatoon, Saskatchewan
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Kuljeet Chawla		Inorganics, Calgary, Alberta
Maqsood UlHassan	Laboratory Analyst	Organics, Calgary, Alberta
Maya Urquhart	Lab Analyst	Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Inorganics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia
Shirley Li	Team Leader - Inorganics	Metals, Calgary, Alberta
Stephanie Korol	Laboratory Assistant	Organics, Calgary, Alberta

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
µg/L	micrograms per litre
µg/sample	micrograms per sample
µS/cm	microsiemens per centimetre
L	litres
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
psu	practical salinity units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	*Description*
DLA	*Detection Limit adjusted for required dilution.*
DLDS	*Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.*
DTMF	*Dissolved concentration exceeds total for field-filtered metals sample. Metallic contaminants may have been introduced to dissolved sample during field filtration.*
HTP	*Sample preparation or preservation hold time was exceeded.*
SP	*Sample was preserved at the laboratory.*

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04-SED1	REF-04-SED2	REF-04-SED3	REF-05-SED1	REF-05-SED2
					Client sampling date / time	22-Aug-2024 13:30	22-Aug-2024 14:30	22-Aug-2024 16:30	22-Aug-2024 09:00	22-Aug-2024 10:30
						YL2401307-027	YL2401307-028	YL2401307-029	YL2401307-030	YL2401307-031
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/CG	0.25	%		20.3	36.1	31.3	19.8	19.7
pH (1:2 soil:water)	----	E108/CG	0.10	pH units		8.14	8.26	7.89	7.34	7.66
Particle Size										
Gravel (>2mm)	----	EC184E/SK	1.0	%		3.4	2.4	3.2	<1.0	<1.0
Sand (2.0mm - 0.063mm)	----	EC184E/SK	1.0	%		91.8	49.7	69.0	97.8	97.4
Silt (0.063mm - 0.004mm)	----	EC184E/SK	1.0	%		3.7	29.0	18.6	2.1	2.2
Clay (<0.004mm)	----	EC184E/SK	1.0	%		1.1	18.9	9.2	<1.0	<1.0
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.205	0.698	0.385	0.127	0.129
Metals										
Aluminum	7429-90-5	E440/CG	50	mg/kg		2180	8520	8300	1430	1680
Antimony	7440-36-0	E440/CG	0.10	mg/kg		<0.10	0.14	0.13	<0.10	<0.10
Arsenic	7440-38-2	E440/CG	0.10	mg/kg		1.45	4.02	3.26	0.83	0.95
Barium	7440-39-3	E440/CG	0.50	mg/kg		8.72	45.2	45.5	4.14	9.57
Beryllium	7440-41-7	E440/CG	0.10	mg/kg		0.11	0.38	0.37	<0.10	<0.10
Bismuth	7440-69-9	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Boron	7440-42-8	E440/CG	5.0	mg/kg		<5.0	24.4	21.2	<5.0	<5.0
Cadmium	7440-43-9	E440/CG	0.020	mg/kg		<0.020	0.115	0.060	<0.020	<0.020
Calcium	7440-70-2	E440/CG	50	mg/kg		2120	15700	3500	1320	1400
Chromium	7440-47-3	E440/CG	0.50	mg/kg		5.68	21.7	21.2	3.52	4.32
Cobalt	7440-48-4	E440/CG	0.10	mg/kg		1.70	4.78	4.50	1.09	1.35
Copper	7440-50-8	E440/CG	0.50	mg/kg		2.34	12.6	11.6	2.72	2.06
Iron	7439-89-6	E440/CG	50	mg/kg		4360	11700	11100	2900	3530
Lead	7439-92-1	E440/CG	0.50	mg/kg		1.16	4.47	4.32	0.72	0.90
Lithium	7439-93-2	E440/CG	2.0	mg/kg		4.8	16.8	16.5	2.6	3.3
Magnesium	7439-95-4	E440/CG	20	mg/kg		2060	5680	5420	1580	1840
Manganese	7439-96-5	E440/CG	1.0	mg/kg		52.4	113	110	35.8	43.8
Mercury	7439-97-6	E510/CG	0.0500	mg/kg		<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg		0.20	1.20	0.91	0.13	<0.10

Analytical Results

Sub-Matrix: Soil/Solid
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04-SED1	REF-04-SED2	REF-04-SED3	REF-05-SED1	REF-05-SED2
					Client sampling date / time	22-Aug-2024 13:30	22-Aug-2024 14:30	22-Aug-2024 16:30	22-Aug-2024 09:00	22-Aug-2024 10:30
						YL2401307-027	YL2401307-028	YL2401307-029	YL2401307-030	YL2401307-031
						Result	Result	Result	Result	Result
Metals										
Nickel	7440-02-0	E440/CG	0.50	mg/kg		3.61	12.8	12.1	2.45	2.90
Phosphorus	7723-14-0	E440/CG	50	mg/kg		268	491	440	112	172
Potassium	7440-09-7	E440/CG	100	mg/kg		490	2500	2420	300	380
Selenium	7782-49-2	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Silver	7440-22-4	E440/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	7440-23-5	E440/CG	50	mg/kg		988	5140	4610	771	1300
Strontium	7440-24-6	E440/CG	0.50	mg/kg		11.9	72.3	28.4	6.58	7.09
Sulfur	7704-34-9	E440/CG	1000	mg/kg		<1000	<1000	<1000	<1000	<1000
Thallium	7440-28-0	E440/CG	0.050	mg/kg		<0.050	0.088	0.082	<0.050	<0.050
Tin	7440-31-5	E440/CG	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	7440-32-6	E440/CG	1.0	mg/kg		78.8	342	341	66.1	83.6
Tungsten	7440-33-7	E440/CG	0.50	mg/kg		<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	7440-61-1	E440/CG	0.050	mg/kg		0.400	1.19	1.15	0.271	0.373
Vanadium	7440-62-2	E440/CG	0.20	mg/kg		6.27	24.8	24.4	4.97	6.48
Zinc	7440-66-6	E440/CG	2.0	mg/kg		5.8	23.6	22.8	4.2	4.8
Zirconium	7440-67-7	E440/CG	1.0	mg/kg		1.9	4.8	10.5	2.5	2.7
Speciated Metals										
Chromium, hexavalent [Cr VI]	18540-29-9	E532/EO	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	208-96-8	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	260-94-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A-L/CG	0.0040	mg/kg		<0.0040	<0.0044	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	56-55-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	n/a	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04-SED1	REF-04-SED2	REF-04-SED3	REF-05-SED1	REF-05-SED2
					Client sampling date / time	22-Aug-2024 13:30	22-Aug-2024 14:30	22-Aug-2024 16:30	22-Aug-2024 09:00	22-Aug-2024 10:30
						YL2401307-027	YL2401307-028	YL2401307-029	YL2401307-030	YL2401307-031
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Dibenz(a,h)anthracene	53-70-3	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	129-00-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/CG	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	<0.020
IACR (CCME)	----	E641A-L/CG	0.150	-		<0.150	<0.150	<0.150	<0.150	<0.150
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/CG	0.1	%		87.2	84.5	86.7	82.5	79.2
Chrysene-d12	1719-03-5	E641A-L/CG	0.1	%		90.5	87.8	86.6	84.9	85.9
Naphthalene-d8	1146-65-2	E641A-L/CG	0.1	%		97.1	93.4	89.8	86.3	93.8
Phenanthrene-d10	1517-22-2	E641A-L/CG	0.1	%		89.6	86.3	90.6	86.9	87.8

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Soil/Solid
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-05-SED3	BRP-46-SED1	BRP-46-SED2	BRP-46-SED3	BRP-48-SED1
					Client sampling date / time	22-Aug-2024 12:00	23-Aug-2024 09:10	23-Aug-2024 12:30	23-Aug-2024 15:55	26-Aug-2024 13:00
						YL2401307-032	YL2401307-033	YL2401307-034	YL2401307-035	YL2401307-036
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/CG	0.25	%		20.1	21.0	19.2	18.6	32.8
pH (1:2 soil:water)	----	E108/CG	0.10	pH units		7.48	7.85	7.65	8.03	8.08
Particle Size										
Gravel (>2mm)	----	EC184E/SK	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
Sand (2.0mm - 0.063mm)	----	EC184E/SK	1.0	%		98.1	90.1	92.1	90.9	79.4
Silt (0.063mm - 0.004mm)	----	EC184E/SK	1.0	%		1.6	7.5	6.1	7.0	14.5
Clay (<0.004mm)	----	EC184E/SK	1.0	%		<1.0	2.4	1.8	2.1	6.1
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.121	0.117	0.103	0.152	0.305
Metals										
Aluminum	7429-90-5	E440/CG	50	mg/kg		1520	1930	1820	1850	3890
Antimony	7440-36-0	E440/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	0.11
Arsenic	7440-38-2	E440/CG	0.10	mg/kg		0.76	1.13	1.16	1.24	2.06
Barium	7440-39-3	E440/CG	0.50	mg/kg		4.80	20.3	14.2	18.6	23.0
Beryllium	7440-41-7	E440/CG	0.10	mg/kg		<0.10	0.10	<0.10	<0.10	0.18
Bismuth	7440-69-9	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Boron	7440-42-8	E440/CG	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	11.0
Cadmium	7440-43-9	E440/CG	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	0.031
Calcium	7440-70-2	E440/CG	50	mg/kg		979	1070	988	1200	1630
Chromium	7440-47-3	E440/CG	0.50	mg/kg		3.22	4.62	4.41	4.55	9.70
Cobalt	7440-48-4	E440/CG	0.10	mg/kg		1.24	1.39	1.26	1.28	2.31
Copper	7440-50-8	E440/CG	0.50	mg/kg		1.97	2.55	2.24	2.58	8.18
Iron	7439-89-6	E440/CG	50	mg/kg		2970	3500	3390	3480	5940
Lead	7439-92-1	E440/CG	0.50	mg/kg		0.72	1.24	1.20	1.19	3.70
Lithium	7439-93-2	E440/CG	2.0	mg/kg		2.8	3.3	2.9	3.2	7.4
Magnesium	7439-95-4	E440/CG	20	mg/kg		1600	1560	1410	1480	2620
Manganese	7439-96-5	E440/CG	1.0	mg/kg		32.4	37.8	33.7	37.9	55.3
Mercury	7439-97-6	E510/CG	0.0500	mg/kg		<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg		<0.10	0.13	0.13	0.11	1.03
Nickel	7440-02-0	E440/CG	0.50	mg/kg		2.59	2.88	2.66	2.67	5.76

Analytical Results

Sub-Matrix: Soil/Solid
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-05-SED3	BRP-46-SED1	BRP-46-SED2	BRP-46-SED3	BRP-48-SED1
					Client sampling date / time	22-Aug-2024 12:00	23-Aug-2024 09:10	23-Aug-2024 12:30	23-Aug-2024 15:55	26-Aug-2024 13:00
						YL2401307-032	YL2401307-033	YL2401307-034	YL2401307-035	YL2401307-036
						Result	Result	Result	Result	Result
Metals										
Phosphorus	7723-14-0	E440/CG	50	mg/kg		112	200	206	205	306
Potassium	7440-09-7	E440/CG	100	mg/kg		340	530	510	500	1150
Selenium	7782-49-2	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Silver	7440-22-4	E440/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	7440-23-5	E440/CG	50	mg/kg		719	1390	1080	931	2020
Strontium	7440-24-6	E440/CG	0.50	mg/kg		6.03	8.23	10.7	8.32	16.6
Sulfur	7704-34-9	E440/CG	1000	mg/kg		<1000	<1000	<1000	<1000	<1000
Thallium	7440-28-0	E440/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Tin	7440-31-5	E440/CG	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	7440-32-6	E440/CG	1.0	mg/kg		68.8	101	95.5	100	187
Tungsten	7440-33-7	E440/CG	0.50	mg/kg		<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	7440-61-1	E440/CG	0.050	mg/kg		0.283	0.413	0.366	0.353	0.657
Vanadium	7440-62-2	E440/CG	0.20	mg/kg		5.21	6.78	6.39	6.82	12.7
Zinc	7440-66-6	E440/CG	2.0	mg/kg		4.5	5.2	4.9	5.0	10.4
Zirconium	7440-67-7	E440/CG	1.0	mg/kg		2.4	3.8	3.9	3.6	6.2
Speciated Metals										
Chromium, hexavalent [Cr VI]	18540-29-9	E532/EO	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	208-96-8	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	260-94-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A-L/CG	0.0040	mg/kg		<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	56-55-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	n/a	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-05-SED3	BRP-46-SED1	BRP-46-SED2	BRP-46-SED3	BRP-48-SED1
					Client sampling date / time	22-Aug-2024 12:00	23-Aug-2024 09:10	23-Aug-2024 12:30	23-Aug-2024 15:55	26-Aug-2024 13:00
						YL2401307-032	YL2401307-033	YL2401307-034	YL2401307-035	YL2401307-036
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Fluoranthene	206-44-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	129-00-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/CG	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	<0.020
IACR (CCME)	----	E641A-L/CG	0.150	-		<0.150	<0.150	<0.150	<0.150	<0.150
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/CG	0.1	%		72.1	78.2	73.8	74.0	80.3
Chrysene-d12	1719-03-5	E641A-L/CG	0.1	%		78.9	84.3	80.0	79.3	84.5
Naphthalene-d8	1146-65-2	E641A-L/CG	0.1	%		88.0	96.8	89.1	89.6	93.4
Phenanthrene-d10	1517-22-2	E641A-L/CG	0.1	%		79.2	84.4	79.4	78.9	83.8

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Soil/Solid
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-48-SED2	BRP-48-SED3	BRP-51-SED1	BRP-51-SED2	BRP-51-SED3
					Client sampling date / time	26-Aug-2024 13:45	26-Aug-2024 14:15	24-Aug-2024 11:00	24-Aug-2024 11:50	24-Aug-2024 14:20
						YL2401307-037	YL2401307-038	YL2401307-039	YL2401307-040	YL2401307-041
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/CG	0.25	%		20.8	22.7	18.6	19.1	21.1
pH (1:2 soil:water)	----	E108/CG	0.10	pH units		7.62	7.90	7.63	7.72	7.64
Particle Size										
Gravel (>2mm)	----	EC184E/SK	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
Sand (2.0mm - 0.063mm)	----	EC184E/SK	1.0	%		87.5	84.9	95.0	94.7	95.3
Silt (0.063mm - 0.004mm)	----	EC184E/SK	1.0	%		8.7	10.0	3.8	3.7	3.1
Clay (<0.004mm)	----	EC184E/SK	1.0	%		3.8	5.0	1.2	1.6	1.6
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.159	0.165	0.158	0.130	0.150
Metals										
Aluminum	7429-90-5	E440/CG	50	mg/kg		2330	2320	1920	1910	1750
Antimony	7440-36-0	E440/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Arsenic	7440-38-2	E440/CG	0.10	mg/kg		1.19	1.46	1.30	1.05	1.68
Barium	7440-39-3	E440/CG	0.50	mg/kg		15.6	12.0	11.8	23.0	10.6
Beryllium	7440-41-7	E440/CG	0.10	mg/kg		0.11	0.11	0.10	0.10	<0.10
Bismuth	7440-69-9	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Boron	7440-42-8	E440/CG	5.0	mg/kg		6.1	6.0	<5.0	<5.0	<5.0
Cadmium	7440-43-9	E440/CG	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	<0.020
Calcium	7440-70-2	E440/CG	50	mg/kg		1060	1090	1090	852	991
Chromium	7440-47-3	E440/CG	0.50	mg/kg		5.79	6.18	4.78	5.28	3.91
Cobalt	7440-48-4	E440/CG	0.10	mg/kg		1.48	1.59	1.48	1.37	1.36
Copper	7440-50-8	E440/CG	0.50	mg/kg		3.46	3.90	3.16	2.41	2.17
Iron	7439-89-6	E440/CG	50	mg/kg		3800	3960	3590	3880	3250
Lead	7439-92-1	E440/CG	0.50	mg/kg		1.42	1.56	1.69	1.40	1.30
Lithium	7439-93-2	E440/CG	2.0	mg/kg		4.6	4.2	3.5	3.3	3.0
Magnesium	7439-95-4	E440/CG	20	mg/kg		1730	1820	1550	1510	1450
Manganese	7439-96-5	E440/CG	1.0	mg/kg		36.8	42.0	36.0	36.4	43.0
Mercury	7439-97-6	E510/CG	0.0500	mg/kg		<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg		0.26	0.25	0.10	<0.10	0.15
Nickel	7440-02-0	E440/CG	0.50	mg/kg		3.44	3.79	2.97	2.88	2.70

Analytical Results

Sub-Matrix: Soil/Solid
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-48-SED2	BRP-48-SED3	BRP-51-SED1	BRP-51-SED2	BRP-51-SED3
					Client sampling date / time	26-Aug-2024 13:45	26-Aug-2024 14:15	24-Aug-2024 11:00	24-Aug-2024 11:50	24-Aug-2024 14:20
						YL2401307-037	YL2401307-038	YL2401307-039	YL2401307-040	YL2401307-041
						Result	Result	Result	Result	Result
Metals										
Phosphorus	7723-14-0	E440/CG	50	mg/kg		199	200	210	196	209
Potassium	7440-09-7	E440/CG	100	mg/kg		680	660	530	540	480
Selenium	7782-49-2	E440/CG	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Silver	7440-22-4	E440/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	7440-23-5	E440/CG	50	mg/kg		1550	1610	1470	1620	1190
Strontium	7440-24-6	E440/CG	0.50	mg/kg		9.25	9.71	7.57	7.76	8.81
Sulfur	7704-34-9	E440/CG	1000	mg/kg		<1000	<1000	<1000	<1000	<1000
Thallium	7440-28-0	E440/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Tin	7440-31-5	E440/CG	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	7440-32-6	E440/CG	1.0	mg/kg		115	115	114	108	83.2
Tungsten	7440-33-7	E440/CG	0.50	mg/kg		<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	7440-61-1	E440/CG	0.050	mg/kg		0.408	0.450	0.370	0.384	0.318
Vanadium	7440-62-2	E440/CG	0.20	mg/kg		7.76	7.76	7.21	7.91	6.05
Zinc	7440-66-6	E440/CG	2.0	mg/kg		6.3	7.2	5.7	5.4	5.0
Zirconium	7440-67-7	E440/CG	1.0	mg/kg		4.2	4.2	3.7	3.7	3.2
Speciated Metals										
Chromium, hexavalent [Cr VI]	18540-29-9	E532/EO	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	208-96-8	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	260-94-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A-L/CG	0.0040	mg/kg		<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	56-55-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	n/a	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-48-SED2	BRP-48-SED3	BRP-51-SED1	BRP-51-SED2	BRP-51-SED3
					Client sampling date / time	26-Aug-2024 13:45	26-Aug-2024 14:15	24-Aug-2024 11:00	24-Aug-2024 11:50	24-Aug-2024 14:20
						YL2401307-037	YL2401307-038	YL2401307-039	YL2401307-040	YL2401307-041
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Fluoranthene	206-44-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A-L/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	129-00-0	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A-L/CG	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/CG	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	<0.020
IACR (CCME)	----	E641A-L/CG	0.150	-		<0.150	<0.150	<0.150	<0.150	<0.150
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/CG	0.1	%		76.3	70.8	78.0	74.4	76.8
Chrysene-d12	1719-03-5	E641A-L/CG	0.1	%		78.6	76.6	81.3	78.6	81.3
Naphthalene-d8	1146-65-2	E641A-L/CG	0.1	%		87.7	84.5	91.1	85.9	87.9
Phenanthrene-d10	1517-22-2	E641A-L/CG	0.1	%		81.1	75.1	81.0	77.6	79.8

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	FIELD-DUP	----	----	----	----
					Client sampling date / time	24-Aug-2024 00:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401307-042	--------	--------	--------	--------	
					Result	----	----	----	----	
Physical Tests										
Moisture	----	E144/CG	0.25	%	18.8	----	----	----	----	
pH (1:2 soil:water)	----	E108/CG	0.10	pH units	7.29	----	----	----	----	
Particle Size										
Gravel (>2mm)	----	EC184E/SK	1.0	%	<1.0	----	----	----	----	
Sand (2.0mm - 0.063mm)	----	EC184E/SK	1.0	%	95.6	----	----	----	----	
Silt (0.063mm - 0.004mm)	----	EC184E/SK	1.0	%	2.8	----	----	----	----	
Clay (<0.004mm)	----	EC184E/SK	1.0	%	1.6	----	----	----	----	
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%	0.145	----	----	----	----	
Metals										
Aluminum	7429-90-5	E440/CG	50	mg/kg	2110	----	----	----	----	
Antimony	7440-36-0	E440/CG	0.10	mg/kg	<0.10	----	----	----	----	
Arsenic	7440-38-2	E440/CG	0.10	mg/kg	1.11	----	----	----	----	
Barium	7440-39-3	E440/CG	0.50	mg/kg	12.1	----	----	----	----	
Beryllium	7440-41-7	E440/CG	0.10	mg/kg	0.10	----	----	----	----	
Bismuth	7440-69-9	E440/CG	0.20	mg/kg	<0.20	----	----	----	----	
Boron	7440-42-8	E440/CG	5.0	mg/kg	<5.0	----	----	----	----	
Cadmium	7440-43-9	E440/CG	0.020	mg/kg	<0.020	----	----	----	----	
Calcium	7440-70-2	E440/CG	50	mg/kg	856	----	----	----	----	
Chromium	7440-47-3	E440/CG	0.50	mg/kg	5.05	----	----	----	----	
Cobalt	7440-48-4	E440/CG	0.10	mg/kg	1.44	----	----	----	----	
Copper	7440-50-8	E440/CG	0.50	mg/kg	2.62	----	----	----	----	
Iron	7439-89-6	E440/CG	50	mg/kg	3700	----	----	----	----	
Lead	7439-92-1	E440/CG	0.50	mg/kg	1.49	----	----	----	----	
Lithium	7439-93-2	E440/CG	2.0	mg/kg	4.0	----	----	----	----	
Magnesium	7439-95-4	E440/CG	20	mg/kg	1620	----	----	----	----	
Manganese	7439-96-5	E440/CG	1.0	mg/kg	35.5	----	----	----	----	
Mercury	7439-97-6	E510/CG	0.0500	mg/kg	<0.0500	----	----	----	----	
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg	0.10	----	----	----	----	
Nickel	7440-02-0	E440/CG	0.50	mg/kg	3.17	----	----	----	----	

