

Back River Project: Marine Laydown Area - 2023 Marine Sampling Report

Back River, Nunavut

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Limitations and Sign-off

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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, seasonally operated camp that has no in-water footprint as vessels are generally brought into the shoreline for offloading and 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.

Although the plan was to conduct two sampling events in 2023, in April and August, for the marine monitoring program, the August 2023 event was postponed by a year due to safety concerns and inaccessibility of the MLA resulting from the extensive wildfires in northern Canada. Consequently, the August 2024 sampling program will include physical oceanography, water quality and phytoplankton sampling, and expand in scope to include benthic macroinvertebrate and sediment quality sampling. Postponing the August sampling program to 2024 is not anticipated to affect the interpretation of results in the context of the MMP.

The April 2023 sampling program consisted of physical oceanography, water quality and phytoplankton sampling at three MLA stations and two reference stations. A summary of the results is as follows.

Physical Oceanography

Profiles of salinity, turbidity, and pH concentration throughout the water column remained similar between the MLA and reference stations. Temperature and dissolved oxygen concentrations at shallow stations BRP-46 in the MLA and reference station REF-04 differ from levels at the other three stations. Dissolved oxygen concentrations were consistently above the Canadian Council of Ministers of the Environment Guidelines for the Protection of Marine Aquatic Life (CCME MAL) recommended minimum concentration.

Water Quality

There were no parameters that exceeded the CCME MAL guidelines in water samples collected in April 2023 from the MLA and the reference stations. Overall, water quality was generally similar between stations at similar depths in the MLA and the reference area.

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Phytoplankton

Phytoplankton biomass (as Chlorophyll *a*) was collected in triplicate at the MLA stations and reference stations during the April 2023 sampling program. Chlorophyll *a* concentrations were higher at the reference stations than the MLA stations. The mean Chlorophyll *a* concentrations ranged between 0.222 to 0.312 µg/L at the reference stations and 0.104 to 0.178 µg/L at the MLA stations. Comparison across sampling years will be important to determine if this reflects natural variability between sites and if there is a relationship with activities at the MLA.

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Abbreviations

| | |
|-----------|--------------------------------------------------|
| MLA..... | Marine Laydown Area |
| NIRB..... | Nunavut Impact Review Board |
| BRP..... | Black River Project |
| REF..... | Reference |
| EAU..... | Electronic Aquatic Utility |
| LSA..... | Local Study Area |
| RSA..... | Regional Study Area |
| CTD..... | Conductivity, Temperature, Depth |
| FR..... | Field Replicate |
| CCME..... | Canadian Council of Ministers of the Environment |
| RPD..... | Relative Percent Difference |
| QA..... | Quality Assurance |
| QC..... | Quality Control |
| WQ..... | Water Quality |

Glossary

The Project

The Black River Project

Report

Marine Sampling Report

B2Gold Nunavut

B2Gold Corporation

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 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 seasonally, including during the summer open water period for Bathurst Inlet (typically August and September) to receive supplies that are brought in by boat, and again in winter to early spring (typically January to April) when the ice road to Goose Property is in operation. The MLA camp is supplied with desalinated seawater for all domestic water uses. The MLA has no in-water footprint as vessels are generally brought into the shoreline pad 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 the marine monitoring services that were completed in April 2023 at the MLA and at reference locations as well as report on the desalination sampling results.

Although the 2023 monitoring program was to include two separate sampling events (April and August), the August event was postponed by a year to 2024, due to safety concerns and inaccessibility of the MLA resulting from the extensive wildfires in northern Canada. Consequently, the August 2024 sampling program will include physical oceanography, water quality and phytoplankton sampling, and extended to include benthic macroinvertebrate and sediment quality sampling. Postponing the sampling program is not anticipated to affect the interpretation of results in the context of the MMP.

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 include sampling of water and sediment and physical oceanography in the MLA during April, and therefore are relevant to the current monitoring program for MLA stations BRP-46, BRP-48, and BRP-51. Reference stations in the two studies in Table 1 are not relevant since new reference stations were selected in 2022 (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 sampled 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 2023 marine monitoring program was to conduct semi-annual sampling in the MLA and at a reference location for physical oceanography, water quality, and phytoplankton. As discussed previously, sediment quality and benthic macroinvertebrate sampling were also planned for August 2023 but were postponed due to the extensive wildfires in northern Canada at that time that restricted site access.

Samples taken at the MLA were compared to those taken at reference sites and significant differences highlighted, if noted. Water samples were screened against the Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Marine Aquatic Life (MAL). Parameters that exceeded CCME MAL guidelines were subject to additional evaluation including comparison to historical records. If exceedances are outside of historical and reference conditions, investigations into potential causes and appropriate adaptive management actions are undertaken.

3.0 Methods

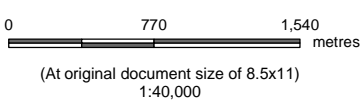
Marine environment sampling was conducted on April 15 and 16, 2023 when winter ice cover in Bathurst Inlet is near it's peak thickness. Samples were collected from three previously established sampling stations adjacent to the MLA (BRP-46, BRP-48, BRP-51) and two previously established reference stations 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.

Sampling 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. Field data were recorded using Stantec's mobile Electronic Aquatic Utility (EAU) data application and a notebook.



Notes
1. Coordinate System: NAD 1983 UTM Zone 13N
2. Data Sources:
3. Background: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- Sampling Location
- Watercourse
- waterbody



Project Location Prepared on 2023-03-22
Kiluhiqtuq
Bathurst Inlet, Nunavut
Client/Project 121417593_001
Nunami Stantec Limited
Sabina Back River Project
Marine Monitoring Services

Figure No.
1
Title

**2023 Location of Project Marine
Sampling Stations**

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Section 3.0: Methods

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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 Longitude 107°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 April 2023 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 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 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) |
| | • Reference stations –REF-04, REF-05 | • 6 (triplicate samples at each of the 2 reference locations sampled 1 m below ice) |

*Field Dup is the field replicate sample. FB is the Field Blank sample

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 at 1 m/s while logging data.

To collect the CTD profiles, the sonde was lowered through the hole in the ice, just below the water surface 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 at a rate of 1 m/s. Data were logged only 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.

3.2 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. Samples were collected from 1 m below the bottom of the ice 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 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 (MgCO₃) 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 until they reached ALS Laboratories in Yellowknife, NT.

3.4 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.

Quality control samples (i.e., field replicates, field blank, and trip blank) represented approximately 20% of all water samples collected. The following quality control samples were collected during the April 2023 program:

- **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.

3.5 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 April 2023 showed relatively constant temperatures at all depths for the stations monitored. BRP-46 and REF-04 had temperatures above zero degrees Celsius (°C), ranging from 0.09 to 0.44 °C. BRP-48, BRP-51 and REF-05 had temperatures below zero °C, ranging from -1.46 to -1.27 °C. Temperature profiles from each station monitored in 2023 are presented on Figure 2. Winter water temperatures commonly remain below 0°C in the Bathurst inlet during winter (Sabina, 2019, Sabina 2015)

Dissolved oxygen (DO) concentrations were consistently above the CCME MAL recommended minimum concentration of 8.0 mg/L and ranged from 10.92 to 13.0 mg/L. DO concentrations were lowest near the bottom and increased steadily at deep stations BRP-46 and REF-04. DO concentrations remained relatively constant at stations BRP-48, BRP-51 and REF-05. DO profiles from each station monitored in 2023 are presented on Figure 3. DO ranges are similar to those observed in the 2018 winter profiling (Sabina, 2019)

Temperature levels and dissolved oxygen concentrations at stations BRP-46 and REF-04 differ from levels at the other three stations. It is not known why these locations differed from the others, it may be a result of stations BRP-46 and REF-04 being deep sampling locations, although it is noted the BRP-48 is also a deep location and was more consistent with the other stations with respect to temperature and DO.

Salinity, pH and turbidity remained relatively constant throughout the water column profiles at the five stations monitored. Salinity ranged between 26.23 and 26.87 psu, pH ranged between 7.88 and 8.02, and turbidity concentrations ranged between 0.94 and 1.19 NTU. Salinity profiles from each station monitored in 2023 are presented in Figure 2, while pH and turbidity profiles are presented in Figure 4. Salinity and pH concentrations in 2023 are similar to baseline. Turbidity concentrations are higher than average baseline levels (0.28 NTU shallow, 0.34 NTU deep). This may be due to baseline samples being collected closer to the center of Bathurst Inlet where disturbed sediments would be less prevalent in the water column (Sabina.2015).