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)									
				Client sample ID	FIELD-DUP	----	----	----	----
				Client sampling date / time	24-Aug-2024 00:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401307-042	--------	--------	--------	--------
					Result	----	----	----	----
Metals									
Phosphorus	7723-14-0	E440/CG	50	mg/kg	206	----	----	----	----
Potassium	7440-09-7	E440/CG	100	mg/kg	580	----	----	----	----
Selenium	7782-49-2	E440/CG	0.20	mg/kg	<0.20	----	----	----	----
Silver	7440-22-4	E440/CG	0.10	mg/kg	<0.10	----	----	----	----
Sodium	7440-23-5	E440/CG	50	mg/kg	1620	----	----	----	----
Strontium	7440-24-6	E440/CG	0.50	mg/kg	8.34	----	----	----	----
Sulfur	7704-34-9	E440/CG	1000	mg/kg	<1000	----	----	----	----
Thallium	7440-28-0	E440/CG	0.050	mg/kg	<0.050	----	----	----	----
Tin	7440-31-5	E440/CG	2.0	mg/kg	<2.0	----	----	----	----
Titanium	7440-32-6	E440/CG	1.0	mg/kg	95.9	----	----	----	----
Tungsten	7440-33-7	E440/CG	0.50	mg/kg	<0.50	----	----	----	----
Uranium	7440-61-1	E440/CG	0.050	mg/kg	0.445	----	----	----	----
Vanadium	7440-62-2	E440/CG	0.20	mg/kg	7.10	----	----	----	----
Zinc	7440-66-6	E440/CG	2.0	mg/kg	5.5	----	----	----	----
Zirconium	7440-67-7	E440/CG	1.0	mg/kg	3.7	----	----	----	----
Speciated Metals									
Chromium, hexavalent [Cr VI]	18540-29-9	E532/EO	0.10	mg/kg	<0.10	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	E641A-L/CG	0.0050	mg/kg	<0.0050	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/CG	0.0050	mg/kg	<0.0050	----	----	----	----
Acridine	260-94-6	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Anthracene	120-12-7	E641A-L/CG	0.0040	mg/kg	<0.0040	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/CG	0.015	mg/kg	<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Chrysene	218-01-9	E641A-L/CG	0.010	mg/kg	<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/CG	0.0050	mg/kg	<0.0050	----	----	----	----

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	FIELD-DUP	----	----	----	----
					Client sampling date / time	24-Aug-2024 00:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401307-042	--------	--------	--------	--------
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Fluoranthene	206-44-0	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Fluorene	86-73-7	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/CG	0.015	mg/kg		<0.015	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Naphthalene	91-20-3	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Pyrene	129-00-0	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
Quinoline	91-22-5	E641A-L/CG	0.010	mg/kg		<0.010	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/CG	0.020	mg/kg		<0.020	----	----	----	----
IACR (CCME)	----	E641A-L/CG	0.150	-		<0.150	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/CG	0.1	%		80.2	----	----	----	----
Chrysene-d12	1719-03-5	E641A-L/CG	0.1	%		83.0	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/CG	0.1	%		91.6	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/CG	0.1	%		82.1	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-46S-WQ	BRP-46D-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-51-WQ
					Client sampling date / time	25-Aug-2024 04:34	25-Aug-2024 04:23	25-Aug-2024 05:45	25-Aug-2024 05:30	25-Aug-2024 03:50
						YL2401307-001	YL2401307-002	YL2401307-003	YL2401307-004	YL2401307-005
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		27200	34100	26900	39900	26700
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		3080	3860	3000	4750	2990
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		3320	4330	3350	5150	3400
pH	----	E108/VA	0.10	pH units		7.86	7.86	7.87	7.85	7.87
Salinity	----	EC100S/VA	1.0	psu		17.2	22.1	17.0	26.2	16.8
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		17900	23600	15800	30400	18600
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	3.7	<3.0	<3.0	<3.0
Turbidity	----	E121/VA	0.10	NTU		1.01	0.91	0.78	0.38	0.48
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	0.0054	<0.0050	<0.0050	<0.0050
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		30.4	38.2	30.3	47.2	31.4
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		9280	11700	9330	14300	9540
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<2.00 DLDS	<2.00 DLDS	<2.00 DLDS	<2.00 DLDS	<2.00 DLDS
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.500 DLDS	<0.500 DLDS	<0.500 DLDS	<0.500 DLDS	<0.500 DLDS
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.100 DLDS	<0.100 DLDS	<0.100 DLDS	<0.100 DLDS	<0.100 DLDS
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.048	0.062	0.065	0.091	0.073
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/VA	0.0010	mg/L		0.0106	0.0255	0.0118	0.0433	0.0108
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0164	0.0332	0.0177	0.0445	0.0175
Silicate (as SiO2)	7631-86-9	E392/VA	0.50	mg/L		0.66	1.05	0.69	1.53	0.63
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		1240	1560	1230	1950	1270
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		2.29	1.42	2.40	1.90	2.27
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		1.58	1.39	1.71	1.05	1.59
Total Sulfides										
Sulfide, total (as H2S)	7783-06-4	E395-H/VA	0.011	mg/L		0.014	<0.011	<0.011	<0.011	<0.011
Sulfide, total (as S)	18496-25-8	E395-H/VA	0.010	mg/L		0.013	<0.010	<0.010	<0.010	<0.010
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		<0.0600 DLA	<0.0600 DLA	<0.0600 DLA	<0.150 DLA	<0.0600 DLA

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-46S-WQ	BRP-46D-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-51-WQ
					Client sampling date / time	25-Aug-2024 04:34	25-Aug-2024 04:23	25-Aug-2024 05:45	25-Aug-2024 05:30	25-Aug-2024 03:50
						YL2401307-001	YL2401307-002	YL2401307-003	YL2401307-004	YL2401307-005
						Result	Result	Result	Result	Result
Total Metals										
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00945	0.00949	0.00800	0.00862	0.00923
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000400 DLA	<0.000400 DLA	<0.000400 DLA	<0.00100 DLA	<0.000400 DLA
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.00100 DLA	<0.00100 DLA	<0.00100 DLA	<0.00250 DLA	<0.00100 DLA
Boron, total	7440-42-8	E420/VA	0.010	mg/L		2.37	3.20	2.44	3.85	2.34
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.000100 DLA	<0.000100 DLA	<0.000100 DLA	<0.000250 DLA	<0.000100 DLA
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		203	266	208	315	206
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000200 DLA	0.000212	<0.000200 DLA	<0.000500 DLA	<0.000200 DLA
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.0100 DLA	<0.0100 DLA	<0.0100 DLA	<0.0250 DLA	<0.0100 DLA
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.0100 DLA	<0.0100 DLA	<0.0100 DLA	<0.0250 DLA	<0.0100 DLA
Iron, total	7439-89-6	E420/VA	0.010	mg/L		<0.200 DLA	<0.200 DLA	<0.200 DLA	<0.500 DLA	<0.200 DLA
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.00100 DLA	<0.00100 DLA	<0.00100 DLA	<0.00250 DLA	<0.00100 DLA
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0817	0.116	0.0885	0.140	0.0879
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		683	891	688	1060	702
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00404	0.00242	0.00204	<0.00500 DLA	<0.00200 DLA
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.00559	0.00693	0.00562	0.00801	0.00551
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.0100 DLA	<0.0100 DLA	<0.0100 DLA	<0.0250 DLA	<0.0100 DLA
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<1.00 DLA	<1.00 DLA	<1.00 DLA	<2.50 DLA	<1.00 DLA
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		200	280	208	320	214
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.0539	0.0730	0.0545	0.0830	0.0547
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.00100 DLA	<0.00100 DLA	<0.00100 DLA	<0.00250 DLA	<0.00100 DLA
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		<2.00 DLA	<2.00 DLA	<2.00 DLA	<5.00 DLA	<2.00 DLA
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000200 DLA	<0.000200 DLA	<0.000200 DLA	<0.000500 DLA	<0.000200 DLA
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		5280	7240	5660	8050	5400
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		3.58	4.67	3.56	5.41	3.56
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		484	659	474	752	481
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00400 DLA	<0.00400 DLA	<0.00400 DLA	<0.0100 DLA	<0.00400 DLA

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-46S-WQ	BRP-46D-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-51-WQ
					Client sampling date / time	25-Aug-2024 04:34	25-Aug-2024 04:23	25-Aug-2024 05:45	25-Aug-2024 05:30	25-Aug-2024 03:50
						YL2401307-001	YL2401307-002	YL2401307-003	YL2401307-004	YL2401307-005
						Result	Result	Result	Result	Result
Total Metals										
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000200 DLA	<0.000200 DLA	<0.000200 DLA	<0.000500 DLA	<0.000200 DLA
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00600 DLA	<0.00600 DLA	<0.00600 DLA	<0.0150 DLA	<0.00600 DLA
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00200 DLA	<0.00200 DLA	<0.00200 DLA	<0.00500 DLA	<0.00200 DLA
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.00145	0.00185	0.00150	0.00235	0.00140
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.0100 DLA	<0.0100 DLA	<0.0100 DLA	<0.0250 DLA	<0.0100 DLA
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0600 DLA	<0.0600 DLA	<0.0600 DLA	<0.150 DLA	<0.0600 DLA
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00400 DLA	<0.00400 DLA	<0.00400 DLA	<0.0100 DLA	<0.00400 DLA
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		<0.0100 DLA	<0.0500 DLA	<0.0200 DLA	<0.0200 DLA	<0.0200 DLA
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00100	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00901	0.00939	0.00872	0.0103	0.00915
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000200 DLA	<0.00100 DLA	<0.000400 DLA	<0.000400 DLA	<0.000400 DLA
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.00100 DLA	<0.00100 DLA	<0.00100 DLA
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		2.32	2.98	2.39	3.71	2.13
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000500 DLA	<0.000250 DLA	<0.000100 DLA	<0.000100 DLA	<0.000100 DLA
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		207	256	196	329	205
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000155	<0.000500 DLA	<0.000200 DLA	0.000236	<0.000200 DLA
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.0100 DLA	<0.0100 DLA	<0.0100 DLA
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.0100 DLA	<0.00400 DLA	<0.00400 DLA	<0.00400 DLA
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.100 DLA	<0.500 DLA	<0.200 DLA	<0.200 DLA	<0.200 DLA
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.00100 DLA	<0.00100 DLA	<0.00100 DLA
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0870	0.110	0.0857	0.138	0.0850
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		622	781	609	955	601
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00135	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.00562	0.00726	0.00532	0.00847	0.00577

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-46S-WQ	BRP-46D-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-51-WQ
					Client sampling date / time	25-Aug-2024 04:34	25-Aug-2024 04:23	25-Aug-2024 05:45	25-Aug-2024 05:30	25-Aug-2024 03:50
						YL2401307-001	YL2401307-002	YL2401307-003	YL2401307-004	YL2401307-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.0100 DLA	<0.0100 DLA	<0.0100 DLA
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.500 DLA	<2.50 DLA	<1.00 DLA	<1.00 DLA	<1.00 DLA
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		197	260	205	313	194
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.0544	0.0671	0.0533	0.0853	0.0571
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.00100 DLA	<0.00100 DLA	<0.00100 DLA
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		<0.500 DLA	<2.50 DLA	<1.00 DLA	<1.00 DLA	<1.00 DLA
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000100 DLA	<0.000500 DLA	<0.000200 DLA	<0.000200 DLA	<0.000200 DLA
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		5140	6560	5020	7910	4900
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		3.83	4.69	3.65	5.96	3.88
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		488	597	472	760	458
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.0100 DLA	<0.00400 DLA	<0.00400 DLA	<0.00400 DLA
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000100 DLA	<0.000500 DLA	<0.000200 DLA	<0.000200 DLA	<0.000200 DLA
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00300 DLA	<0.0150 DLA	<0.00600 DLA	<0.00600 DLA	<0.00600 DLA
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00200 DLA	<0.00200 DLA	<0.00200 DLA
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00151	0.00188	0.00147	0.00222	0.00160
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.0100 DLA	<0.0100 DLA	<0.0100 DLA
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		<0.0100 DLA	<0.0500 DLA	<0.0200 DLA	<0.0200 DLA	<0.0200 DLA
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.0100 DLA	<0.00400 DLA	<0.00400 DLA	<0.00400 DLA
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-46S-WQ	BRP-46D-WQ	BRP-48S-WQ	BRP-48D-WQ	BRP-51-WQ
					Client sampling date / time	25-Aug-2024 04:34	25-Aug-2024 04:23	25-Aug-2024 05:45	25-Aug-2024 05:30	25-Aug-2024 03:50
						YL2401307-001	YL2401307-002	YL2401307-003	YL2401307-004	YL2401307-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/VA	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/VA	100	µg/L		<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%		83.5	88.5	90.8	86.5	92.7
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		78.9	82.5	82.2	88.9	111
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%		85.7	87.5	87.1	87.2	86.6
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%		101	102	102	102	99.2

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	Field Dup	Field Blank
					Client sampling date / time	25-Aug-2024 09:30	25-Aug-2024 09:45	25-Aug-2024 03:20	25-Aug-2024 00:00	25-Aug-2024 01:30
						YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-009	YL2401307-010
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		26700	39300	27100	26900	<2.0
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		3050	4700	3120	3100	<0.60
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		3460	5150	3280	3330	<0.60
pH	----	E108/VA	0.10	pH units		7.84	7.86	7.88	7.86	5.40
Salinity	----	EC100S/VA	1.0	psu		16.8	25.8	17.1	17.0	<1.0
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		22700	30900	23000	22800	<10
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	3.7	5.9	<3.0
Turbidity	----	E121/VA	0.10	NTU		0.70	0.74	0.54	0.72	<0.10
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	0.0171	0.0089	<0.0050	<0.0050
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		31.0	46.2	29.8	30.4	<0.050
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		9440	14000	9220	9310	<0.50
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<2.00 DLDS	<2.00 DLDS	<2.00 DLDS	<2.00 DLDS	<0.020
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.500 DLDS	<0.500 DLDS	<0.500 DLDS	<0.500 DLDS	<0.0050
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.100 DLDS	<0.100 DLDS	<0.100 DLDS	<0.100 DLDS	<0.0010
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.057	0.082	0.146	0.047	<0.030
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/VA	0.0010	mg/L		0.0104	0.0413	0.0083	0.0108	<0.0010
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0220	0.0429	0.0162	0.0158	<0.0020
Silicate (as SiO2)	7631-86-9	E392/VA	0.50	mg/L		0.65	1.31	0.60	0.64	<0.50
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		1240	1880	1220	1240	<0.30
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.78	1.14	1.96	1.69	<0.50
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		1.86	1.16	2.00	1.76	<0.50
Total Sulfides										
Sulfide, total (as H2S)	7783-06-4	E395-H/VA	0.011	mg/L		<0.011	<0.011	<0.011	<0.011	<0.011
Sulfide, total (as S)	18496-25-8	E395-H/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		<0.0300 DLA	<0.150 DLA	0.0334	<0.0600 DLA	<0.0030

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	Field Dup	Field Blank
					Client sampling date / time	25-Aug-2024 09:30	25-Aug-2024 09:45	25-Aug-2024 03:20	25-Aug-2024 00:00	25-Aug-2024 01:30
						YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-009	YL2401307-010
						Result	Result	Result	Result	Result
Total Metals										
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00908	0.00993	0.00912	0.00928	<0.00010
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000200 DLA	<0.00100 DLA	<0.000200 DLA	<0.000400 DLA	<0.000100
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L		2.26	3.70	2.34	2.27	<0.010
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000500 DLA	<0.000250 DLA	<0.0000500 DLA	<0.000100 DLA	<0.0000050
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		211	313	201	204	<0.050
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000138	<0.000500 DLA	0.000134	<0.000200 DLA	<0.000010
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Iron, total	7439-89-6	E420/VA	0.010	mg/L		<0.100 DLA	<0.500 DLA	<0.100 DLA	<0.200 DLA	<0.010
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0854	0.136	0.0836	0.0829	<0.0010
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		712	1060	675	686	<0.0050
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00263	<0.00500 DLA	0.00282	0.00228	<0.00010
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.00551	0.00809	0.00540	0.00564	<0.000050
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.500 DLA	<2.50 DLA	<0.500 DLA	<1.00 DLA	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		215	324	212	209	<0.050
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.0553	0.0870	0.0548	0.0553	<0.00020
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000500 DLA	<0.00250 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		<1.00 DLA	<5.00 DLA	<1.00 DLA	<2.00 DLA	<0.10
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000100 DLA	<0.000500 DLA	<0.000100 DLA	<0.000200 DLA	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		5570	8490	5430	5330	<0.050
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		3.57	5.52	3.58	3.62	<0.00020
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		512	713	518	472	<0.50
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00200 DLA	<0.0100 DLA	<0.00200 DLA	<0.00400 DLA	<0.00020

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	Field Dup	Field Blank
					Client sampling date / time	25-Aug-2024 09:30	25-Aug-2024 09:45	25-Aug-2024 03:20	25-Aug-2024 00:00	25-Aug-2024 01:30
						YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-009	YL2401307-010
						Result	Result	Result	Result	Result
Total Metals										
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000100 DLA	<0.000500 DLA	<0.000100 DLA	<0.000200 DLA	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00300 DLA	<0.0150 DLA	<0.00300 DLA	<0.00600 DLA	<0.00030
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00100 DLA	<0.00500 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.00142	0.00221	0.00141	0.00146	<0.000010
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00500 DLA	<0.0250 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0300 DLA	<0.150 DLA	<0.0300 DLA	<0.0600 DLA	<0.0030
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00200 DLA	<0.0100 DLA	<0.00200 DLA	<0.00400 DLA	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		<0.0100 DLA	<0.0200 DLA	<0.0100 DLA	<0.0200 DLA	<0.0010
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00931	0.0100	0.00989	0.00909	<0.00010
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000200 DLA	<0.000400 DLA	<0.000200 DLA	<0.000400 DLA	<0.000100
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00100 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		2.26	3.52	2.32	2.28	<0.010
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000846 DTMF	<0.000100 DLA	0.0000602	<0.000100 DLA	<0.0000050
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		211	316	214	214	<0.050
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000158	0.000240	0.000133	<0.000200 DLA	<0.000010
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0100 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.00400 DLA	0.00257	<0.00400 DLA	<0.00020
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.100 DLA	<0.200 DLA	<0.100 DLA	<0.200 DLA	<0.010
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00100 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0879	0.134	0.0894	0.0886	<0.0010
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		612	949	628	622	<0.0050
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00135	<0.00200 DLA	0.00153	<0.00200 DLA	<0.00010
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.00560	0.00842	0.00573	0.00536	<0.000050

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	Field Dup	Field Blank
					Client sampling date / time	25-Aug-2024 09:30	25-Aug-2024 09:45	25-Aug-2024 03:20	25-Aug-2024 00:00	25-Aug-2024 01:30
						YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-009	YL2401307-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0100 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.500 DLA	<1.00 DLA	<0.500 DLA	<1.00 DLA	<0.050
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		202	312	208	207	<0.050
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.0541	0.0782	0.0570	0.0572	<0.00020
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000500 DLA	<0.00100 DLA	<0.000500 DLA	<0.00100 DLA	<0.000050
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		<0.500 DLA	<1.00 DLA	<0.500 DLA	<1.00 DLA	<0.050
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000100 DLA	<0.000200 DLA	<0.000100 DLA	<0.000200 DLA	<0.000010
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		5000	7890	5240	5180	<0.050
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		3.95	6.04	3.88	3.93	<0.00020
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		475	734	496	484	<0.50
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.00400 DLA	<0.00200 DLA	<0.00400 DLA	<0.00020
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000100 DLA	<0.000200 DLA	<0.000100 DLA	<0.000200 DLA	<0.000010
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00300 DLA	<0.00600 DLA	<0.00300 DLA	<0.00600 DLA	<0.00030
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00100 DLA	<0.00200 DLA	<0.00100 DLA	<0.00200 DLA	<0.00010
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00143	0.00214	0.00147	0.00152	<0.000010
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00500 DLA	<0.0100 DLA	<0.00500 DLA	<0.0100 DLA	<0.00050
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		<0.0100 DLA	<0.0200 DLA	0.0209	<0.0200 DLA	<0.0010
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00200 DLA	<0.00400 DLA	<0.00200 DLA	<0.00400 DLA	<0.00020
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-04S-WQ	REF-04D-WQ	REF-05-WQ	Field Dup	Field Blank
					Client sampling date / time	25-Aug-2024 09:30	25-Aug-2024 09:45	25-Aug-2024 03:20	25-Aug-2024 00:00	25-Aug-2024 01:30
						YL2401307-006	YL2401307-007	YL2401307-008	YL2401307-009	YL2401307-010
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/VA	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/VA	100	µg/L		<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%		88.3	92.8	86.8	91.4	86.4
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		91.8	83.1	86.8	88.8	83.3
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%		86.7	86.8	85.8	86.2	85.2
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%		101	101	102	101	101

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	TB	REF-04-PP-01	REF-04-PP-02	REF-04-PP-03	REF-05-PP-01
					Client sampling date / time	25-Aug-2024 00:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00
						YL2401307-011	YL2401307-012	YL2401307-013	YL2401307-014	YL2401307-015
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		----	1.21	1.22	1.09	1.14
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		<2.0	----	----	----	----
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		<0.60	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		<0.60	----	----	----	----
pH	----	E108/VA	0.10	pH units		5.20	----	----	----	----
Salinity	----	EC100S/VA	1.0	psu		<1.0	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		<10	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	----	----	----	----
Turbidity	----	E121/VA	0.10	NTU		<0.10	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		<0.50	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<0.020	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.0050	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	----	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		<0.030	----	----	----	----
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/VA	0.0010	mg/L		<0.0010	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		<0.0020	----	----	----	----
Silicate (as SiO2)	7631-86-9	E392/VA	0.50	mg/L		<0.50	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		<0.30	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		<0.50	----	----	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		<0.50 HTP, SP	----	----	----	----
Total Sulfides										
Sulfide, total (as H2S)	7783-06-4	E395-H/VA	0.011	mg/L		<0.011	----	----	----	----
Sulfide, total (as S)	18496-25-8	E395-H/VA	0.010	mg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	TB	REF-04-PP-01	REF-04-PP-02	REF-04-PP-03	REF-05-PP-01
					Client sampling date / time	25-Aug-2024 00:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00
						YL2401307-011	YL2401307-012	YL2401307-013	YL2401307-014	YL2401307-015
						Result	Result	Result	Result	Result
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		<0.0030	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		<0.010	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		<0.010	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		<0.0050	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		<0.10	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		0.345	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	TB	REF-04-PP-01	REF-04-PP-02	REF-04-PP-03	REF-05-PP-01
					Client sampling date / time	25-Aug-2024 00:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00
						YL2401307-011	YL2401307-012	YL2401307-013	YL2401307-014	YL2401307-015
						Result	Result	Result	Result	Result
Total Metals										
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		<0.0010	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		<0.010	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		<0.0010	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		<0.0050	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	----	----	----	----

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	TB	REF-04-PP-01	REF-04-PP-02	REF-04-PP-03	REF-05-PP-01
					Client sampling date / time	25-Aug-2024 00:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00
						YL2401307-011	YL2401307-012	YL2401307-013	YL2401307-014	YL2401307-015
						Result	Result	Result	Result	Result
Dissolved Metals										
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		<0.50	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	----	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	TB	REF-04-PP-01	REF-04-PP-02	REF-04-PP-03	REF-05-PP-01
					Client sampling date / time	25-Aug-2024 00:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00	22-Aug-2024 17:00
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401307-011	YL2401307-012	YL2401307-013	YL2401307-014	YL2401307-015
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	----	----	----	----
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	----	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	----	----	----	----
F1-BTEX	----	EC580/VA	100	µg/L		<100	----	----	----	----
F2 (C10-C16)	----	E601/VA	100	µg/L		<100	----	----	----	----
F3 (C16-C34)	----	E601/VA	250	µg/L		<250	----	----	----	----
F4 (C34-C50)	----	E601/VA	250	µg/L		<250	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%		90.7	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		85.2	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%		84.5	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%		101	----	----	----	----
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		----	1.02	0.902	0.917	0.965
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		----	1.24	1.10	1.00	1.10

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	REF-05-PP-02	REF-05-PP-03	BRP-46-PP-01	BRP-46-PP-02	BRP-46-PP-03
					Client sampling date / time	22-Aug-2024 17:00	22-Aug-2024 17:00	24-Aug-2024 17:00	24-Aug-2024 17:00	24-Aug-2024 17:00
						YL2401307-016	YL2401307-017	YL2401307-018	YL2401307-019	YL2401307-020
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.15	1.06	1.17	1.16	1.14
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		0.991	0.808	1.54	1.66	1.64
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.14	0.856	1.80	1.93	1.87

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BRP-51-PP-01	BRP-51-PP-02	BRP-51-PP-03	BRP-48-PP-01	BRP-48-PP-02
					Client sampling date / time	24-Aug-2024 17:00	24-Aug-2024 17:00	24-Aug-2024 17:00	25-Aug-2024 21:00	25-Aug-2024 21:00
						YL2401307-021	YL2401307-022	YL2401307-023	YL2401307-024	YL2401307-025
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.15	1.21	1.21	1.25	1.21
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.81	1.83	1.91	1.14	0.992
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.08	2.22	2.31	1.43	1.20

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	BRP-48-PP-03	----	----	----	----
					Client sampling date / time	25-Aug-2024 21:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401307-026	--------	--------	--------	--------
						Result	----	----	----	----
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.23	----	----	----	----
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.11	----	----	----	----
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.37	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **YL2401307**	Page	: 1 of 60
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Paige Glenen	Account Manager	: Brent Mack
Address	: 102-40 Highfield Park Drive Dartmouth NS Canada B3A0A3	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: ----	Telephone	: 778-370-3279
Project	: 121417593	Date Samples Received	: 27-Aug-2024 16:19
PO	: ----	Issue Date	: 05-Sep-2024 14:19
C-O-C number	: 17-824810/809/808		
Sampler	: MW/AJ		
Site	: ----		
Quote number	: VA22-STAC100-001 (via ALS Yellowknife)		
No. of samples received	: 42		
No. of samples analysed	: 42		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Method Blank value outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Dissolved Metals	QC-1625946-001	----	Barium, dissolved	7440-39-3	E421	0.00011 B mg/L	0.0001 mg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
B	*Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E510	22-Aug-2024	01-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E510	26-Aug-2024	01-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	8 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E510	26-Aug-2024	01-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	8 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E510	26-Aug-2024	01-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	8 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E510	24-Aug-2024	01-Sep-2024	28 days	8 days	✓	03-Sep-2024	28 days	10 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E510	24-Aug-2024	01-Sep-2024	28 days	8 days	✓	03-Sep-2024	28 days	10 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E510	24-Aug-2024	01-Sep-2024	28 days	8 days	✓	03-Sep-2024	28 days	10 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E510	24-Aug-2024	01-Sep-2024	28 days	8 days	✓	03-Sep-2024	28 days	10 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E510	23-Aug-2024	01-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E510	23-Aug-2024	01-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E510	23-Aug-2024	01-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	11 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E440	22-Aug-2024	01-Sep-2024	180 days	10 days	✓	03-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E440	26-Aug-2024	01-Sep-2024	180 days	6 days	✓	03-Sep-2024	180 days	8 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E440	26-Aug-2024	01-Sep-2024	180 days	6 days	✓	03-Sep-2024	180 days	8 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E440	26-Aug-2024	01-Sep-2024	180 days	6 days	✓	03-Sep-2024	180 days	8 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E440	24-Aug-2024	01-Sep-2024	180 days	8 days	✓	03-Sep-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E440	24-Aug-2024	01-Sep-2024	180 days	8 days	✓	03-Sep-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E440	24-Aug-2024	01-Sep-2024	180 days	8 days	✓	03-Sep-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E440	24-Aug-2024	01-Sep-2024	180 days	8 days	✓	03-Sep-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E440	23-Aug-2024	01-Sep-2024	180 days	9 days	✓	03-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E440	23-Aug-2024	01-Sep-2024	180 days	9 days	✓	03-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E440	23-Aug-2024	01-Sep-2024	180 days	9 days	✓	03-Sep-2024	180 days	11 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E144	26-Aug-2024	----	----	----		30-Aug-2024	----	4 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E144	26-Aug-2024	----	----	----		30-Aug-2024	----	4 days	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E144	26-Aug-2024	----	----	----		30-Aug-2024	----	4 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E144	24-Aug-2024	----	----	----		30-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E144	24-Aug-2024	----	----	----		30-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E144	24-Aug-2024	----	----	----		30-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E144	24-Aug-2024	----	----	----		30-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E144	23-Aug-2024	----	----	----		30-Aug-2024	----	7 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E144	23-Aug-2024	----	----	----		30-Aug-2024	----	7 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E144	23-Aug-2024	----	----	----		30-Aug-2024	----	7 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E144	22-Aug-2024	----	----	----		30-Aug-2024	----	8 days	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E108	24-Aug-2024	03-Sep-2024	30 days	10 days	✓	03-Sep-2024	30 days	10 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E108	24-Aug-2024	03-Sep-2024	30 days	10 days	✓	03-Sep-2024	30 days	10 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E108	24-Aug-2024	03-Sep-2024	30 days	10 days	✓	03-Sep-2024	30 days	10 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E108	24-Aug-2024	03-Sep-2024	30 days	10 days	✓	03-Sep-2024	30 days	10 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E108	23-Aug-2024	03-Sep-2024	30 days	11 days	✓	03-Sep-2024	30 days	11 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E108	23-Aug-2024	03-Sep-2024	30 days	11 days	✓	03-Sep-2024	30 days	11 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E108	23-Aug-2024	03-Sep-2024	30 days	11 days	✓	03-Sep-2024	30 days	11 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E108	22-Aug-2024	03-Sep-2024	30 days	12 days	✓	03-Sep-2024	30 days	12 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E108	26-Aug-2024	03-Sep-2024	30 days	8 days	✓	03-Sep-2024	30 days	8 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E108	26-Aug-2024	03-Sep-2024	30 days	8 days	✓	03-Sep-2024	30 days	8 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E108	26-Aug-2024	03-Sep-2024	30 days	8 days	✓	03-Sep-2024	30 days	8 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E641A-L	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E641A-L	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E641A-L	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E641A-L	24-Aug-2024	30-Aug-2024	14 days	6 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E641A-L	24-Aug-2024	30-Aug-2024	14 days	6 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E641A-L	24-Aug-2024	30-Aug-2024	14 days	6 days	✓	30-Aug-2024	40 days	0 days	✓

Matrix: **Soil/Solid**

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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E641A-L	24-Aug-2024	30-Aug-2024	14 days	6 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E641A-L	23-Aug-2024	30-Aug-2024	14 days	7 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E641A-L	23-Aug-2024	30-Aug-2024	14 days	7 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E641A-L	23-Aug-2024	30-Aug-2024	14 days	7 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E641A-L	22-Aug-2024	30-Aug-2024	14 days	8 days	✓	30-Aug-2024	40 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-48-SED1	E532	26-Aug-2024	31-Aug-2024	30 days	5 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-48-SED2	E532	26-Aug-2024	31-Aug-2024	30 days	5 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-48-SED3	E532	26-Aug-2024	31-Aug-2024	30 days	5 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-51-SED1	E532	24-Aug-2024	31-Aug-2024	30 days	7 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-51-SED2	E532	24-Aug-2024	31-Aug-2024	30 days	7 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-51-SED3	E532	24-Aug-2024	31-Aug-2024	30 days	7 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
FIELD-DUP	E532	24-Aug-2024	31-Aug-2024	30 days	7 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-46-SED1	E532	23-Aug-2024	31-Aug-2024	30 days	8 days	✓	31-Aug-2024	7 days	0 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-46-SED2	E532	23-Aug-2024	31-Aug-2024	30 days	8 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
BRP-46-SED3	E532	23-Aug-2024	31-Aug-2024	30 days	8 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-04-SED1	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-04-SED2	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-04-SED3	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-05-SED1	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-05-SED2	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓
Speciated Metals : Hexavalent Chromium (Cr VI) by IC										
Glass soil jar/Teflon lined cap										
REF-05-SED3	E532	22-Aug-2024	31-Aug-2024	30 days	9 days	✓	31-Aug-2024	7 days	0 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BRP-46D-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	01-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BRP-46S-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	01-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BRP-48D-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	01-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BRP-48S-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	01-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BRP-51-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	01-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Field Blank	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	02-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Field Dup	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	02-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) REF-04D-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	02-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) REF-04S-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	02-Sep-2024	28 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) REF-05-WQ	E298	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	02-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (lab preserved) TB	E298	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	31-Aug-2024	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BRP-46D-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BRP-46S-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BRP-48D-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BRP-48S-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BRP-51-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE Field Blank	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE Field Dup	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE REF-04D-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE REF-04S-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE REF-05-WQ	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE TB	E235.Br-L	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BRP-46D-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BRP-46S-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BRP-48D-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BRP-48S-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BRP-51-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE										
Field Blank	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
Field Dup	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
REF-04D-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
REF-04S-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
REF-05-WQ	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
TB	E235.Cl	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
BRP-46D-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
BRP-46S-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
BRP-48D-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
BRP-48S-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
BRP-51-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
Field Blank	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
Field Dup	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
REF-04D-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
REF-04S-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
REF-05-WQ	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
TB	E378-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
BRP-46D-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE BRP-46S-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE BRP-48D-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE BRP-48S-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE BRP-51-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE Field Blank	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE Field Dup	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE REF-04D-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE REF-04S-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE REF-05-WQ	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE TB	E235.F	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BRP-46D-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BRP-46S-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BRP-48D-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BRP-48S-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BRP-51-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE Field Blank	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE Field Dup	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE REF-04D-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
REF-04S-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
REF-05-WQ	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
TB	E235.NO3-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BRP-46D-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BRP-46S-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BRP-48D-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BRP-48S-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BRP-51-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Field Blank	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Field Dup	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
REF-04D-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
REF-04S-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
REF-05-WQ	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
TB	E235.NO2-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	29-Aug-2024	3 days	4 days	× EHT
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
BRP-46D-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
BRP-46S-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
BRP-48D-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
BRP-48S-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
BRP-51-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
Field Blank	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
Field Dup	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
REF-04D-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
REF-04S-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
REF-05-WQ	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Reactive Silica by Colourimetry										
HDPE										
TB	E392	25-Aug-2024	----	----	----		30-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
BRP-46D-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
BRP-46S-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE BRP-48D-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE BRP-48S-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE BRP-51-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE Field Blank	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE Field Dup	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE REF-04D-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE REF-04S-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE REF-05-WQ	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE TB	E235.SO4	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	29-Aug-2024	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BRP-46D-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BRP-46S-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BRP-48D-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BRP-48S-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BRP-51-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
Field Blank	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
Field Dup	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
REF-04D-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
REF-04S-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) REF-05-WQ	E366	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (lab preserved) TB	E366	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	31-Aug-2024	28 days	1 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) BRP-46D-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) BRP-46S-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) BRP-48D-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) BRP-48S-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) BRP-51-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Field Blank	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Field Dup	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
REF-04D-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
REF-04S-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
REF-05-WQ	E372-U	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	31-Aug-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (lab preserved)										
TB	E372-U	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	31-Aug-2024	28 days	2 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BRP-46D-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BRP-46S-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BRP-48D-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BRP-48S-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BRP-51-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) Field Blank	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) Field Dup	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) REF-04D-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) REF-04S-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) REF-05-WQ	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved) TB	E509	25-Aug-2024	04-Sep-2024	28 days	10 days	✓	04-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) BRP-46D-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) BRP-46S-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) BRP-48D-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) BRP-48S-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) BRP-51-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) Field Blank	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) Field Dup	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) REF-04D-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) REF-04S-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) REF-05-WQ	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) TB	E421	25-Aug-2024	30-Aug-2024	180 days	6 days	✓	02-Sep-2024	180 days	8 days	✓
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-48-PP-01	EF003	25-Aug-2024	----	----	----		04-Sep-2024	----	10 days	

Matrix: **Water**

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			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-48-PP-02	EF003	25-Aug-2024	----	----	----		04-Sep-2024	----	10 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-48-PP-03	EF003	25-Aug-2024	----	----	----		04-Sep-2024	----	10 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-46-PP-01	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-46-PP-02	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-46-PP-03	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-51-PP-01	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-51-PP-02	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-51-PP-03	EF003	24-Aug-2024	----	----	----		04-Sep-2024	----	11 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-04-PP-01	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-04-PP-02	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-04-PP-03	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-05-PP-01	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-05-PP-02	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	
Field Tests : Field Volume (L)										
Opaque HDPE tube REF-05-PP-03	EF003	22-Aug-2024	----	----	----		04-Sep-2024	----	13 days	
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) BRP-46D-WQ	E601	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	01-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) BRP-46S-WQ	E601	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	01-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) BRP-48D-WQ	E601	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	01-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) BRP-48S-WQ	E601	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	01-Sep-2024	40 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
BRP-51-WQ	E601	25-Aug-2024	02-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
Field Dup	E601	25-Aug-2024	02-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
REF-04D-WQ	E601	25-Aug-2024	02-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
REF-04S-WQ	E601	25-Aug-2024	02-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
Field Blank	E601	25-Aug-2024	02-Sep-2024	14 days	9 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
REF-05-WQ	E601	25-Aug-2024	02-Sep-2024	14 days	9 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
TB	E601	25-Aug-2024	02-Sep-2024	14 days	9 days	✓	03-Sep-2024	40 days	1 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
BRP-46S-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
BRP-48D-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) BRP-48S-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) Field Dup	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) REF-04D-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) REF-04S-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) BRP-46D-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) BRP-51-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) Field Blank	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) REF-05-WQ	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) TB	E581.VH+F1	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) BRP-46D-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) BRP-46S-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) BRP-48D-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) BRP-48S-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) BRP-51-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) Field Blank	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) Field Dup	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) REF-04D-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) REF-04S-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) REF-05-WQ	E358-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) TB	E358-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	30-Aug-2024	28 days	1 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) BRP-46D-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) BRP-46S-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) BRP-48D-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) BRP-48S-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) BRP-51-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) Field Blank	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) Field Dup	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) REF-04D-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) REF-04S-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) REF-05-WQ	E355-L	25-Aug-2024	30-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (lab preserved) TB	E355-L	25-Aug-2024	29-Aug-2024	3 days	4 days	× EHT	30-Aug-2024	28 days	1 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] BRP-46D-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] BRP-46S-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] BRP-48D-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] BRP-48S-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] BRP-51-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] Field Blank	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] Field Dup	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] REF-04D-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] REF-04S-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] REF-05-WQ	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE [TSS-WB] TB	E100	25-Aug-2024	29-Aug-2024	28 days	5 days	✓	30-Aug-2024	28 days	5 days	✓
Physical Tests : pH by Meter										
HDPE [TSS-WB] REF-04D-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	108 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	119 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] REF-04S-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	108 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	120 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] BRP-48S-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	112 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	123 hrs	× EHTR-FM

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [TSS-WB] BRP-48D-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	112 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	124 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] BRP-46D-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	113 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	125 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] BRP-46S-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	113 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	125 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] Field Dup	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	113 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	125 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] BRP-51-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	114 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	125 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] REF-05-WQ	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	114 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	126 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] Field Blank	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	116 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	128 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE [TSS-WB] TB	E108	25-Aug-2024	29-Aug-2024	0.25 hrs	117 hrs	× EHTR-FM	30-Aug-2024	0.25 hrs	129 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE BRP-46D-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓

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			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE BRP-46S-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE BRP-48D-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE BRP-48S-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE Field Dup	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE REF-04D-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE REF-04S-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE BRP-51-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE Field Blank	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE REF-05-WQ	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE TB	E162	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE BRP-46D-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE BRP-46S-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE BRP-48D-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE BRP-48S-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE Field Dup	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE REF-04D-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE REF-04S-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Physical Tests : TSS by Gravimetry										
HDPE BRP-51-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE Field Blank	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE REF-05-WQ	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE TB	E160	25-Aug-2024	----	----	----		30-Aug-2024	7 days	6 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE BRP-46D-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE BRP-46S-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE BRP-48D-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE BRP-48S-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE BRP-51-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE Field Blank	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT

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			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Turbidity by Nephelometry										
HDPE Field Dup	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE REF-04D-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE REF-04S-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE REF-05-WQ	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE TB	E121	25-Aug-2024	----	----	----		03-Sep-2024	3 days	9 days	× EHT
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-46-PP-01	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-46-PP-02	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-46-PP-03	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-51-PP-01	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-51-PP-02	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-51-PP-03	E870A	24-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-04-PP-01	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-04-PP-02	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-04-PP-03	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-05-PP-01	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-05-PP-02	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube REF-05-PP-03	E870A	22-Aug-2024	03-Sep-2024	28 days	12 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-48-PP-01	E870A	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	0 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-48-PP-02	E870A	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-48-PP-03	E870A	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) Field Blank	E508	25-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved) TB	E508	25-Aug-2024	03-Sep-2024	28 days	10 days	✓	03-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) BRP-46D-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) BRP-46S-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) BRP-48D-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) BRP-48S-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) BRP-51-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
Field Dup	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
REF-04D-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
REF-04S-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
REF-05-WQ	E508	25-Aug-2024	03-Sep-2024	28 days	9 days	✓	03-Sep-2024	28 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
BRP-51-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	10 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
REF-05-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	10 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
BRP-46D-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
BRP-46S-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
BRP-48D-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) BRP-48S-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) Field Dup	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) REF-04D-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) REF-04S-WQ	E420	25-Aug-2024	31-Aug-2024	180 days	6 days	✓	03-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) Field Blank	E420	25-Aug-2024	31-Aug-2024	180 days	7 days	✓	03-Sep-2024	180 days	10 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) TB	E420	25-Aug-2024	31-Aug-2024	180 days	7 days	✓	03-Sep-2024	180 days	10 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) BRP-46D-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) BRP-46S-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) BRP-48D-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
BRP-48S-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
BRP-51-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
Field Blank	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
Field Dup	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
REF-04D-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
REF-04S-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
REF-05-WQ	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
TB	E395-H	25-Aug-2024	----	----	----		30-Aug-2024	7 days	5 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate)										
BRP-46S-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) BRP-48D-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) BRP-48S-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) Field Dup	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) REF-04D-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) REF-04S-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	6 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) BRP-46D-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) BRP-51-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) Field Blank	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) REF-05-WQ	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate)										
TB	E611A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	14 days	7 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Hexavalent Chromium (Cr VI) by IC	E532	1627876	1	20	5.0	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1628764	1	17	5.8	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1628763	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1625645	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1625643	1	20	5.0	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1629535	2	22	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Hexavalent Chromium (Cr VI) by IC	E532	1627876	2	20	10.0	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	1628764	2	17	11.7	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1628763	2	20	10.0	10.0	✓
Moisture Content by Gravimetry	E144	1625645	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1625643	1	20	5.0	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1629535	4	22	18.1	10.0	✓
Method Blanks (MB)							
Hexavalent Chromium (Cr VI) by IC	E532	1627876	1	20	5.0	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1628764	1	17	5.8	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1628763	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1625645	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1625643	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1625643	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Ammonia by Fluorescence	E298	1624903	2	33	6.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1624868	1	11	9.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1627607	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1624864	1	20	5.0	5.0	✓
Conductivity in Water	E100	1624861	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1631073	2	23	8.7	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1625946	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1624899	2	33	6.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1624869	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1624863	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP) - Continued							
Nitrate in Water by IC (Low Level)	E235.NO3-L	1624865	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1624866	1	20	5.0	5.0	✓
pH by Meter	E108	1624859	1	20	5.0	5.0	✓
Reactive Silica by Colourimetry	E392	1625878	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1624867	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1626995	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1630340	1	17	5.8	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1625918	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1624901	2	24	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1624900	2	31	6.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1624902	2	27	7.4	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395-H	1625883	1	18	5.5	5.0	✓
TSS by Gravimetry	E160	1626991	1	11	9.0	5.0	✓
Turbidity by Nephelometry	E121	1630217	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1627608	1	17	5.8	5.0	✓
Laboratory Control Samples (LCS)							
Ammonia by Fluorescence	E298	1624903	2	33	6.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1624868	1	11	9.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1627607	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	1627414	2	12	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1624864	1	20	5.0	5.0	✓
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A	1630371	1	15	6.6	5.0	✓
Conductivity in Water	E100	1624861	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1631073	2	23	8.7	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1625946	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1624899	2	33	6.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1624869	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1624863	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1624865	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1624866	1	20	5.0	5.0	✓
pH by Meter	E108	1624859	1	20	5.0	5.0	✓
Reactive Silica by Colourimetry	E392	1625878	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1624867	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1626995	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1630340	1	17	5.8	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1625918	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1624901	2	24	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1624900	2	31	6.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1624902	2	27	7.4	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395-H	1625883	1	18	5.5	5.0	✓
TSS by Gravimetry	E160	1626991	1	11	9.0	5.0	✓
Turbidity by Nephelometry	E121	1630217	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1627608	1	17	5.8	5.0	✓
Method Blanks (MB)							
Ammonia by Fluorescence	E298	1624903	2	33	6.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1624868	1	11	9.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1627607	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	1627414	2	12	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1624864	1	20	5.0	5.0	✓
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A	1630371	1	15	6.6	5.0	✓
Conductivity in Water	E100	1624861	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1631073	2	23	8.7	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1625946	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1624899	2	33	6.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1624869	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1624863	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1624865	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1624866	1	20	5.0	5.0	✓
Reactive Silica by Colourimetry	E392	1625878	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1624867	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1626995	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1630340	1	17	5.8	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1625918	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1624901	2	24	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1624900	2	31	6.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1624902	2	27	7.4	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395-H	1625883	1	18	5.5	5.0	✓
TSS by Gravimetry	E160	1626991	1	11	9.0	5.0	✓
Turbidity by Nephelometry	E121	1630217	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1627608	1	17	5.8	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1624903	2	33	6.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1624868	1	11	9.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1627607	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1624864	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1631073	2	23	8.7	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1625946	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1624899	2	33	6.0	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1624869	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1624863	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1624865	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1624866	1	20	5.0	5.0	✓
Reactive Silica by Colourimetry	E392	1625878	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1624867	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1630340	1	17	5.8	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1625918	2	20	10.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1624901	2	24	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1624900	2	31	6.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1624902	2	27	7.4	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395-H	1625883	1	18	5.5	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1627608	1	17	5.8	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:Water Extraction)	E108 ALS Environmental - Calgary	Soil/Solid	BC Lab Manual	pH is determined by potentiometric measurement with a pH electrode at ambient laboratory temperature (normally 20 ± 5°C), and is carried out in accordance with procedures described in the BC Lab Manual (prescriptive method). The procedure involves mixing the dried (at <60 ºC) and sieved (10mesh/2mm) sample with ultra pure water at a 1:2 ratio of sediment to water. The pH is then measured by a standard pH probe.
Moisture Content by Gravimetry	E144 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 ALS Environmental - Calgary	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.
Mercury in Soil/Solid by CVAAS	E510 ALS Environmental - Calgary	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Edmonton	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L ALS Environmental - Calgary	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
Particle Size Analysis (Pipette) - MMER Classification	EC184E ALS Environmental - Saskatoon	Soil/Solid	Metal Mining Technical Guidance for Environmental Effects Monitoring (2012)	The particle size determination is performed by various methods to generate a Grain Size curve. The data from the curve is then used to produce particle size ranges based on the Metal Mining Effluent Regulations (MMER) classification system for Environmental Effects Monitoring.
Total Organic Carbon (Calculated) in soil	EC356 ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 21.2	Total Organic Carbon (TOC) is calculated by the difference between total carbon (TC) and total inorganic carbon (TIC).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Vancouver	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
TDS by Gravimetry	E162 ALS Environmental - Vancouver	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC (Low Level)	E235.NO3-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO_2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO_2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Nitrogen by Colourimetry	E366 ALS Environmental - Vancouver	Water	Chinchilla Scientific Nitrate Method, 2011	Following digestion, total nitrogen is is determined colourimetrically using a discrete analyzer utilizing the vanadium chloride reduction method. This method of analysis is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Vancouver	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Reactive Silica by Colourimetry	E392 ALS Environmental - Vancouver	Water	APHA 4500-SiO_2 E (mod)	Silicate (molybdate-reactive silica) is determined by the molybdosilicate-heteropoly blue colourimetric method using a discrete analyzer. Method Limitation: Arsenic (5+) above 100 mg/L is a negative interference on this test
Total Sulfide by Colourimetry (Automated Flow)	E395-H ALS Environmental - Vancouver	Water	APHA 4500 -S E-Auto-Colorimetry	Sulfide is determined using the gas dialysis automated methlyene blue colourimetric method. Results expressed "as H_2S" if reported represent the maximum possible H_2S concentration based on the total sulfide concentration in the sample. The H_2S calculation converts Total Sulphide as (S2-) and reports it as Total Sulphide as (H_2S)
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Vancouver	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BTEX by Headspace GC-MS	E611A ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A ALS Environmental - Vancouver	Water	EPA 445.0 (mod)	Chlorophyll-a is determined by solvent extraction followed with analysis by fluorometry using the non-acidification procedure. Sampling volume not provided by client.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in $CaCO_3$ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Salinity in Water (calculation)	EC100S ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a seawater sample. Conductivity measurements are temperature-compensated to 25°C. Salinity in Practical Salinity Units is calculated.
F1-BTEX	EC580 ALS Environmental - Vancouver	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Chlorophyll-a by Fluorometry (Field Filtered µg/L)	EC870A ALS Environmental - Vancouver	Water	CALC	Convert results to sample concentration based on field information.
Field Volume (L)	EF003 ALS Environmental - Vancouver	Water		Field measurement of sampling volume provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil:Water for pH/EC	EP108 ALS Environmental - Calgary	Soil/Solid	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL	The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.
Digestion for Metals and Mercury	EP440 ALS Environmental - Calgary	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532 ALS Environmental - Edmonton	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Dry and Grind in Soil/Solid <60°C	EPP442 ALS Environmental - Calgary	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Vancouver	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Nitrogen in water	EP366 ALS Environmental - Vancouver	Water	APHA 4500-P J (mod)	Samples for total nitrogen analysis are digested using a heated persulfate digestion. Nitrogen compounds are converted to nitrate in this digestion.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Vancouver	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Vancouver	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Chlorophyll-a Extraction (Field Filtered)	EP870A ALS Environmental - Vancouver	Water	EPA 445.0 (mod)	Chlorophyll-a solvent extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **YL2401307**	Page	: 1 of 29
Client	: Stantec Consulting Ltd.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Paige Glenen	Account Manager	: Brent Mack
Address	: 102-40 Highfield Park Drive Dartmouth NS Canada B3A0A3	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: ----	Telephone	: 778-370-3279
Project	: 121417593	Date Samples Received	: 27-Aug-2024 16:19
PO	: ----	Date Analysis Commenced	: 29-Aug-2024
C-O-C number	: 17-824810/809/808	Issue Date	: 05-Sep-2024 14:20
Sampler	: MW/AJ		
Site	: ----		
Quote number	: VA22-STAC100-001 (via ALS Yellowknife)		
No. of samples received	: 42		
No. of samples analysed	: 42		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

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General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1625645)											
SK2404601-003	Anonymous	Moisture	----	E144	0.25	%	24.0	24.0	0.124%	20%	----
Physical Tests (QC Lot: 1629535)											
CG2412164-001	Anonymous	pH (1:2 soil:water)	----	E108	0.10	pH units	8.24	8.21	0.365%	5%	----
Physical Tests (QC Lot: 1629536)											
YL2401307-041	BRP-51-SED3	pH (1:2 soil:water)	----	E108	0.10	pH units	7.64	7.60	0.525%	5%	----
Metals (QC Lot: 1628763)											
CG2412159-042	Anonymous	Aluminum	7429-90-5	E440	50	mg/kg	9590	9650	0.586%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	0.34	0.33	0.005	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	6.48	6.50	0.209%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	180	176	2.01%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.52	0.54	0.02	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Boron	7440-42-8	E440	5.0	mg/kg	5.1	5.5	0.4	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	0.176	0.183	3.72%	30%	----
		Calcium	7440-70-2	E440	50	mg/kg	25500	25900	1.26%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	16.0	16.1	0.749%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	6.39	6.42	0.393%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	11.8	11.9	0.912%	30%	----
		Iron	7439-89-6	E440	50	mg/kg	14100	14200	0.554%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	8.12	8.28	1.95%	40%	----
		Lithium	7439-93-2	E440	2.0	mg/kg	9.8	11.1	1.3	Diff <2x LOR	----
		Magnesium	7439-95-4	E440	20	mg/kg	6510	6460	0.666%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	237	239	0.643%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.67	0.66	1.85%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	17.6	17.6	0.208%	30%	----
		Phosphorus	7723-14-0	E440	50	mg/kg	362	375	3.40%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	1350	1370	1.29%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Sodium	7440-23-5	E440	50	mg/kg	200	198	2	Diff <2x LOR	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Metals (QC Lot: 1628763) - continued											
CG2412159-042	Anonymous	Strontium	7440-24-6	E440	0.50	mg/kg	53.9	53.6	0.434%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	<1000	<1000	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	0.171	0.176	0.004	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Titanium	7440-32-6	E440	1.0	mg/kg	24.1	25.0	3.80%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	0.732	0.752	2.63%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	23.6	23.6	0.179%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	42.4	42.4	0.0341%	30%	----
		Zirconium	7440-67-7	E440	1.0	mg/kg	5.8	5.7	0.09	Diff <2x LOR	----
Metals (QC Lot: 1628764)											
GP2401625-002	Anonymous	Mercury	7439-97-6	E510	0.0050	mg/kg	0.0392	0.0427	8.48%	40%	----
Speciated Metals (QC Lot: 1627876)											
CG2412369-001	Anonymous	Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1625643)											
SK2404601-003	Anonymous	Acenaphthene	83-32-9	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Acridine	260-94-6	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A-L	0.0040	mg/kg	<0.0040	<0.0040	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(a)pyrene	50-32-8	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(b+j)fluoranthene	n/a	E641A-L	0.010	mg/kg	0.012	0.010	0.002	Diff <2x LOR	----
		Benzo(g,h,i)perylene	191-24-2	E641A-L	0.010	mg/kg	0.019	0.016	0.003	Diff <2x LOR	----
		Benzo(k)fluoranthene	207-08-9	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Dibenz(a,h)anthracene	53-70-3	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Fluorene	86-73-7	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.010	mg/kg	0.014	0.012	0.002	Diff <2x LOR	----
		Methylnaphthalene, 1-	90-12-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Phenanthrene	85-01-8	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Pyrene	129-00-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Polycyclic Aromatic Hydrocarbons (QC Lot: 1625643) - continued											
SK2404601-003	Anonymous	Quinoline	91-22-5	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1624859)											
YL2401302-001	Anonymous	pH	----	E108	0.10	pH units	7.85	7.86	0.127%	4%	----
Physical Tests (QC Lot: 1624861)											
YL2401302-001	Anonymous	Conductivity	----	E100	2.0	µS/cm	306	307	0.326%	10%	----
Physical Tests (QC Lot: 1626991)											
YL2401307-001	BRP-46S-WQ	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	3.3	0.3	Diff <2x LOR	----
Physical Tests (QC Lot: 1626995)											
YL2401307-001	BRP-46S-WQ	Solids, total dissolved [TDS]	----	E162	400	mg/L	17900	21400	17.7%	20%	----
Physical Tests (QC Lot: 1630217)											
VA24C2171-001	Anonymous	Turbidity	----	E121	0.10	NTU	0.12	0.13	0.02	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624863)											
YL2401307-001	BRP-46S-WQ	Fluoride	16984-48-8	E235.F	2.00	mg/L	<2.00	<2.00	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624864)											
YL2401307-001	BRP-46S-WQ	Chloride	16887-00-6	E235.Cl	50.0	mg/L	9280	9500	2.27%	20%	----
Anions and Nutrients (QC Lot: 1624865)											
YL2401307-001	BRP-46S-WQ	Nitrate (as N)	14797-55-8	E235.NO3-L	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624866)											
YL2401307-001	BRP-46S-WQ	Nitrite (as N)	14797-65-0	E235.NO2-L	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624867)											
YL2401307-001	BRP-46S-WQ	Sulfate (as SO4)	14808-79-8	E235.SO4	30.0	mg/L	1240	1250	1.14%	20%	----
Anions and Nutrients (QC Lot: 1624868)											
YL2401307-001	BRP-46S-WQ	Bromide	24959-67-9	E235.Br-L	5.00	mg/L	30.4	30.9	0.519	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624869)											
VA24C2329-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0168	0.0172	1.77%	20%	----
Anions and Nutrients (QC Lot: 1624901)											
VA24C1850-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.193	0.191	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624902)											
VA24C1850-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0147	0.0144	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1624903)											
VA24C1850-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0057	0.0057	0.000003	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 1625468)											
VA24C1907-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.066	0.056	0.010	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1625469)											
VA24C1907-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0052	0.0050	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1625470)											
VA24C1907-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1625878)											
YL2401251-001	Anonymous	Silicate (as SiO2)	7631-86-9	E392	0.50	mg/L	3.24	3.25	0.01	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1624899)											
VA24C1850-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.53	2.78	0.26	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1624900)											
VA24C1850-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	2.57	2.77	0.20	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1625466)											
VA24C1907-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.54	1.46	0.08	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1625467)											
VA24C1907-003	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	0.83	0.92	0.10	Diff <2x LOR	----
Total Sulfides (QC Lot: 1625883)											
VA24C1021-006	Anonymous	Sulfide, total (as S)	18496-25-8	E395-H	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Total Metals (QC Lot: 1625918)											
YL2401309-003	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0093	0.0088	0.0005	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00013	0.00013	0.000006	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0132	0.0135	2.14%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.037	0.037	0.00006	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000598	0.0000611	2.12%	20%	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	31.6	32.2	1.88%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000028	0.000032	0.000004	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00055	0.00059	0.00004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0047	0.0050	0.0002	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1625918) - continued											
YL2401309-003	Anonymous	Magnesium, total	7439-95-4	E420	0.0050	mg/L	5.78	5.56	3.99%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00812	0.00769	5.38%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000791	0.000780	1.41%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00053	0.00056	0.00003	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.90	1.84	3.10%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00317	0.00334	5.03%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	0.15	0.16	0.008	Diff <2x LOR	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	17.2	17.0	1.24%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.381	0.386	1.31%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	5.01	5.10	1.79%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000189	0.000192	1.80%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1630340)											
VA24C2659-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1625946)											
VA24C2117-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0258	0.0252	2.29%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00030	0.00030	0.000002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00316	0.00322	2.15%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0672	0.0679	0.962%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000117	0.000112	4.62%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1625946) - continued											
VA24C2117-001	Anonymous	Calcium, dissolved	7440-70-2	E421	0.050	mg/L	54.4	54.2	0.267%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00097	0.00098	0.000006	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00108	0.00108	0.000002	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.050	0.050	0.0005	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000099	0.000097	0.000002	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0058	0.0058	0.00003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	16.5	16.8	1.95%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.162	0.162	0.300%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000604	0.000603	0.0686%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00974	0.00983	0.895%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.709	0.719	1.46%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00054	0.00051	0.00003	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000454	0.000440	0.000013	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.06	3.16	3.12%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.99	1.99	0.0910%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.240	0.247	2.62%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	28.0	28.5	1.96%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00079	0.00074	0.00005	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00102	0.00102	0.796%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0105	0.0105	0.182%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1631073)											
VA24C2652-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1631074)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1631074) - continued											
YL2401307-009	Field Dup	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1627607)											
VA24C1591-001	Anonymous	Benzene	71-43-2	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611A	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1627608)											
VA24C1624-004	Anonymous	F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1625645)						
Moisture	----	E144	0.25	%	<0.25	----
Metals (QCLot: 1628763)						
Aluminum	7429-90-5	E440	50	mg/kg	<50	----
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	----
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	----
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	----
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	----
Bismuth	7440-69-9	E440	0.2	mg/kg	<0.20	----
Boron	7440-42-8	E440	5	mg/kg	<5.0	----
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	----
Calcium	7440-70-2	E440	50	mg/kg	<50	----
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	----
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	----
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	----
Iron	7439-89-6	E440	50	mg/kg	<50	----
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	----
Lithium	7439-93-2	E440	2	mg/kg	<2.0	----
Magnesium	7439-95-4	E440	20	mg/kg	<20	----
Manganese	7439-96-5	E440	1	mg/kg	<1.0	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	----
Phosphorus	7723-14-0	E440	50	mg/kg	<50	----
Potassium	7440-09-7	E440	100	mg/kg	<100	----
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	----
Sodium	7440-23-5	E440	50	mg/kg	<50	----
Strontium	7440-24-6	E440	0.5	mg/kg	<0.50	----
Sulfur	7704-34-9	E440	1000	mg/kg	<1000	----
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----
Titanium	7440-32-6	E440	1	mg/kg	<1.0	----
Tungsten	7440-33-7	E440	0.5	mg/kg	<0.50	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 1628763) - continued						
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Zirconium	7440-67-7	E440	1	mg/kg	<1.0	----
Metals (QCLot: 1628764)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
Speciated Metals (QCLot: 1627876)						
Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1625643)						
Acenaphthene	83-32-9	E641A-L	0.005	mg/kg	<0.0050	----
Acenaphthylene	208-96-8	E641A-L	0.005	mg/kg	<0.0050	----
Acridine	260-94-6	E641A-L	0.01	mg/kg	<0.010	----
Anthracene	120-12-7	E641A-L	0.004	mg/kg	<0.0040	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	mg/kg	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.01	mg/kg	<0.010	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	mg/kg	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	mg/kg	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	mg/kg	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	mg/kg	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	mg/kg	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	mg/kg	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	mg/kg	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	mg/kg	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	mg/kg	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	mg/kg	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	mg/kg	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	mg/kg	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	mg/kg	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1624861)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 1626991)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1626991) - continued						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1626995)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 1630217)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Anions and Nutrients (QCLot: 1624863)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1624864)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1624865)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1624866)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1624867)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1624868)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1624869)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1624901)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1624902)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1624903)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1625468)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1625469)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1625470)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1625878)						
Silicate (as SiO2)	7631-86-9	E392	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1624899)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Organic / Inorganic Carbon (QCLot: 1624900)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1625466)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1625467)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1625883)						
Sulfide, total (as S)	18496-25-8	E395-H	0.01	mg/L	<0.010	----
Total Metals (QCLot: 1625918)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1625918) - continued						
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1630340)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1625946)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	# 0.00011	B
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1625946) - continued						
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1631073)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1631074)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 1627607)						
Benzene	71-43-2	E611A	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611A	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611A	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1627414)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Hydrocarbons (QCLot: 1627608)						
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1629077)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Plant Pigments (QCLot: 1630371)						
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	<0.0020	----