A summary of the 2023 physical oceanographic data is presented in Appendix B.

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Section 4.0: Results and Discussion

March 20, 2024

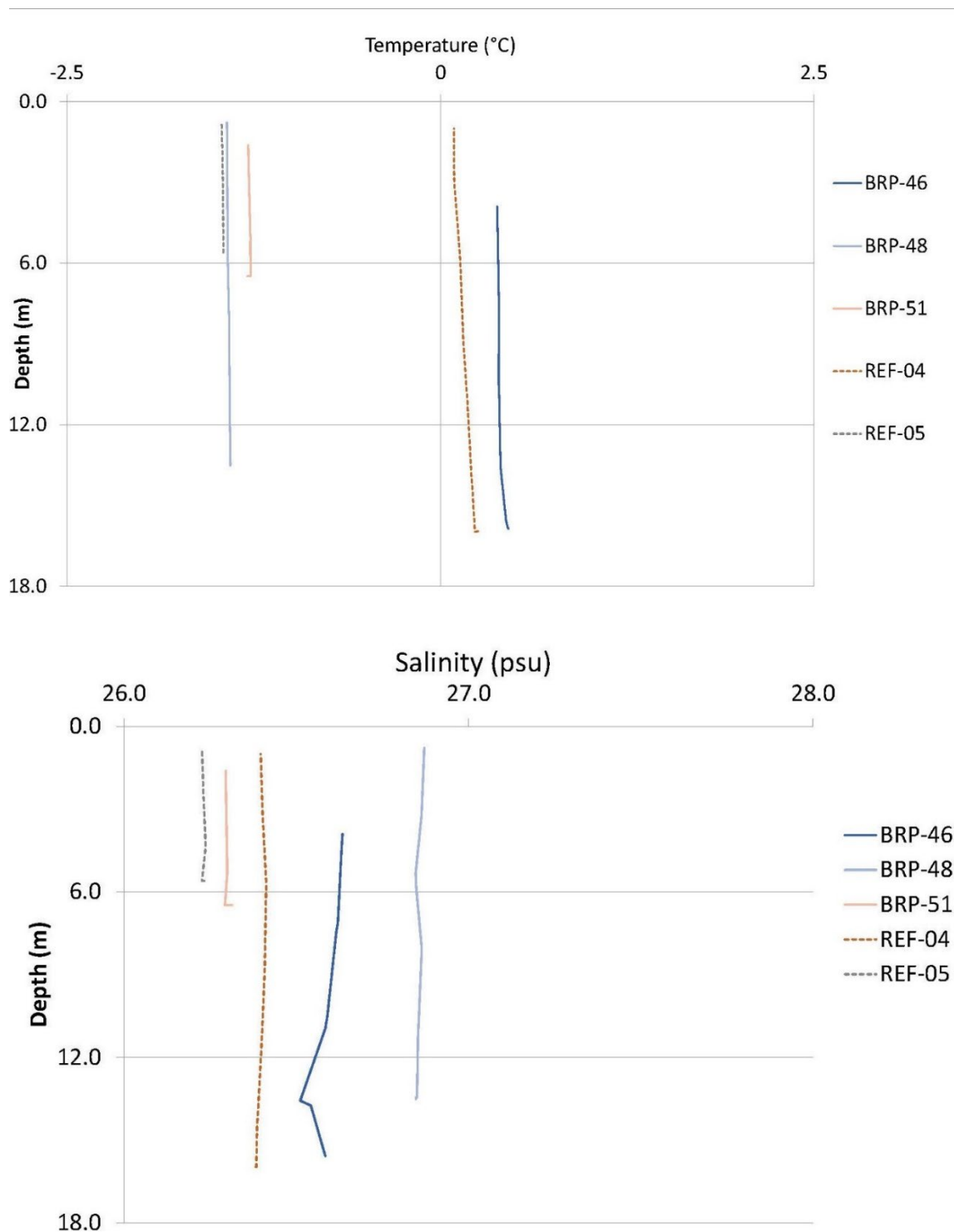


Figure 2 April 2023 Temperature and Salinity Profiles at the MLA and Reference Stations