Qualifiers

Qualifier	Description
B	*Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1625645)									
Moisture	----	E144	0.25	%	50 %	92.9	90.0	110	----
Physical Tests (QCLot: 1629535)									
pH (1:2 soil:water)	----	E108	----	pH units	7 pH units	101	97.0	103	----
Physical Tests (QCLot: 1629536)									
pH (1:2 soil:water)	----	E108	----	pH units	7 pH units	101	97.0	103	----
Metals (QCLot: 1628763)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	118	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	118	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	117	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	117	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	110	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	112	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	111	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	108	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	108	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	112	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	111	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	109	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	112	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	110	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	116	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	112	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	113	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	114	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	111	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	113	80.0	120	----
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	117	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	109	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	105	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	111	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	113	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	113	80.0	120	----

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Metals (QCLot: 1628763) - continued									
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	108	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	112	80.0	120	----
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	114	80.0	120	----
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	113	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	111	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	113	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	112	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	110	80.0	120	----
Metals (QCLot: 1628764)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	97.6	80.0	120	----
Speciated Metals (QCLot: 1627876)									
Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	16 mg/kg	111	80.0	120	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1625643)									
Acenaphthene	83-32-9	E641A-L	0.005	mg/kg	0.464 mg/kg	82.1	60.0	130	----
Acenaphthylene	208-96-8	E641A-L	0.005	mg/kg	0.464 mg/kg	82.2	60.0	130	----
Acridine	260-94-6	E641A-L	0.01	mg/kg	0.464 mg/kg	85.1	60.0	130	----
Anthracene	120-12-7	E641A-L	0.004	mg/kg	0.464 mg/kg	74.3	60.0	130	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	mg/kg	0.464 mg/kg	78.6	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A-L	0.01	mg/kg	0.464 mg/kg	78.5	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	mg/kg	0.464 mg/kg	76.2	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	mg/kg	0.464 mg/kg	77.8	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	mg/kg	0.464 mg/kg	81.7	60.0	130	----
Chrysene	218-01-9	E641A-L	0.01	mg/kg	0.464 mg/kg	75.0	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	mg/kg	0.464 mg/kg	78.8	60.0	130	----
Fluoranthene	206-44-0	E641A-L	0.01	mg/kg	0.464 mg/kg	78.6	60.0	130	----
Fluorene	86-73-7	E641A-L	0.01	mg/kg	0.464 mg/kg	75.9	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	mg/kg	0.464 mg/kg	90.6	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	mg/kg	0.464 mg/kg	78.7	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	mg/kg	0.464 mg/kg	88.1	60.0	130	----
Naphthalene	91-20-3	E641A-L	0.01	mg/kg	0.464 mg/kg	83.6	50.0	130	----
Phenanthrene	85-01-8	E641A-L	0.01	mg/kg	0.464 mg/kg	75.3	60.0	130	----
Pyrene	129-00-0	E641A-L	0.01	mg/kg	0.464 mg/kg	76.2	60.0	130	----
Quinoline	91-22-5	E641A-L	0.01	mg/kg	0.464 mg/kg	76.5	60.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1624859)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1624861)									
Conductivity	----	E100	1	µS/cm	147 µS/cm	98.4	90.0	110	----
Physical Tests (QCLot: 1626991)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 1626995)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1630217)									
Turbidity	----	E121	0.1	NTU	200 NTU	95.5	85.0	115	----
Anions and Nutrients (QCLot: 1624863)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	97.6	90.0	110	----
Anions and Nutrients (QCLot: 1624864)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 1624865)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1624866)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1624867)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.4	90.0	110	----
Anions and Nutrients (QCLot: 1624868)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 1624869)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.03 mg/L	105	80.0	120	----
Anions and Nutrients (QCLot: 1624901)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1624902)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.7	80.0	120	----
Anions and Nutrients (QCLot: 1624903)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	96.8	85.0	115	----
Anions and Nutrients (QCLot: 1625468)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1625469)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.3	80.0	120	----
Anions and Nutrients (QCLot: 1625470)									

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1625470) - continued									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	96.2	85.0	115	----
Anions and Nutrients (QCLot: 1625878)									
Silicate (as SiO2)	7631-86-9	E392	0.5	mg/L	10 mg/L	103	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1624899)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	94.1	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1624900)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	109	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1625466)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.8	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1625467)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	97.4	80.0	120	----
Total Sulfides (QCLot: 1625883)									
Sulfide, total (as H2S)	7783-06-4	E395-H	----	mg/L	0.085 mg/L	118	80.0	120	----
Sulfide, total (as S)	18496-25-8	E395-H	0.01	mg/L	0.08 mg/L	118	80.0	120	----
Total Metals (QCLot: 1625918)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	94.3	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	95.2	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	99.8	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.5	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	95.9	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	99.5	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	93.8	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	97.8	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.0	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	88.1	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	97.3	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.1	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	104	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	94.5	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1625918) - continued									
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.6	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	97.5	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	98.2	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	93.6	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	98.1	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	88.8	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	104	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	93.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	98.4	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.4	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	97.4	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.4	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.1	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.7	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	95.8	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	95.0	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	97.0	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	93.8	80.0	120	----
Total Metals (QCLot: 1630340)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	94.5	80.0	120	----
Dissolved Metals (QCLot: 1625946)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	105	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	99.5	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	96.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	102	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	97.7	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1625946) - continued									
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	99.1	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	99.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	99.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	100.0	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	97.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	99.6	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	119	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	105	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	108	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	94.7	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	104	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	95.4	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	103	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.7	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	99.2	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	98.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	104	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	96.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.1	80.0	120	----
Volatile Organic Compounds (QCLot: 1627607)									
Benzene	71-43-2	E611A	0.5	µg/L	100 µg/L	101	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	100 µg/L	102	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	100 µg/L	105	70.0	130	----
Styrene	100-42-5	E611A	0.5	µg/L	100 µg/L	97.9	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1627607) - continued									
Toluene	108-88-3	E611A	0.5	µg/L	100 µg/L	110	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	200 µg/L	109	70.0	130	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	100 µg/L	102	70.0	130	----
Hydrocarbons (QCLot: 1627414)									
F2 (C10-C16)	----	E601	100	µg/L	3540 µg/L	114	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7050 µg/L	108	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	5050 µg/L	116	70.0	130	----
Hydrocarbons (QCLot: 1627608)									
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	77.6	70.0	130	----
Hydrocarbons (QCLot: 1629077)									
F2 (C10-C16)	----	E601	100	µg/L	3540 µg/L	116	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7050 µg/L	109	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	5050 µg/L	117	70.0	130	----
Plant Pigments (QCLot: 1630371)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	99.6	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1625643)										
SK2404601-003	Anonymous	Acenaphthene	83-32-9	E641A-L	0.312 mg/kg	0.385 mg/kg	81.1	50.0	140	----
		Acenaphthylene	208-96-8	E641A-L	0.311 mg/kg	0.385 mg/kg	80.8	50.0	140	----
		Acridine	260-94-6	E641A-L	0.285 mg/kg	0.385 mg/kg	74.0	50.0	140	----
		Anthracene	120-12-7	E641A-L	0.310 mg/kg	0.385 mg/kg	80.6	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A-L	0.289 mg/kg	0.385 mg/kg	75.1	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A-L	0.299 mg/kg	0.385 mg/kg	77.8	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A-L	0.294 mg/kg	0.385 mg/kg	76.4	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A-L	0.293 mg/kg	0.385 mg/kg	76.1	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A-L	0.313 mg/kg	0.385 mg/kg	81.4	50.0	140	----
		Chrysene	218-01-9	E641A-L	0.292 mg/kg	0.385 mg/kg	76.0	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A-L	0.306 mg/kg	0.385 mg/kg	79.5	50.0	140	----
		Fluoranthene	206-44-0	E641A-L	0.300 mg/kg	0.385 mg/kg	78.1	50.0	140	----
		Fluorene	86-73-7	E641A-L	0.318 mg/kg	0.385 mg/kg	82.6	50.0	140	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.352 mg/kg	0.385 mg/kg	91.4	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A-L	0.296 mg/kg	0.385 mg/kg	77.0	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A-L	0.331 mg/kg	0.385 mg/kg	86.1	50.0	140	----
		Naphthalene	91-20-3	E641A-L	0.312 mg/kg	0.385 mg/kg	81.1	50.0	140	----
		Phenanthrene	85-01-8	E641A-L	0.319 mg/kg	0.385 mg/kg	82.9	50.0	140	----
		Pyrene	129-00-0	E641A-L	0.297 mg/kg	0.385 mg/kg	77.2	50.0	140	----
		Quinoline	91-22-5	E641A-L	0.322 mg/kg	0.385 mg/kg	83.6	50.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1624863)										
YL2401307-002	BRP-46D-WQ	Fluoride	16984-48-8	E235.F	93.3 mg/L	100 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 1624864)										
YL2401307-002	BRP-46D-WQ	Chloride	16887-00-6	E235.Cl	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1624865)										
YL2401307-002	BRP-46D-WQ	Nitrate (as N)	14797-55-8	E235.NO3-L	245 mg/L	250 mg/L	97.9	75.0	125	----
Anions and Nutrients (QCLot: 1624866)										
YL2401307-002	BRP-46D-WQ	Nitrite (as N)	14797-65-0	E235.NO2-L	51.9 mg/L	50 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1624867)										
YL2401307-002	BRP-46D-WQ	Sulfate (as SO4)	14808-79-8	E235.SO4	9910 mg/L	10000 mg/L	99.1	75.0	125	----
Anions and Nutrients (QCLot: 1624868)										
YL2401307-002	BRP-46D-WQ	Bromide	24959-67-9	E235.Br-L	49.7 mg/L	50 mg/L	99.5	75.0	125	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1624869)										
VA24C2329-002	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0301 mg/L	0.03 mg/L	100	70.0	130	----
Anions and Nutrients (QCLot: 1624901)										
VA24C1850-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.392 mg/L	0.4 mg/L	98.0	70.0	130	----
Anions and Nutrients (QCLot: 1624902)										
VA24C1850-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0488 mg/L	0.05 mg/L	97.6	70.0	130	----
Anions and Nutrients (QCLot: 1624903)										
VA24C1850-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0936 mg/L	0.1 mg/L	93.6	75.0	125	----
Anions and Nutrients (QCLot: 1625468)										
VA24C1907-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.385 mg/L	0.4 mg/L	96.2	70.0	130	----
Anions and Nutrients (QCLot: 1625469)										
VA24C1907-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0480 mg/L	0.05 mg/L	96.0	70.0	130	----
Anions and Nutrients (QCLot: 1625470)										
VA24C1907-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0969 mg/L	0.1 mg/L	96.9	75.0	125	----
Anions and Nutrients (QCLot: 1625878)										
YL2401251-002	Anonymous	Silicate (as SiO2)	7631-86-9	E392	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1624899)										
VA24C1850-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.86 mg/L	5 mg/L	97.2	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1624900)										
VA24C1850-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	5.10 mg/L	5 mg/L	102	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1625466)										
VA24C1907-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.20 mg/L	5 mg/L	104	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1625467)										
VA24C1907-004	Anonymous	Carbon, total organic [TOC]	----	E355-L	5.19 mg/L	5 mg/L	104	70.0	130	----
Total Sulfides (QCLot: 1625883)										
VA24C1021-007	Anonymous	Sulfide, total (as S)	18496-25-8	E395-H	1.00 mg/L	1 mg/L	100	75.0	125	----
Total Metals (QCLot: 1625918)										
YL2401309-004	Anonymous	Aluminum, total	7429-90-5	E420	0.186 mg/L	0.2 mg/L	N/A	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0186 mg/L	0.02 mg/L	N/A	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0202 mg/L	0.02 mg/L	N/A	70.0	130	----
		Barium, total	7440-39-3	E420	0.0190 mg/L	0.02 mg/L	N/A	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0379 mg/L	0.04 mg/L	N/A	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0101 mg/L	0.01 mg/L	N/A	70.0	130	----
		Boron, total	7440-42-8	E420	0.093 mg/L	0.1 mg/L	N/A	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00402 mg/L	0.004 mg/L	N/A	70.0	130	----
		Calcium, total	7440-70-2	E420	3.64 mg/L	4 mg/L	N/A	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00936 mg/L	0.01 mg/L	N/A	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1625918) - continued										
YL2401309-004	Anonymous	Chromium, total	7440-47-3	E420	0.0400 mg/L	0.04 mg/L	N/A	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0198 mg/L	0.02 mg/L	N/A	70.0	130	----
		Copper, total	7440-50-8	E420	0.0202 mg/L	0.02 mg/L	N/A	70.0	130	----
		Iron, total	7439-89-6	E420	1.96 mg/L	2 mg/L	N/A	70.0	130	----
		Lead, total	7439-92-1	E420	0.0202 mg/L	0.02 mg/L	N/A	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0918 mg/L	0.1 mg/L	N/A	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.975 mg/L	1 mg/L	N/A	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0184 mg/L	0.02 mg/L	N/A	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0396 mg/L	0.04 mg/L	N/A	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.29 mg/L	10 mg/L	N/A	70.0	130	----
		Potassium, total	7440-09-7	E420	3.72 mg/L	4 mg/L	N/A	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0195 mg/L	0.02 mg/L	N/A	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0406 mg/L	0.04 mg/L	N/A	70.0	130	----
		Silicon, total	7440-21-3	E420	9.54 mg/L	10 mg/L	N/A	70.0	130	----
		Silver, total	7440-22-4	E420	0.00382 mg/L	0.004 mg/L	N/A	70.0	130	----
		Sodium, total	7440-23-5	E420	2.14 mg/L	2 mg/L	N/A	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0190 mg/L	0.02 mg/L	N/A	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.8 mg/L	20 mg/L	N/A	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0391 mg/L	0.04 mg/L	N/A	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00394 mg/L	0.004 mg/L	N/A	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0185 mg/L	0.02 mg/L	N/A	70.0	130	----
		Tin, total	7440-31-5	E420	0.0190 mg/L	0.02 mg/L	N/A	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0369 mg/L	0.04 mg/L	N/A	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0192 mg/L	0.02 mg/L	N/A	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00407 mg/L	0.004 mg/L	N/A	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0986 mg/L	0.1 mg/L	N/A	70.0	130	----
		Zinc, total	7440-66-6	E420	0.397 mg/L	0.4 mg/L	N/A	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0355 mg/L	0.04 mg/L	N/A	70.0	130	----
YL2401309-004	Anonymous	Manganese, total	7439-96-5	E420	0.0201 mg/L	0.02 mg/L	N/A	70.0	130	----
Total Metals (QCLot: 1630340)										
VA24C2659-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000943 mg/L	0 mg/L	94.3	70.0	130	----
Dissolved Metals (QCLot: 1625946)										
VA24C2403-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.193 mg/L	0.2 mg/L	96.7	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0199 mg/L	0.02 mg/L	99.7	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0377 mg/L	0.04 mg/L	94.4	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00904 mg/L	0.01 mg/L	90.4	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.092 mg/L	0.1 mg/L	92.2	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00404 mg/L	0.004 mg/L	101	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0384 mg/L	0.04 mg/L	95.9	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1625946) - continued										
VA24C2403-001	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.94 mg/L	2 mg/L	96.8	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0969 mg/L	0.1 mg/L	96.9	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0384 mg/L	0.04 mg/L	95.9	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0190 mg/L	0.02 mg/L	94.8	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0398 mg/L	0.04 mg/L	99.6	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.61 mg/L	10 mg/L	96.1	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00394 mg/L	0.004 mg/L	98.4	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	19.7 mg/L	20 mg/L	98.4	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00365 mg/L	0.004 mg/L	91.3	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0156 mg/L	0.02 mg/L	77.8	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0384 mg/L	0.04 mg/L	96.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.416 mg/L	0.4 mg/L	104	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
Dissolved Metals (QCLot: 1631073)										
VA24C2652-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 1631074)										
YL2401307-010	Field Blank	Mercury, dissolved	7439-97-6	E509	0.0000973 mg/L	0 mg/L	97.3	70.0	130	----
Volatile Organic Compounds (QCLot: 1627607)										
VA24C1591-002	Anonymous	Benzene	71-43-2	E611A	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Ethylbenzene	100-41-4	E611A	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	100 µg/L	100 µg/L	100	60.0	140	----
		Styrene	100-42-5	E611A	90.5 µg/L	100 µg/L	90.5	60.0	140	----
		Toluene	108-88-3	E611A	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	196 µg/L	200 µg/L	98.2	60.0	140	----
		Xylene, o-	95-47-6	E611A	92.2 µg/L	100 µg/L	92.2	60.0	140	----
Hydrocarbons (QCLot: 1627608)										
VA24C1624-005	Anonymous	F1 (C6-C10)	----	E581.VH+F1	5820 µg/L	6310 µg/L	92.2	60.0	140	----

Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Physical Tests (QCLot: 1629535)									
QC-1629535-002	RM	pH (1:2 soil:water)	----	E108	7.78 pH units	102	96.0	104	----
Physical Tests (QCLot: 1629536)									
QC-1629536-002	RM	pH (1:2 soil:water)	----	E108	7.78 pH units	102	96.0	104	----
Metals (QCLot: 1628763)									
QC-1628763-003	RM	Aluminum	7429-90-5	E440	22500 mg/kg	98.3	70.0	130	----
QC-1628763-003	RM	Antimony	7440-36-0	E440	24.8 mg/kg	95.5	70.0	130	----
QC-1628763-003	RM	Arsenic	7440-38-2	E440	21.2 mg/kg	96.4	70.0	130	----
QC-1628763-003	RM	Barium	7440-39-3	E440	788 mg/kg	99.1	70.0	130	----
QC-1628763-003	RM	Beryllium	7440-41-7	E440	1.82 mg/kg	98.8	70.0	130	----
QC-1628763-003	RM	Bismuth	7440-69-9	E440	1.78 mg/kg	94.9	70.0	130	----
QC-1628763-003	RM	Cadmium	7440-43-9	E440	2.15 mg/kg	98.0	70.0	130	----
QC-1628763-003	RM	Calcium	7440-70-2	E440	4900 mg/kg	94.6	70.0	130	----
QC-1628763-003	RM	Chromium	7440-47-3	E440	56.9 mg/kg	97.3	70.0	130	----
QC-1628763-003	RM	Cobalt	7440-48-4	E440	32 mg/kg	95.1	70.0	130	----
QC-1628763-003	RM	Copper	7440-50-8	E440	969 mg/kg	95.6	70.0	130	----
QC-1628763-003	RM	Iron	7439-89-6	E440	32700 mg/kg	97.9	70.0	130	----
QC-1628763-003	RM	Lead	7439-92-1	E440	919 mg/kg	97.4	70.0	130	----
QC-1628763-003	RM	Lithium	7439-93-2	E440	47.3 mg/kg	104	70.0	130	----
QC-1628763-003	RM	Magnesium	7439-95-4	E440	7780 mg/kg	92.3	70.0	130	----
QC-1628763-003	RM	Manganese	7439-96-5	E440	8640 mg/kg	95.0	70.0	130	----
QC-1628763-003	RM	Molybdenum	7439-98-7	E440	25.1 mg/kg	99.2	70.0	130	----
QC-1628763-003	RM	Nickel	7440-02-0	E440	1000 mg/kg	93.4	70.0	130	----
QC-1628763-003	RM	Phosphorus	7723-14-0	E440	660 mg/kg	95.9	70.0	130	----
QC-1628763-003	RM	Potassium	7440-09-7	E440	10800 mg/kg	97.6	70.0	130	----
QC-1628763-003	RM	Selenium	7782-49-2	E440	1.04 mg/kg	95.5	60.0	140	----
QC-1628763-003	RM	Silver	7440-22-4	E440	8.98 mg/kg	96.2	70.0	130	----
QC-1628763-003	RM	Sodium	7440-23-5	E440	1770 mg/kg	96.4	70.0	130	----
QC-1628763-003	RM	Strontium	7440-24-6	E440	41 mg/kg	95.0	70.0	130	----
QC-1628763-003	RM	Sulfur	7704-34-9	E440	3940 mg/kg	97.2	50.0	150	----
QC-1628763-003	RM	Thallium	7440-28-0	E440	0.907 mg/kg	99.3	70.0	130	----
QC-1628763-003	RM	Tin	7440-31-5	E440	3.79 mg/kg	97.5	40.0	160	----
QC-1628763-003	RM	Titanium	7440-32-6	E440	2790 mg/kg	96.8	70.0	130	----

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Metals (QCLot: 1628763) - continued									
QC-1628763-003	RM	Tungsten	7440-33-7	E440	6.99 mg/kg	105	70.0	130	----
QC-1628763-003	RM	Uranium	7440-61-1	E440	3.97 mg/kg	91.7	70.0	130	----
QC-1628763-003	RM	Vanadium	7440-62-2	E440	66.2 mg/kg	96.6	70.0	130	----
QC-1628763-003	RM	Zinc	7440-66-6	E440	828 mg/kg	93.8	70.0	130	----
QC-1628763-003	RM	Zirconium	7440-67-7	E440	6.91 mg/kg	106	70.0	130	----
Metals (QCLot: 1628764)									
QC-1628764-003	RM	Mercury	7439-97-6	E510	0.068 mg/kg	90.5	70.0	130	----
Speciated Metals (QCLot: 1627876)									
QC-1627876-003	RM	Chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	108	80.0	120	----

ALS Environmental

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824810

Page of

Report To	Contact and company name below will appear on the final report
Company:	Stantec Consulting
Contact:	Paige Glenen
Phone:	902-468-7777
	Company address below will appear on the final report
Street:	102-40 Highfield Park Dr
City/Province:	Dartmouth, Nova Scotia
Postal Code:	B3A 0A3
Invoice To	Same as Report To [x] YES [ ] NO
	Copy of Invoice with Report [x] YES [ ] NO
Company:	Stantec Consulting
Contact:	Accounts Payable

Report Format / Distribution	
Select Report Format:	[x] PDF [x] EXCEL [x] EDD (DIGITAL)
Quality Control (QC) Report with Report	[x] YES [ ] NO
[ ] Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	[x] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax	Paige.glenen@stantec.com
Email 2	mary.murdoch@stantec.com
Email 3	sam.caldwell@stantec.com

Invoice Distribution	
Select Invoice Distribution:	[x] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax	AccountsPayable@stantec.com
Email 2	paige.glenen@stantec.com

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] [x] Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] [ ] | 3 day [P3-25%] [ ] | 2 day [P2-50%] [ ]

EMERGENCY: 1 Business day [E - 100%] [ ] | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information	
ALS Account # / Quote #:	
Job #:	121417593
PO / AFE:	
LSD:	
ALS Lab Work Order # (lab use only):	
ALS Contact:	Sampler: MW/AJ

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	BTEX, F1 - F4	Total Mercury (low level)	Dissolved Mercury (low level)	Total Metals (low level)	Dissolved Metals (low level)	Total Nutrients (inc tot Nitrog)	Dissolved Nutrients (inc Nitrate, Nitrite, Urea)	Routine *	Total Sulphide	Salinity	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	BRP-46S-WQ	25-Aug-24	4:34	SW	13	X	X	X	X	X	X	X	X	X	X		
	BRP-46D-WQ	25-Aug-24	4:23	SW	13	X	X	X	X	X	X	X	X	X	X		
	BRP-48S-WQ	25-Aug-24	5:45	SW	13	X	X	X	X	X	X	X	X	X	X		
	BRP-48D-WQ	25-Aug-24	5:30	SW	13	X	X	X	X	X	X	X	X	X	X		
	BRP-51-WQ	25/Aug/24	3:50	SW	13	X	X	X	X	X	X	X	X	X	X		
	REF-04S-WQ	25-Aug-24	8:30	SW	13	X	X	X	X	X	X	X	X	X	X		
	REF-04D-WQ	25-Aug-24	9:45	SW	13	X	X	X	X	X	X	X	X	X	X		
	REF-05-WQ	25-Aug-24	3:20	SW	13	X	X	X	X	X	X	X	X	X	X		
	Field Dup	25-Aug-24	NA	SW	13	X	X	X	X	X	X	X	X	X	X		
	Field Blank	25-Aug-24	1:30	SW	13	X	X	X	X	X	X	X	X	X	X		
	TB	-	-	-	13	X	X	X	X	X	X	X	X	X	X		

Environmental Division
Yellowknife
Work Order Reference
YL2401307

Telephone : +1 867 873 5593

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? [ ] YES [ ] NO	
Are samples for human consumption/ use? [ ] YES [ ] NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen [ ] | SIF Observations Yes [ ] No [ ]

Ice Packs [ ] Ice Cubes [ ] | Custody seal intact Yes [ ] No [ ]

Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
0.3	

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: AUG 27/24	Time: 1519

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date	Time

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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JUNE 2018 FRONT

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

*including organic phosphorus, conductivity, anions, reactive silica

ALS Environmental
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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824809

Page of

Report To	Contact and company name below will appear on the final report
Company:	Stantec Consulting
Contact:	Paige Glenen
Phone:	902-468-7777
	Company address below will appear on the final report
Street:	108-40 Highfield Park Dr.
City/Province:	Dartmouth, Nova Scotia
Postal Code:	B3A 0A3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Stantec Consulting
Contact:	Accounts Payable

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Paige.Glenen@Stantec.com
Email 2	Mary.Murdoch@Stantec.com
Email 3	Sam.Caldwell@Stantec.com
Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Accounts Payable@Stantec.com
Email 2	Paige.Glenen@stantec.com

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)	
Regular [R]	☒ Standard TAT if received by 3 pm - business days - no surcharges apply
PRIORITY (Business Days)	4 day [P4-20%] ☐
	3 day [P3-25%] ☐
	2 day [P2-50%] ☐
EMERGENCY	1 Business day [E - 100%] ☐
	Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐
Date and Time Required for all E&P TATs:	dd-mmm-yy hh:mm
For tests that can not be performed according to the service level selected, you will be contacted.	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center:	PO#
Job #:	18417593	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):		ALS Contact:	Sampler: MW/AJ

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Chlorophyll A	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	REF-04-PP-01	22/08/24	17:00	Bio	1	X		
	REF-04-PP-02	22/08/24	17:00	Bio	1	X		
	REF-04-PP-03	22/08/24	17:00	Bio	1	X		
	REF-05-PP-01	22/08/24	17:00	Bio	1	X		
	REF-05-PP-02	22/08/24	17:00	Bio	1	X		
	REF-05-PP-03	22/08/24	17:00	Bio	1	X		
	BRP-46-PP-01	24/08/24	17:00	Bio	1	X		
	BRP-46-PP-02	24/08/24	17:00	Bio	1	X		
	BRP-46-PP-03	24/08/24	17:00	Bio	1	X		
	BRP-51-PP-01	24/08/24	17:00	Bio	1	X		
	BRP-51-PP-02	24/08/24	17:00	Bio	1	X		
	BRP-51-PP-03	24/08/24	17:00	Bio	1	X		

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO	
Are samples for human consumption/ use? ☐ YES ☐ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No	☐
Ice Packs	☐ Ice Cubes ☐	Custody seal intact	Yes ☐	No	☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824808

Page of

Report To	Contact and company name below will appear on the final report
Company:	Stantec Consulting
Contact:	Paige Glenen
Phone:	902-468-7777
	Company address below will appear on the final report
Street:	102-40 Highfield Park Dr.
City/Province:	Dartmouth, Nova Scotia
Postal Code:	B3A 0A3
Invoice To	Same as Report To [x] YES [ ] NO
	Copy of Invoice with Report [x] YES [ ] NO
Company:	Stantec Consulting
Contact:	Accounts Payable
Project Information	
ALS Account # / Quote #:	
Job #:	1214/7593
PO / AFE:	
LSD:	
ALS Lab Work Order # (lab use only):	

Report Format / Distribution	
Select Report Format:	[x] PDF [x] EXCEL [x] EDD (DIGITAL)
Quality Control (QC) Report with Report	[x] YES [ ] NO
[ ] Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	[x] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax	Paige.Glenen@Stantec.com
Email 2	Mary.Murdoch@Stantec.com
Email 3	Sam.Caldwell@Stantec.com
Invoice Distribution	
Select Invoice Distribution:	[x] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax	Accounts Payable@Stantec.com
Email 2	Paige.Glenen@Stantec.com
Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact:	Sampler: MW/AJ

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] [x] Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] [ ] | 3 day [P3-25%] [ ] | 2 day [P2-50%] [ ]

EMERGENCY: 1 Business day [E - 100%] [ ] | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Chlorophyll A	Physical tests	Anions	Nutrients	Organic carbon	Inorganic carbon	Metals	Particle size analysis	Hydrocarbons (BTEX, F1-F4)	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	BRP-48-PP-01	25/08/24	21:00	BIO	1	X										
	BRP-48-PP-02	25/08/24	21:00	BIO	1	X										
	BRP-48-PP-03	25/08/24	21:00	BIO	1	X										
	REF-04-SED1	22/08/24	13:30	SED	4		X	X	X	X	X	X	X	X		
	REF-04-SED2	22/08/24	14:30	SED	4		X	X	X	X	X	X	X	X		
	REF-04-SED3	22/08/24	16:30	SED	4		X	X	X	X	X	X	X	X		
	REF-05-SED1	22/08/24	09:00	SED	4		X	X	X	X	X	X	X	X		
	REF-05-SED2	22/08/24	10:30	SED	4		X	X	X	X	X	X	X	X		
	REF-05-SED3	22/08/24	12:00	SED	4		X	X	X	X	X	X	X	X		
	BRP-46-SED1	23/08/24	09:10	SED	4		X	X	X	X	X	X	X	X		
	BRP-46-SED2	23/08/24	12:30	SED	4		X	X	X	X	X	X	X	X		
	BRP-46-SED3	23/08/24	15:55	SED	4		X	X	X	X	X	X	X	X		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? [ ] YES [ ] NO

Are samples for human consumption/ use? [ ] YES [ ] NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen [ ] | SIF Observations Yes [ ] No [ ]

Ice Packs [ ] Ice Cubes [ ] | Custody seal intact Yes [ ] No [ ]

Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by: SA	Date:	Time:

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page ____ of ____

Report To
Company: Stantec Consulting
Contact: Paige Glenen
Address: 102-40 Highfield Park Dr. Dartmouth, NS B3A0A3
Phone: 902-468-7777

Report Format / Distribution
Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ Yes ☐ No
☐ Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Paige.Glenen@Stantec.com
Email 2: Mary.Murdoch@Stantec.com

Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
R ☒ Regular (Standard TAT if received by 3 pm - business days)
P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Specify Date Required for E2, E or P:

Invoice To Same as Report To ☑ Yes ☐ No
Copy of Invoice with Report ☑ Yes ☐ No
Company: Stantec Consulting
Contact: Accounts Payable

Invoice Distribution
Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Accounts Payable@Stantec.com
Email 2: Paige.Glenen@Stantec.com

Project Information
ALS Quote #:
Job #: 121417593
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)
Approver ID: | Cost Center:
GL Account: | Routing Code:
Activity Code:
Location:

ALS Lab Work Order # (lab use only)
ALS Contact: | **Sampler:**

Analysis Request
Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Physical tests	Anions	Nutrients	Organic carbon	Inorganic carbon	Metals	Particle size analysis	Hydrocarbons (BTEX,F1-F4)	Number of Containers
	BRP-48-SED1	26/08/24	13:00	SED	X	X	X	X	X	X	X		4
	BRP-48-SED2	26/08/24	13:45	SED	X	X	X	X	X	X	X		4
	BRP-48-SED3	26/08/24	14:15	SED	X	X	X	X	X	X	X		4
	BRP-51-SED1	24/08/24	11:00	SED	X	X	X	X	X	X	X		4
	BRP-51-SED2	24/08/24	11:50	SED	X	X	X	X	X	X	X		4
	BRP-51-SED3	24/08/24	14:20	SED	X	X	X	X	X	X	X		4
	FIELD-DUP	24/08/24	NA	SED	X	X	X	X	X	X	X		4

Drinking Water (DW) Samples[1] (client use)
Are samples taken from a Regulated DW System? ☐ Yes ☐ No
Are samples for human drinking water use? ☐ Yes ☐ No

Special Instructions / Specify Criteria to add on report (client Use)
★ Please Add Sam.Caldwell@Stantec.com to the List For "Report Format / Distribution" ★

SAMPLE CONDITION AS RECEIVED (lab use only)
Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice packs Yes ☐ No ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
03					

SHIPMENT RELEASE (client use)
Released by: | Date: | Time:

INITIAL SHIPMENT RECEPTION (lab use only)
Received by: | Date: 27/24 AUG | Time: 15:14

FINAL SHIPMENT RECEPTION (lab use only)
Received by: | Date: | Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Chlorophyll Sample Record Sheet

Client Name: Project Name: D2 Gold

Stantec Project Number: Project Manager: 121417593

Water Body & Territory: Bathurst inlet

Collectors Names: Filtration Conducted by: Mac whitehead

Preservative Used: $MgCO_3$

Filter Type and Pore Size Used: .45 µm

Station ID	Replicate Number	Sampling Date	Preserved?	Filtration Date	Filtration Volume (mL)	Notes
REF-04-PP01	1	Aug 22/24	Y	Aug 22/24	1210 mL	
REF-04-PP-02	2	Aug 22/24	Y	Aug 22/24	1224	
REF-04-PP-03	3	Aug 22/24	Y	Aug 22/24	1092	
REF-05-PP-01	1	Aug 22/24	Y	Aug 22/24	1142	
REF-05-PP-02	2	Aug 22/24	Y	Aug 22/24	1150	
REF-05-PP03	3	Aug 22/24	Y	Aug 22/24	1065	
BRP-46-PP01	1	Aug 23/24	Y	Aug 24/24	1169	
BRP-46-PP-02	2	Aug 23/24	Y	Aug 24/24	1162	
BRP-46-PP-03	3	Aug 23/24	Y	Aug 24/24	1143	
BRP51-PP01	1	Aug 23/24	Y	Aug 24/24	1154	
BRP-51-PP-02	2	Aug 23/24	Y	Aug 24/24	1210	
BRP-51-PP-03	3	Aug 23/24	Y	Aug 24/24	1210	
BRP-48-PP-01	1	Aug 25/24	Y	Aug 25/24	1250	
BRP-48-PP-02	2	Aug 25/24	Y	Aug 25/24	1213	
BRP-48PP-03	3	Aug 25/24	Y	Aug 25/24	1234	

Appendix E Phytoplankton Biomass

Table E1 **April 2024 Phytoplankton Biomass**

Sample ID	date sampled	Volume filtered (mL)	Chlorophyll *a* (ug/sample)	Chlorophyll *a* (ug/L)
BRP-51-01-PP	24-Apr-2024	1172	0.256	0.218
BRP-51-02-PP	24-Apr-2024	1187	0.284	0.239
BRP-51-03-PP	24-Apr-2024	1236	0.322	0.261
BRP-48-01-PP	25-Apr-2024	1270	0.476	0.375
BRP-48-02-PP	25-Apr-2024	1212	0.669	0.552
BRP-48-03-PP	25-Apr-2024	1211	0.413	0.341
BRP-46-01-PP	25-Apr-2024	1200	0.235	0.196
BRP-46-02-PP	25-Apr-2024	1250	0.244	0.195
BRP-46-03-PP	25-Apr-2024	1236	0.190	0.154
REF05-01-PP	24-Apr-2024	1221	0.280	0.229
REF05-02-PP	24-Apr-2024	1000	0.185	0.185
REF05-02-PP	24-Apr-2024	1195	0.179	0.150
REF04-01-PP	24-Apr-2024	1210	0.220	0.182
REF04-02-PP	24-Apr-2024	1230	0.248	0.202
REF04-02-PP	24-Apr-2024	1259	0.213	0.169

Table E2 **August 2024 Phytoplankton Biomass**

Sample ID	date sampled	Volume filtered (mL)	Chlorophyll *a* (ug/sample)	Chlorophyll *a* (ug/L)
BRP-51-01-PP	24-Aug-2024	1154	2.08	1.81
BRP-51-02-PP	24-Aug-2024	1210	2.22	1.83
BRP-51-03-PP	24-Aug-2024	1210	2.31	1.91
BRP-48-01-PP	25-Aug-2024	1250	1.43	1.14
BRP-48-02-PP	25-Aug-2024	1213	1.20	0.992
BRP-48-03-PP	25-Aug-2024	1234	1.37	1.11
BRP-46-01-PP	24-Aug-2024	1169	1.80	1.54
BRP-46-02-PP	24-Aug-2024	1162	1.93	1.66
BRP-46-03-PP	24-Aug-2024	1143	1.87	1.64
REF05-01-PP	22-Aug-2024	1142	1.10	0.965
REF05-02-PP	22-Aug-2024	1150	1.14	0.991
REF05-02-PP	22-Aug-2024	1065	0.86	0.808
REF04-01-PP	22-Aug-2024	1210	1.24	1.02
REF04-02-PP	22-Aug-2024	1224	1.10	0.902
REF04-02-PP	22-Aug-2024	1092	1.00	0.917

Appendix F Sediment Quality Analytical Results Summary

Table F1 - Sediment Quality Analytical Results and Relevant CCME Guidelines

Location					MLA	MLA	MLA	MLA	MLA	MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference	Reference	Reference	
Station					BRP-51	BRP-51	BRP-51	BRP-48	BRP-48	BRP-48	BRP-46	BRP-46	BRP-46	REF04	REF04	REF04	REF05	REF05	REF05	
Client Sample ID					BRP-51-SED1	BRP-51-SED2	BRP-51-SED3	BRP-48-SED1	BRP-48-SED2	BRP-48-SED3	BRP-46-SED1	BRP-46-SED2	BRP-46-SED3	REF-04-SED1	REF-04-SED2	REF-04-SED3	REF-05-SED1	REF-05-SED2	REF-05-SED3	FIELD-DUP
Date Sampled					8/24/2024	8/24/2024	8/24/2024	8/26/2024	8/26/2024	8/26/2024	8/23/2024	8/23/2024	8/23/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/24/2024
Time Sampled					11:00:00 AM	11:50:00 AM	2:20:00 PM	1:00:00 PM	1:45:00 PM	2:15:00 PM	9:10:00 AM	12:30:00 PM	3:55:00 PM	1:30:00 PM	0.604166667	4:30:00 PM	9:00:00 AM	10:30:00 AM	12:00:00 PM	12:00:00 AM
ALS Sample ID					YL2401307-039	YL2401307-040	YL2401307-041	YL2401307-036	YL2401307-037	YL2401307-038	YL2401307-033	YL2401307-034	YL2401307-035	YL2401307-027	YL2401307-028	YL2401307-029	YL2401307-030	YL2401307-031	YL2401307-032	YL2401307-042
Analyte	Lowest Detection Limit	Units	CCME Sediment Quality Guidelines (Marine/Estuarine)		Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid	Sub-Matrix: Soil/Solid
			ISQG	PEL																
Physical Tests (Matrix: Soil/Solid)																				
Moisture	0.25	%	-	-	18.6	19.1	21.1	32.8	20.8	22.7	21	19.2	18.6	20.3	36.1	31.3	19.8	19.7	20.1	18.8
pH (1:2 soil:water)	0.1	pH units	-	-	7.63	7.72	7.64	8.08	7.62	7.9	7.85	7.65	8.03	8.14	8.26	7.89	7.34	7.66	7.48	7.29
Particle Size (Matrix: Soil/Solid)																				
Gravel (>2mm)	1	%	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.4	2.4	3.2	<1.0	<1.0	<1.0	<1.0
Sand (2.0mm - 0.063mm)	1	%	-	-	95	94.7	95.3	79.4	87.5	84.9	90.1	92.1	90.9	91.8	49.7	69	97.8	97.4	98.1	95.6
Silt (0.063mm - 0.004mm)	1	%	-	-	3.8	3.7	3.1	14.5	8.7	10	7.5	6.1	7	3.7	29	18.6	2.1	2.2	1.6	2.8
Clay (<0.004mm)	1	%	-	-	1.2	1.6	1.6	6.1	3.8	5	2.4	1.8	2.1	1.1	18.9	9.2	<1.0	<1.0	<1.0	1.6
Organic / Inorganic Carbon (Matrix: Soil/Solid)																				
Carbon, total organic [TOC]	0.05	%	-	-	0.158	0.13	0.15	0.305	0.159	0.165	0.117	0.103	0.152	0.205	0.698	0.385	0.127	0.129	0.121	0.145
Metals (Matrix: Soil/Solid)																				
Aluminum	50	mg/kg	-	-	1920	1910	1750	3890	2330	2320	1930	1820	1850	2180	8520	8300	1430	1680	1520	2110
Antimony	0.1	mg/kg	-	-	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.14	0.13	<0.10	<0.10	<0.10	<0.10
Arsenic	0.1	mg/kg	7.24	41.6	1.3	1.05	1.68	2.06	1.19	1.46	1.13	1.16	1.24	1.45	4.02	3.26	0.83	0.95	0.76	1.11
Barium	0.5	mg/kg	-	-	11.8	23	10.6	23	15.6	12	20.3	14.2	18.6	8.72	45.2	45.5	4.14	9.57	4.8	12.1
Beryllium	0.1	mg/kg	-	-	0.1	0.1	<0.10	0.18	0.11	0.11	0.1	<0.10	<0.10	0.11	0.38	0.37	<0.10	<0.10	<0.10	0.1
Bismuth	0.2	mg/kg	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Boron	5	mg/kg	-	-	<5.0	<5.0	<5.0	11	6.1	6	<5.0	<5.0	<5.0	<5.0	24.4	21.2	<5.0	<5.0	<5.0	<5.0
Cadmium	0.02	mg/kg	0.7	4.2	<0.020	<0.020	<0.020	0.031	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.115	0.06	<0.020	<0.020	<0.020	<0.020
Calcium	50	mg/kg	-	-	1090	852	991	1630	1060	1090	1070	988	1200	2120	15700	3500	1320	1400	979	856
Chromium	0.5	mg/kg	52.3	160	4.78	5.28	3.91	9.7	5.79	6.18	4.62	4.41	4.55	5.68	21.7	21.2	3.52	4.32	3.22	5.05
Cobalt	0.1	mg/kg	-	-	1.48	1.37	1.36	2.31	1.48	1.59	1.39	1.26	1.28	1.7	4.78	4.5	1.09	1.35	1.24	1.44
Copper	0.5	mg/kg	18.7	108	3.16	2.41	2.17	8.18	3.46	3.9	2.55	2.24	2.58	2.34	12.6	11.6	2.72	2.06	1.97	2.62
Iron	50	mg/kg	-	-	3590	3880	3250	5940	3800	3960	3500	3390	3480	4360	11700	11100	2900	3530	2970	3700
Lead	0.5	mg/kg	30.2	112	1.69	1.4	1.3	3.7	1.42	1.56	1.24	1.2	1.19	1.16	4.47	4.32	0.72	0.9	0.72	1.49
Lithium	2	mg/kg	-	-	3.5	3.3	3	7.4	4.6	4.2	3.3	2.9	3.2	4.8	16.8	16.5	2.6	3.3	2.8	4
Magnesium	20	mg/kg	-	-	1550	1510	1450	2620	1730	1820	1560	1410	1480	2060	5680	5420	1580	1840	1600	1620
Manganese	1	mg/kg	-	-	36	36.4	43	55.3	36.8	42	37.8	33.7	37.9	52.4	113	110	35.8	43.8	32.4	35.5
Mercury	0.05	mg/kg	0.13	0.7	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Molybdenum	0.1	mg/kg	-	-	0.1	<0.10	0.15	1.03	0.26	0.25	0.13	0.13	0.11	0.2	1.2	0.91	0.13	<0.10	<0.10	0.1
Nickel	0.5	mg/kg	-	-	2.97	2.88	2.7	5.76	3.44	3.79	2.88	2.66	2.67	3.61	12.8	12.1	2.45	2.9	2.59	3.17
Phosphorus	50	mg/kg	-	-	210	196	209	306	199	200	200	206	205	268	491	440	112	172	112	206
Potassium	100	mg/kg	-	-	530	540	480	1150	680	660	530	510	500	490	2500	2420	300	380	340	580
Selenium	0.2	mg/kg	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Silver	0.1	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	50	mg/kg	-	-	1470	1620	1190	2020	1550	1610	1390	1080	931	988	5140	4610	771	1300	719	1620
Strontium	0.5	mg/kg	-	-	7.57	7.76	8.81	16.6	9.25	9.71	8.23	10.7	8.32	11.9	72.3	28.4	6.58	7.09	6.03	8.34
Sulfur	1000	mg/kg	-	-	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
Thallium	0.05	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.088	0.082	<0.050	<0.050	<0.050	<0.050
Tin	2	mg/kg	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	1	mg/kg	-	-	114	108	83.2	187	115	115	101	95.5	100	78.8	342	341	66.1	83.6	68.8	95.9
Tungsten	0.5	mg/kg	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	0.05	mg/kg	-	-	0.37	0.384	0.318	0.657	0.408	0.45	0.413	0.366	0.353	0.4	1.19	1.15	0.271	0.373	0.283	0.445
Vanadium	0.2	mg/kg	-	-	7.21	7.91	6.05	12.7	7.76	7.76	6.78	6.39	6.82	6.27	24.8	24.4	4.97	6.48	5.21	7.1
Zinc	2	mg/kg	124	271	5.7	5.4	5	10.4	6.3	7.2	5.2	4.9	5	5.8	23.6	22.8	4.2	4.8	4.5	5.5
Zirconium	1	mg/kg	-	-	3.7	3.7	3.2	6.2	4.2	4.2	3.8	3.9	3.6	1.9	4.8	10.5	2.5	2.7	2.4	3.7
Speciated Metals (Matrix: Soil/Solid)																				
Chromium, hexavalent [Cr VI]	0.1	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Table F1 - Sediment Quality Analytical Results and Relevant CCME Guidelines

Location					MLA	MLA	MLA	MLA	MLA	MLA	MLA	MLA	MLA	Reference	Reference	Reference	Reference	Reference	Reference	
Station					BRP-51	BRP-51	BRP-51	BRP-48	BRP-48	BRP-48	BRP-46	BRP-46	BRP-46	REF04	REF04	REF04	REF05	REF05	REF05	
Client Sample ID					BRP-51-SED1	BRP-51-SED2	BRP-51-SED3	BRP-48-SED1	BRP-48-SED2	BRP-48-SED3	BRP-46-SED1	BRP-46-SED2	BRP-46-SED3	REF-04-SED1	REF-04-SED2	REF-04-SED3	REF-05-SED1	REF-05-SED2	REF-05-SED3	FIELD-DUP
Date Sampled					8/24/2024	8/24/2024	8/24/2024	8/26/2024	8/26/2024	8/26/2024	8/23/2024	8/23/2024	8/23/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/22/2024	8/24/2024
Time Sampled					11:00:00 AM	11:50:00 AM	2:20:00 PM	1:00:00 PM	1:45:00 PM	2:15:00 PM	9:10:00 AM	12:30:00 PM	3:55:00 PM	1:30:00 PM	0.604166667	4:30:00 PM	9:00:00 AM	10:30:00 AM	12:00:00 PM	12:00:00 AM
ALS Sample ID					YL2401307-039	YL2401307-040	YL2401307-041	YL2401307-036	YL2401307-037	YL2401307-038	YL2401307-033	YL2401307-034	YL2401307-035	YL2401307-027	YL2401307-028	YL2401307-029	YL2401307-030	YL2401307-031	YL2401307-032	YL2401307-042
Analyte	**Lowest Detection Limit**	**Units**	**CCME Sediment Quality Guidelines (Marine/Estuarine)**		**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**
			ISQG	**PEL**																
Polycyclic Aromatic Hydrocarbons (Matrix: Soil/Solid)																				
Acenaphthene	0.005	mg/kg	0.00671	0.0889	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.005	mg/kg	0.00587	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	0.004	mg/kg	0.0469	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0044	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	0.01	mg/kg	0.0748	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	0.01	mg/kg	0.0888	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	0.015	mg/kg	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	0.01	mg/kg	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	0.005	mg/kg	0.00622	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.01	mg/kg	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	0.01	mg/kg	0.0212	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	0.015	mg/kg	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 1-	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 2-	0.01	mg/kg	0.0202	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	0.01	mg/kg	0.0346	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	0.01	mg/kg	0.0867	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	0.01	mg/kg	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	0.01	mg/kg	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
B(a)P total potency equivalents [B(a)P TPE]	0.02	mg/kg	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
IACR (CCME)	0.15		-	-	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Polycyclic Aromatic Hydrocarbons Surrogates (Matrix: Soil/Solid)																				
Acridine-d9	0.1	%			78	74.4	76.8	80.3	76.3	70.8	78.2	73.8	74	87.2	84.5	86.7	82.5	79.2	72.1	80.2
Chrysene-d12	0.1	%			81.3	78.6	81.3	84.5	78.6	76.6	84.3	80	79.3	90.5	87.8	86.6	84.9	85.9	78.9	83
Naphthalene-d8	0.1	%			91.1	85.9	87.9	93.4	87.7	84.5	96.8	89.1	89.6	97.1	93.4	89.8	86.3	93.8	88	91.6
Phenanthrene-d10	0.1	%			81	77.6	79.8	83.8	81.1	75.1	84.4	79.4	78.9	89.6	86.3	90.6	86.9	87.8	79.2	82.1

Appendix G Benthic Invertebrate Results

Table G.1 Raw Benthic Invertebrate Community Biological Data by Family
B2 Gold
MLA Marine Monitoring Report
File: 121417593

Phylum	Order	Family	Species	Sampling Area															
				REF-04-BIC			REF-05-BIC			BRP-46-BIC			BRP-48-BIC			BRP-51_BIC		
				1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
PROTOZOA																		
P. Foraminifera																		
		O. Foraminifera		21	52	15	-	-	6	-	-	1	1	6	4	-	-	3
Anemones and Coral																		
	Cl. Anthozoa																	
		F. Actiniidae		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
ROUNDWORMS																		
P. Nematoda				25	44	32	2	-	-	2	1	2	-	3	1	-	-	-
PROBOSCIS WORMS																		
P. Nemertea																		
			indeterminate	-	-	-	-	42	-	6	5	6	1	6	3	4	-	13
	Cl. Anopla																	
		F. Lineidae																
			Micrura	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ANNELIDS																		
P. Annelida																		
	WORMS																	
	Cl. Oligochaeta			1	-	-	-	-	-	-	-	-	-	2	-	-	-	1
	MARINE WORMS																	
	Cl. Polychaeta																	
		F. Capitellidae																
			Capitella capitata	2	4	2	-	-	-	3	-	1	-	-	-	-	-	-
			Mediomastus ambiseta	-	-	2	-	-	-	-	-	3	10	8	-	-	-	2
		F. Cirratulidae																
			Tharyx	38	180	64	-	-	-	1	13	7	1	13	9	-	-	-
		F. Hesionidae																
			Nereimyra punctata	10	16	28	-	-	-	-	-	2	-	-	-	-	-	1
		F. Nephtyidae																
			Nephtys immature	-	16	1	2	-	-	1	2	3	1	1	1	6	10	55
		F. Orbiniidae																
			Scoloplos armiger	-	-	-	-	-	-	-	1	-	-	1	-	-	-	3
		F. Paraonidae																
			Aricidea (Acmira) cerruti	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Aricidea (Strelzovia) sue	3	8	2	-	-	-	-	2	-	-	1	2	-	-	1
			Levinsenia gracilis	3	52	1	-	-	-	-	66	7	-	28	17	-	-	-
		F. Pholoidae																
			Pholoe minuta	3	48	7	-	-	-	-	-	1	-	-	-	-	-	-
		F. Pectinariidae																
			Cistenides granulata	8	-	5	-	-	-	-	-	-	-	-	-	-	-	3
		F. Phyllodocidae																
			Eteone longa	-	-	-	-	-	-	1	-	1	-	-	-	-	2	-
		F. Polynoidae																
			Harmothoe imbricata	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
			Lepidonotus squamatus	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
		F. Sabellidae																
			Euchone rubrocincta	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
		F. Sphaerodoridae																
			Sphaerodoridium minutu	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

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Phylum	Order	Family	Species	Sampling Area														
				REF-04-BIC			REF-05-BIC			BRP-46-BIC			BRP-48-BIC			BRP-51_BIC		
				1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
		F. Spionidae																
			Polydora	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
			Prionospio steenstrupi	2	4	2	2	-	2	2	5	15	5	4	4	1	1	2
			Spio filicornis	-	-	-	-	-	2	-	-	-	4	-	5	1	-	-
		F. Syllidae																
			Eusyllis blomstrandi	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
		F. Terebellidae																
			Neoamphitrite affinis	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
			Polycirrus arcticus	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
ARTHROPODS																		
P. Arthropoda																		
SP. Chelicerata																		
	MITES																	
	Cl. Arachnida																	
		O. Acarina		-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
INSECTS																		
	Cl. Insecta																	
		O. Diptera																
		F. Ephydridae																
			Pupae	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
SP. Crustacea																		
	COPEPODS																	
	SCl. Copepoda																	
		HARPACTICOIDS																
		O. Harpacticoida		1	16	2	-	-	-	7	3	18	23	2	143	1	-	1
	SEED SHRIMPS																	
	Cl. Ostracoda			50	112	56	-	2	2	1	-	-	-	-	-	-	-	-
	CUMACEANS																	
	O. Cumacea																	
		F. Diastylidae																
			Diastylis rathkei	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-
			Leptostylis ampullacea	1	24	25	-	-	2	-	2	-	-	-	-	1	-	2
		F. Lampropidae																
			Lamprops fuscatus	-	-	-	-	-	-	6	1	6	1	3	3	-	-	-
	TANAID SHRIMP																	
	O. Tanaidacea			-	4	3	-	-	-	-	-	-	-	-	-	-	-	-
	SCUDS																	
	O. Amphipoda																	
		F. Ampeliscidae																
			Haploops tubicola	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
		F. Amphilochidae																
			Gitana	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
		F. Corophiidae																
			Apocorophium acutum	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
		F. Gammaridae																
			Gammarus oceanicus	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
		F. Lysianassidae																
			Orchomenella minuta	-	-	1	-	-	-	-	-	3	2	-	-	-	-	2

Table G.1 Raw Benthic Invertebrate Community Biological Data by Family
B2 Gold
MLA Marine Monitoring Report
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Phylum	Order	Family	Species	Sampling Area														
				REF-04-BIC			REF-05-BIC			BRP-46-BIC			BRP-48-BIC			BRP-51_BIC		
				1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
		F. Oedicerotidae																
			Bathymedon obtusifrons	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
			Monoculodes latimanus	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
			Monoculopsis longicornis	-	-	-	2	6	2	-	-	-	-	-	-	-	-	-
			Paroediceros lynceus	1	16	5	-	-	-	2	-	-	-	-	1	-	-	-
		F. Photidae		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
		F. Pontoporeiidae																
			Pontoporeia femorata	-	-	-	-	-	-	-	-	1	-	-	-	1	-	3
	ISOPODS																	
	O. Isopoda																	
		F. Munnidae																
			Munna	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
MOLLUSCS																		
P. Mollusca																		
	SNAILS																	
	Cl. Gastropoda																	
		F. Buccinidae																
			Buccinum undatum	-	4	1	-	-	-	-	2	-	-	-	-	-	-	-
		F. Cylichnidae																
			Cylichna alba	-	-	1	-	-	2	-	-	-	-	-	-	4	1	9
	CLAMS																	
	Cl. Bivalvia																	
		F. Astartidae																
			Tridonta borealis	1	19	4	-	-	-	-	-	1	-	-	-	-	-	-
		F. Hiatellidae																
			Hiatella arctica	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		F. Myidae																
			Mya truncata	-	-	1	-	4	-	-	-	-	-	-	-	-	-	-
			Mytilus edulis	18	48	18	2	66	2	-	-	-	4	1	24	-	-	20
		F. Tellinidae																
			Macoma balthica	24	5	6	1718	932	872	4	-	14	2	2	12	112	59	106
		F. Thyasiridae																
			Thyasira gouldii	11	12	-	-	-	-	-	-	1	-	-	-	-	-	-
P. Echinodermata																		
	BRITTLE STARS																	
	Cl. Ophiuroidea																	
		F. Ophiuridae																
			Ophiura	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS				230	708	297	1730	1054	892	38	103	103	56	81	230	131	73	228
TOTAL NUMBER OF TAXA				22	24	31	7	7	9	14	12	24	13	15	15	9	5	18

Table G.2 Benthic Invertebrate Community Effect Indicators by Sample
B2 Gold
MLA Marine Monitoring Report
File: 121417593

Sampling Area	Station	Density (Individuals per m^2)	Family Richness	Simpson's Evenness
REF-04-BIC-	1	9914	22	0.3844
	2	30517	24	0.3521
	3	12802	31	0.2728
REF-05-BIC-	1	74569	7	0.1449
	2	45431	7	0.1814
	3	38448	9	0.1163
BRP-46-BIC-	1	1638	14	0.6289
	2	4440	12	0.1921
	3	4440	24	0.4434
BRP-48-BIC-	1	2414	13	0.3446
	2	3491	15	0.3840
	3	9914	15	0.1631
BPR-51-BIC-	1	5647	9	0.1511
	2	3147	5	0.2971
	3	9828	18	0.1929

Appendix H QAQC Results

Table H1 - April Water Quality QAQC Results

Location			Field blank	Trip Blank	Field Replicate	Parent Sample	Relative Percent Difference (RPD)(%)
Station					BRP-46	BRP-46	
Client Sample ID			FB	TB	Field DUP	BRP-46D-WQ	
Date Sampled			4/25/2024	45406	4/25/2024	4/25/2024	
Time Sampled			8:15	0	8:30	9:35	
ALS Sample ID			YL2400339-010	YL2400339-011	YL2400339-009	YL2400339-006	
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	
Physical Tests (Matrix: Water)							
Conductivity	2	µS/cm	<2.0	<2.0	40000	40600	1.48%
Hardness (as $CaCO_3$), dissolved	0.6	mg/L	<0.60	<0.60	4800	4980	3.61%
Hardness (as $CaCO_3$), from total Ca/Mg	0.6	mg/L	<0.60	<0.60	4830	5180	6.76%
pH	0.1	pH units	6.46	5.43	7.97	7.96	0.13%
Solids, total dissolved (TDS)	10	mg/L	<10	<10	27900.00	30200	7.62%
Solids, total suspended (TSS)	3	mg/L	<3.0	<3.0	<3.0	<3.0	-
Turbidity	0.1	NTU	<0.10	<0.10	0.18	0.14	28.57%
Salinity	1	psu	<1.0	<1.0	26.5	26.9	1.49%
Anions and Nutrients (Matrix: Water)							
Ammonia, total (as N)	0.005	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	-
Bromide	0.05	mg/L	<0.050	<0.050	50.6	53.4	5.24%
Chloride	0.5	mg/L	<0.50	<0.50	14600	15100	3.31%
Fluoride	0.02	mg/L	<0.020	<0.020	<2.00	<2.00	-
Nitrate (as N)	0.005	mg/L	<0.0050	<0.0050	<0.500	<0.500	-
Nitrite (as N)	0.001	mg/L	<0.0010	<0.0010	<0.100	<0.100	-
Nitrogen, total	0.03	mg/L	<0.030	<0.030	<0.150	<0.150	-
Phosphate, ortho-, dissolved (as P)	0.001	mg/L	<0.0010	<0.0010	0.0350	0.0425	17.65%
Phosphorous, total	0.002	mg/L	<0.0020	<0.0020	0.0406	0.0474	14.35%
Silicate (as SiO2)	0.5	mg/L	<0.50	<0.50	1.25	1.49	16.11%
Sulfate (as SO_4)	0.3	mg/L	<0.30	<0.30	2050	2150	4.65%
Organic / Inorganic Carbon (Matrix: Water)							
Carbon, dissolved organic (DOC)	0.5	mg/L	<0.50	<0.50	2.18	1.31	66.41%
Carbon, total organic (TOC)	0.5	mg/L	<0.50	<0.50	1.45	1.4	3.57%
Total Metals (Matrix: Water)							
Aluminum, total	0.003	mg/L	<0.0030	<0.0030	<0.0600	<0.0600	-
Antimony, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Arsenic, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Barium, total	0.0001	mg/L	<0.00010	<0.00010	0.0114	0.0107	6.54%
Beryllium, total	0.0001	mg/L	<0.000100	<0.000100	<0.000400	<0.000400	-
Bismuth, total	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Boron, total	0.01	mg/L	<0.010	<0.010	3.64	3.75	2.93%
Cadmium, total	0.000005	mg/L	<0.0000050	<0.0000050	<0.000100	<0.000100	-
Calcium, total	0.05	mg/L	<0.050	<0.050	315	326	3.37%
Cesium, total	0.00001	mg/L	<0.000010	<0.000010	<0.000200	0.000205	-
Chromium, total	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Cobalt, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Copper, total	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Iron, total	0.01	mg/L	<0.010	<0.010	<0.200	<0.200	-
Lead, total	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Lithium, total	0.001	mg/L	<0.0010	<0.0010	0.136	0.14	2.86%
Magnesium, total	0.005	mg/L	<0.0050	<0.0050	982	1060	7.36%
Manganese, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Mercury, total	0.000005	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum, total	0.00005	mg/L	<0.000050	<0.000050	0.00869	0.00906	4.08%
Nickel, total	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Phosphorous, total	0.05	mg/L	<0.050	<0.050	<1.00	<1.00	-
Potassium, total	0.05	mg/L	<0.050	<0.050	317	342	7.31%
Rubidium, total	0.0002	mg/L	<0.00020	<0.00020	0.0767	0.0804	4.60%
Selenium, total	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Silicon, total	0.1	mg/L	<0.10	<0.10	<2.00	<2.00	-
Silver, total	0.00001	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Sodium, total	0.05	mg/L	<0.050	<0.050	8450	8980	5.90%
Strontium, total	0.0002	mg/L	<0.00020	<0.00020	5.94	6.18	3.88%
Sulfur, total	0.5	mg/L	<0.50	<0.50	770	823	6.44%
Tellurium, total	0.0002	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Thallium, total	0.00001	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Thorium, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Tin, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Titanium, total	0.0003	mg/L	<0.00030	<0.00030	<0.00600	<0.00600	-
Tungsten, total	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Uranium, total	0.00001	mg/L	<0.000010	<0.000010	0.00226	0.00224	0.89%
Vanadium, total	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Zinc, total	0.003	mg/L	<0.0030	<0.0030	<0.0600	<0.0600	-
Zirconium, total	0.0002	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Dissolved Metals (Matrix: Water)							
Aluminum, dissolved	0.001	mg/L	<0.0010	<0.0010	<0.0200	<0.0200	-
Antimony, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Arsenic, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Barium, dissolved	0.0001	mg/L	<0.00010	<0.00010	0.0114	0.0101	12.87%
Beryllium, dissolved	0.0001	mg/L	<0.000100	<0.000100	<0.000400	<0.000400	-
Bismuth, dissolved	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Boron, dissolved	0.01	mg/L	<0.010	<0.010	3.20	3.31	3.32%
Cadmium, dissolved	0.000005	mg/L	<0.0000050	<0.0000050	<0.000100	<0.000100	-
Calcium,dissolved	0.05	mg/L	<0.050	<0.050	304	311	2.25%
Cesium, dissolved	0.00001	mg/L	<0.000010	<0.000010	0.00	0.00029	1.03%
Chromium, dissolved	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Cobalt, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Copper, dissolved	0.0002	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Iron, dissolved	0.01	mg/L	<0.010	<0.010	<0.200	<0.200	-
Lead, dissolved	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Lithium, dissolved	0.001	mg/L	<0.0010	<0.0010	0.134	0.14	4.29%
Magnesium, dissolved	0.005	mg/L	<0.0050	<0.0050	981	1020	3.82%
Manganese, dissolved	0.0001	mg/L	<0.00010	<0.00010	0.00	<0.00200	-
Mercury, dissolved	0.000005	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum, dissolved	0.00005	mg/L	<0.000050	<0.000050	0.00847	0.00844	0.36%
Nickel, dissolved	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Phosphorous, dissolved	0.05	mg/L	<0.050	<0.050	<1.00	<1.00	-
Potassium, dissolved	0.05	mg/L	<0.050	<0.050	316	324	2.47%
Rubidium, dissolved	0.0002	mg/L	<0.00020	<0.00020	0.0844	0.0847	0.35%
Selenium, dissolved	0.00005	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Silicon, dissolved	0.05	mg/L	<0.050	<0.050	<1.00	<1.00	-
Silver, dissolved	0.00001	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Sodium, dissolved	0.05	mg/L	<0.050	<0.050	8080	8410	3.92%
Strontium, dissolved	0.0002	mg/L	<0.00020	<0.00020	5.83	6.03	3.32%
Sulfur, dissolved	0.5	mg/L	<0.50	<0.50	815	824	1.09%
Tellurium, dissolved	0.0002	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Thallium, dissolved	0.00001	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-

Table H1 - April Water Quality QAQC Results

Location			Field blank	Trip Blank	Field Replicate	Parent Sample	Relative Percent Difference (RPD)(%)
Station					BRP-46	BRP-46	
Client Sample ID			FB	TB	Field DUP	BRP-46D-WQ	
Date Sampled			4/25/2024	45406	4/25/2024	4/25/2024	
Time Sampled			8:15	0	8:30	9:35	
ALS Sample ID			YL2400339-010	YL2400339-011	YL2400339-009	YL2400339-006	
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	
Thorium, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Tin, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Titanium, dissolved	0.0003	mg/L	<0.00030	<0.00030	<0.00600	<0.00600	-
Tungsten, dissolved	0.0001	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Uranium, dissolved	0.00001	mg/L	<0.000010	<0.000010	0.00244	0.0025	2.40%
Vanadium, dissolved	0.0005	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Zinc, dissolved	0.001	mg/L	<0.0010	<0.0010	<0.0200	<0.0200	-
Zirconium, dissolved	0.0002	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Volatile Organic Compounds Surrogates (Matrix: Water)							
bromofluorobenzene, 4-	1	%	75.5	72.9	76.6	75.6	1.32%
difluorobenzene, 1,4-	1	%	97	97	94	94.3	0.64%
Volatile Organic Compounds [Fuels] (Matrix: Water)							
Benzene	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Ethylbenzene	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Methyl-tert-butyl ether (MBTE)	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Styrene	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Toluene	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Xylene, m+p-	0.4	µg/L	<0.40	<0.40	<0.40	<0.40	-
Xylene, o-	0.3	µg/L	<0.30	<0.30	<0.30	<0.30	-
Xylenes, total	0.5	µg/L	<0.50	<0.50	<0.50	<0.50	-
Hydrocarbons (Matrix: Water)							
F1 (C6-C10)	100	µg/L	<100	<100	<100	<100	-
F2 (C10-C16)	300	µg/L	<100	<100	<100	<100	-
F3 (C16-C34)	300	µg/L	<250	<250	<250	<250	-
F4 (C34-C50)	300	µg/L	<250	<250	<250	<250	-
F1-BTEX	100	µg/L	<100	<100	<100	<100	-
Hydrocarbons Surrogates (Matrix: Water)							
bromobenzotrifluoride, 2- (F2-F4 surr)	1	%	72.4	74.8	62.4	73.1	14.64%
dichlorotoluene, 3,4-	1	%	99	107	103	101	1.98%

Notes:

"-" parameter concentrations were below the detectible range

Table H2 - August Water Quality QAQC Results

Location			Field Blank	Trip Blank	Field Replicate	MLA	Relative Percent Difference (RPD)(%)
Station					BRP-46	BRP-46	
Client Sample ID			Field Blank	TB	Field Dup	BRP-46S-WQ	
Date Sampled			25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	
Time Sampled			01:30	00:00	00:00	04:34	
ALS Sample ID			YL2401307-010	YL2401307-011	YL2401307-009	YL2401307-001	
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	
Physical Tests (Matrix: Water)							
Conductivity	2.0	µS/cm	<2.0	<2.0	26900	27200	1.10%
Hardness (as CaCO3), dissolved	0.60	mg/L	<0.60	<0.60	3100	3080	0.65%
Hardness (as CaCO3), from total Ca/Mg	0.60	mg/L	<0.60	<0.60	3330.00	3320.00	0.30%
pH	0.10	pH units	5.40	5.20	7.86	7.86	0.00%
Solids, total dissolved (TDS)	10	mg/L	<10	<10	22800.0	17900	27.37%
Solids, total suspended (TSS)	3.0	mg/L	<3.0	<3.0	5.90	<3.0	-
Turbidity	0.10	NTU	<0.10	<0.10	0.7	1.01	28.71%
Salinity	1.0	psu	<1.0	<1.0	17.00	17.2	1.16%
Anions and Nutrients (Matrix: Water)							
Ammonia, total (as N)	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	-
Bromide	0.050	mg/L	<0.050	<0.050	30.40	30.4	0.00%
Chloride	0.50	mg/L	<0.50	<0.50	9310.00	9280	0.32%
Fluoride	0.020	mg/L	<0.020	<0.020	<2.00	<2.00	-
Nitrate (as N)	0.0050	mg/L	<0.0050	<0.0050	<0.500	<0.500	-
Nitrite (as N)	0.0010	mg/L	<0.0010	<0.0010	<0.100	<0.100	-
Nitrogen, total	0.030	mg/L	<0.030	<0.030	0.0470	0.048	2.08%
Phosphate, ortho-, dissolved (as P)	0.0010	mg/L	<0.0010	<0.0010	0.01	0.0106	1.89%
Phosphorous, total	0.0020	mg/L	<0.0020	<0.0020	0	0.0164	3.66%
Silicate (as SiO2)	0.50	mg/L	<0.50	<0.50	1	0.66	3.03%
Sulfate (as SO4)	0.30	mg/L	<0.30	<0.30	1240	1240	0.00%
Organic / Inorganic Carbon (Matrix: Water)							
Carbon, dissolved organic (DOC)	0.50	mg/L	<0.50	<0.50	1.69	2.29	26.20%
Carbon, total organic (TOC)	0.50	mg/L	<0.50	<0.50	1.76	1.58	11.39%
Total Sulfides (Matrix: Water)							
Sulfide, total (as S)	0.010	mg/L	<0.010	<0.010	<0.010	0.013	-
Sulfide, total (as H2S)	0.011	mg/L	<0.011	<0.011	<0.011	0.014	-
Total Metals (Matrix: Water)							
Aluminum, total	0.0030	mg/L	<0.0030	<0.0030	<0.0600	<0.0600	-
Antimony, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Arsenic, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Barium, total	0.00010	mg/L	<0.00010	<0.00010	0	0.00945	1.80%
Beryllium, total	0.000100	mg/L	<0.000100	<0.000100	<0.000400	<0.000400	-
Bismuth, total	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Boron, total	0.010	mg/L	<0.010	<0.010	2.27	2.37	4.22%
Cadmium, total	0.0000050	mg/L	<0.0000050	<0.0000050	<0.000100	<0.000100	-
Calcium, total	0.050	mg/L	<0.050	<0.050	204.00	203	0.49%
Cesium, total	0.000010	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Chromium, total	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Cobalt, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Copper, total	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Iron, total	0.010	mg/L	<0.010	<0.010	<0.200	<0.200	-
Lead, total	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Lithium, total	0.0010	mg/L	<0.0010	<0.0010	0.08	0.0817	1.47%
Magnesium, total	0.0050	mg/L	<0.0050	<0.0050	686	683	0.44%
Manganese, total	0.00010	mg/L	<0.00010	<0.00010	0.0023	0.00404	43.56%
Mercury, total	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum, total	0.000050	mg/L	<0.000050	<0.000050	0.01	0.00559	0.89%
Nickel, total	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Phosphorous, total	0.050	mg/L	<0.050	<0.050	<1.00	<1.00	-
Potassium, total	0.050	mg/L	<0.050	<0.050	209.00	200	4.50%
Rubidium, total	0.00020	mg/L	<0.00020	<0.00020	0.06	0.0539	2.60%
Selenium, total	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.00100	-
Silicon, total	0.10	mg/L	<0.10	<0.10	<2.00	<2.00	-
Silver, total	0.000010	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Sodium, total	0.050	mg/L	<0.050	0.35	5330.00	5280	0.95%
Strontium, total	0.00020	mg/L	<0.00020	<0.00020	3.62	3.58	1.12%
Sulfur, total	0.50	mg/L	<0.50	<0.50	472.00000	484	2.48%
Tellurium, total	0.00020	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Thallium, total	0.000010	mg/L	<0.000010	<0.000010	<0.000200	<0.000200	-
Thorium, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Tin, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Titanium, total	0.00030	mg/L	<0.00030	<0.00030	<0.00600	<0.00600	-
Tungsten, total	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00200	-
Uranium, total	0.000010	mg/L	<0.000010	<0.000010	0.00	0.00145	0.69%
Vanadium, total	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.0100	-
Zinc, total	0.0030	mg/L	<0.0030	<0.0030	<0.0600	<0.0600	-
Zirconium, total	0.00020	mg/L	<0.00020	<0.00020	<0.00400	<0.00400	-
Dissolved Metals (Matrix: Water)							
Aluminum, dissolved	0.0010	mg/L	<0.0010	<0.0010	<0.0200	<0.0100	-
Antimony, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00100	-
Arsenic, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	0.001	-
Barium, dissolved	0.00010	mg/L	<0.00010	<0.00010	0.01	0.00901	0.89%
Beryllium, dissolved	0.000100	mg/L	<0.000100	<0.000100	<0.000400	<0.000200	-
Bismuth, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.000500	-
Boron, dissolved	0.010	mg/L	<0.010	<0.010	2.280	2.32	1.72%
Cadmium, dissolved	0.0000050	mg/L	<0.0000050	<0.0000050	<0.000100	<0.0000500	-
Calcium,dissolved	0.050	mg/L	<0.050	<0.050	214.00	207	3.38%
Cesium, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000200	0.000155	-
Chromium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.00500	-
Cobalt, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00100	-
Copper, dissolved	0.00020	mg/L	<0.00020	<0.00020	<0.00400	<0.00200	-
Iron, dissolved	0.010	mg/L	<0.010	<0.010	<0.200	<0.100	-
Lead, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.000500	-
Lithium, dissolved	0.0010	mg/L	<0.0010	<0.0010	0.09	0.087	1.84%
Magnesium, dissolved	0.0050	mg/L	<0.0050	<0.0050	622.00	622	0.00%
Manganese, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	0.00135	-
Mercury, dissolved	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum, dissolved	0.000050	mg/L	<0.000050	<0.000050	0	0.00562	4.63%
Nickel, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.00500	-
Phosphorous, dissolved	0.050	mg/L	<0.050	<0.050	<1.00	<0.500	-
Potassium, dissolved	0.050	mg/L	<0.050	<0.050	207.00	197	5.08%
Rubidium, dissolved	0.00020	mg/L	<0.00020	<0.00020	0.06	0.0544	5.15%
Selenium, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.00100	<0.000500	-
Silicon, dissolved	0.050	mg/L	<0.050	<0.050	<1.00	<0.500	-

Table H2 - August Water Quality QAQC Results

Location			Field Blank	Trip Blank	Field Replicate	MLA	Relative Percent Difference (RPD)(%)
Station					BRP-46	BRP-46	
Client Sample ID			Field Blank	TB	Field Dup	BRP-46S-WQ	
Date Sampled			25-Aug-2024	25-Aug-2024	25-Aug-2024	25-Aug-2024	
Time Sampled			01:30	00:00	00:00	04:34	
ALS Sample ID			YL2401307-010	YL2401307-011	YL2401307-009	YL2401307-001	
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	
Silver, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000200	<0.000100	-
Sodium, dissolved	0.050	mg/L	<0.050	<0.050	5180.00	5140	0.78%
Strontium, dissolved	0.00020	mg/L	<0.00020	<0.00020	3.93	3.83	2.61%
Sulfur, dissolved	0.50	mg/L	<0.50	<0.50	484.00	488	0.82%
Tellurium, dissolved	0.00020	mg/L	<0.00020	<0.00020	<0.00400	<0.00200	-
Thallium, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000200	<0.000100	-
Thorium, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00100	-
Tin, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00100	-
Titanium, dissolved	0.00030	mg/L	<0.00030	<0.00030	<0.00600	<0.00300	-
Tungsten, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00200	<0.00100	-
Uranium, dissolved	0.000010	mg/L	<0.000010	<0.000010	0.00	0.00151	0.66%
Vanadium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.0100	<0.00500	-
Zinc, dissolved	0.0010	mg/L	<0.0010	<0.0010	<0.0200	<0.0100	-
Zirconium, dissolved	0.00020	mg/L	<0.00020	<0.00020	<0.00400	<0.00200	-
Volatile Organic Compounds Surrogates (Matrix: Water)							
bromofluorobenzene, 4-	1.0	%	86.40	90.70	91.40	83.5	9.46%
difluorobenzene, 1,4-	1.0	%	83.30	85.20	88.80	78.9	12.55%
Volatile Organic Compounds [Fuels] (Matrix: Water)							
Benzene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Ethylbenzene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Methyl-tert-butyl ether (MBTE)	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Styrene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Toluene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Xylene, m+p-	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	-
Xylene, o-	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	-
Xylenes, total	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	-
Hydrocarbons (Matrix: Water)							
F1 (C6-C10)	100	µg/L	<100	<100	<100	<100	-
F2 (C10-C16)	300	µg/L	<100	<100	<100	<100	-
F3 (C16-C34)	300	µg/L	<250	<250	<250	<250	-
F4 (C34-C50)	300	µg/L	<250	<250	<250	<250	-
F1-BTEX	100	µg/L	<100	<100	<100	<100	-
Hydrocarbons Surrogates (Matrix: Water)							
bromobenzotrifluoride, 2- (F2-F4 surr)	1.0	%	85.20	84.50	86.20	85.7	0.58%
dichlorotoluene, 3,4-	1.0	%	101.00	101.00	101.00	101	0.00%

Notes:

"-" parameter concentrations were below the detectible range

Table H3 - August Sediment Quality QAQC results

Location			Field Replicate	MLA	Relative Percent Difference (RPD)(%)
Station			**BRP-51**	**BRP-51**	
Client Sample ID			**FIELD-DUP**	**BRP-51-SED2**	
Date Sampled			**8/24/2024**	**45528**	
Time Sampled			**0:00**	**0.493055556**	
ALS Sample ID			**YL2401307-042**	**YL2401307-040**	
Analyte	**Lowest Detection Limit**	**Units**	**Sub-Matrix: Soil/Solid**	**Sub-Matrix: Soil/Solid**	
Physical Tests (Matrix: Soil/Solid)					
Moisture	0.25	%	19	19.1	1.57%
pH (1:2 soil:water)	0.1	pH units	7	7.72	5.57%
Particle Size (Matrix: Soil/Solid)					
Gravel (>2mm)	1	%	<1.0	<1.0	-
Sand (2.0mm - 0.063mm)	1	%	95.60	94.7	0.95%
Silt (0.063mm - 0.004mm)	1	%	2.8	3.7	24.32%
Clay (<0.004mm)	1	%	1.60	1.6	0.00%
Organic / Inorganic Carbon (Matrix: Soil/Solid)					
Carbon, total organic [TOC]	0.05	%	0.15	0.13	11.54%
Metals (Matrix: Soil/Solid)					
Aluminum	50	mg/kg	2110.00	1910	10.47%
Antimony	0.1	mg/kg	<0.10	<0.10	-
Arsenic	0.1	mg/kg	1.1100	1.05	5.71%
Barium	0.5	mg/kg	12.10	23	47.39%
Beryllium	0.1	mg/kg	0.1	0.1	0.00%
Bismuth	0.2	mg/kg	<0.20	<0.20	-
Boron	5	mg/kg	<5.0	<5.0	-
Cadmium	0.02	mg/kg	<0.020	<0.020	-
Calcium	50	mg/kg	856	852	0.47%
Chromium	0.5	mg/kg	5	5.28	4.36%
Cobalt	0.1	mg/kg	1	1.37	5.11%
Copper	0.5	mg/kg	3	2.41	8.71%
Iron	50	mg/kg	3700	3880	4.64%
Lead	0.5	mg/kg	1	1.4	6.43%
Lithium	2	mg/kg	4	3.3	21.21%
Magnesium	20	mg/kg	1620.00	1510	7.28%
Manganese	1	mg/kg	35.50	36.4	2.47%
Mercury	0.05	mg/kg	<0.0500	<0.0500	-
Molybdenum	0.1	mg/kg	0.10	<0.10	-
Nickel	0.5	mg/kg	3.17	2.88	10.07%
Phosphorus	50	mg/kg	206.00	196	5.10%
Potassium	100	mg/kg	580.00	540	7.41%
Selenium	0.2	mg/kg	<0.20	<0.20	-
Silver	0.1	mg/kg	<0.10	<0.10	-
Sodium	50	mg/kg	1620.000	1620	0.00%
Strontium	0.5	mg/kg	8	7.76	7.47%
Sulfur	1000	mg/kg	<1000	<1000	-
Thallium	0.05	mg/kg	<0.050	<0.050	-
Tin	2	mg/kg	<2.0	<2.0	-
Titanium	1	mg/kg	95.90	108	11.20%
Tungsten	0.5	mg/kg	<0.50	<0.50	-
Uranium	0.05	mg/kg	0.4450	0.384	15.89%
Vanadium	0.2	mg/kg	7.10	7.91	10.24%
Zinc	2	mg/kg	5.50	5.4	1.85%
Zirconium	1	mg/kg	3.70	3.7	0.00%
Speciated Metals (Matrix: Soil/Solid)					
Chromium, hexavalent [Cr VI]	0.1	mg/kg	<0.10	<0.10	-
Polycyclic Aromatic Hydrocarbons (Matrix: Soil/Solid)					
Acenaphthene	0.005	mg/kg	<0.0050	<0.0050	-
Acenaphthylene	0.005	mg/kg	<0.0050	<0.0050	-
Acridine	0.01	mg/kg	<0.010	<0.010	-
Anthracene	0.004	mg/kg	<0.0040	<0.0040	-
Benz(a)anthracene	0.01	mg/kg	<0.010	<0.010	-
Benzo(a)pyrene	0.01	mg/kg	<0.010	<0.010	-
Benzo(b+j)fluoranthene	0.01	mg/kg	<0.010	<0.010	-
Benzo(b+j+k)fluoranthene	0.015	mg/kg	<0.015	<0.015	-
Benzo(g,h,i)perylene	0.01	mg/kg	<0.010	<0.010	-
Benzo(k)fluoranthene	0.01	mg/kg	<0.010	<0.010	-
Chrysene	0.01	mg/kg	<0.010	<0.010	-
Dibenz(a,h)anthracene	0.005	mg/kg	<0.0050	<0.0050	-
Fluoranthene	0.01	mg/kg	<0.010	<0.010	-
Fluorene	0.01	mg/kg	<0.010	<0.010	-
Indeno(1,2,3-c,d)pyrene	0.01	mg/kg	<0.010	<0.010	-
Methylnaphthalene, 1+2-	0.015	mg/kg	<0.015	<0.015	-
Methylnaphthalene, 1-	0.01	mg/kg	<0.010	<0.010	-
Methylnaphthalene, 2-	0.01	mg/kg	<0.010	<0.010	-
Naphthalene	0.01	mg/kg	<0.010	<0.010	-
Phenanthrene	0.01	mg/kg	<0.010	<0.010	-
Pyrene	0.01	mg/kg	<0.010	<0.010	-
Quinoline	0.01	mg/kg	<0.010	<0.010	-
B(a)P total potency equivalents [B(a)P TPE]	0.02	mg/kg	<0.020	<0.020	-
IACR (CCME)	0.15	mg/kg	<0.150	<0.150	-
Polycyclic Aromatic Hydrocarbons Surrogates (Matrix: Soil/Solid)					
Acridine-d9	0.1	%	80.20	74.4	7.80%
Chrysene-d12	0.1	%	83.00	78.6	5.60%
Naphthalene-d8	0.1	%	91.6000	85.9	6.64%
Phenanthrene-d10	0.1	%	82.10	77.6	5.80%

Notes:

"-" parameter concentrations were below the detectible range

Appendix I Photo Log

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Photographic Log

Client:	**B2 Gold Nunavut**	**Project:**	**121417593**
Site Name:	**Back River Project**	**Site Location:**	**Kitikmeot, Nunavut**

Photograph ID: 1

Photo Location:

Direction:

Survey Date:
4/23/2024

Comments:
Aqua TROLL 600 Multiparameter Sonde

Photograph ID: 2

Photo Location:

Direction:

Survey Date:
4/23/2024

Comments:
Water quality sampling jars

Client:	**B2Gold Nunavut**	**Project:**	**121417593**
Site Name:	**Back River Project**	**Site Location:**	**Kitikmeot, Nunavut**

Photograph ID: 3 **Photo Location:** **Direction:** **Survey Date:** 8/16/2022 **Comments:** phytoplankton filtering set up	
Photograph ID: 4 **Photo Location:** **Direction:** **Survey Date:** 8/15/2022 **Comments:** Ice shelter use for winter sampling	

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Photographic Log

Client:	**B2Gold Nunavut**	**Project:**	**121417593**
Site Name:	**Back River Project**	**Site Location:**	**Kitikmeot, Nunavut**

Photograph ID: 5

Photo Location:

Direction:

Survey Date:
8/23/2024

Comments:
Sediment Sampling Containers