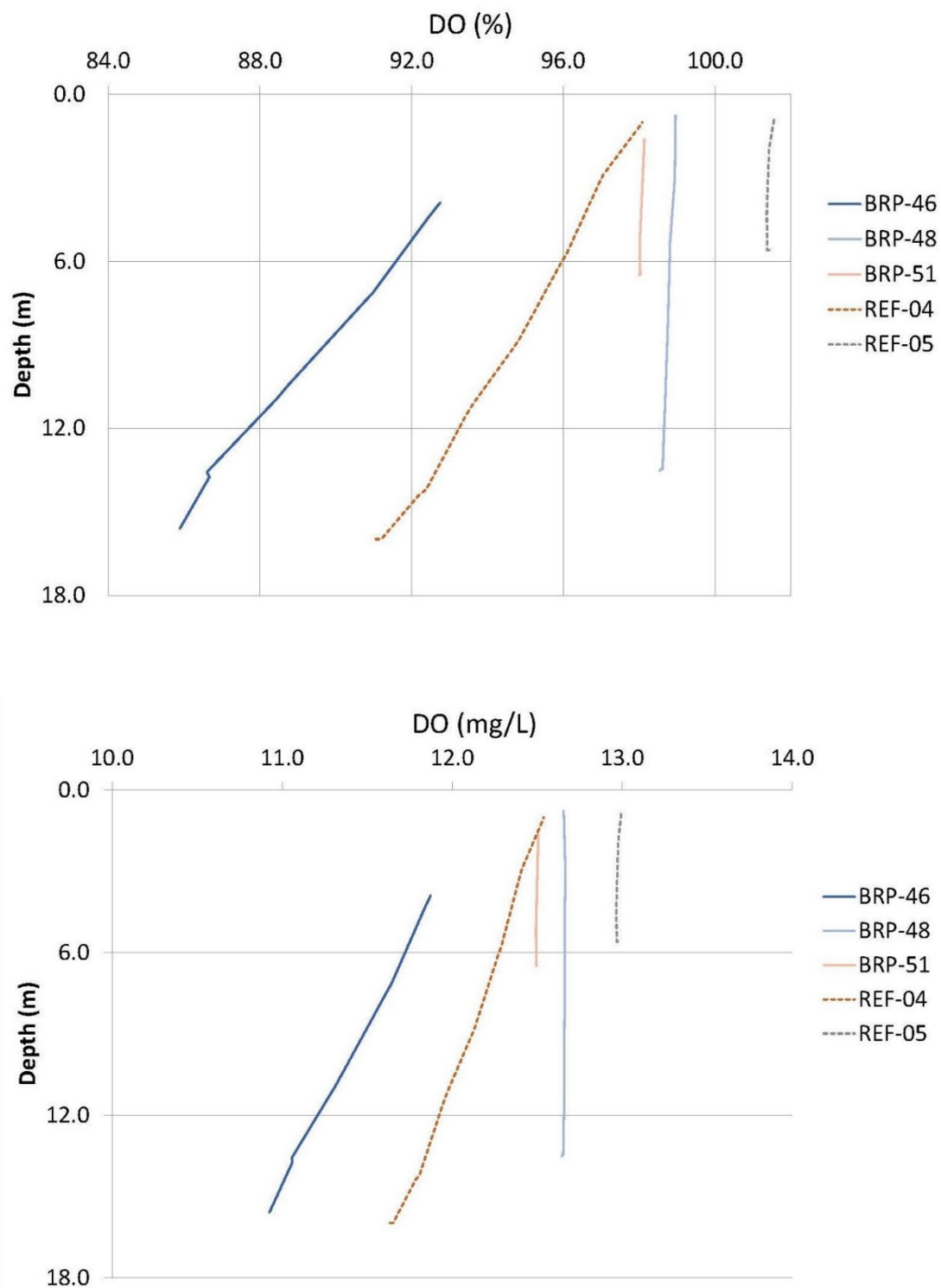


Figure 3 April 2023 Dissolved Oxygen and Percent Saturation Profiles at the MLA and Reference Stations

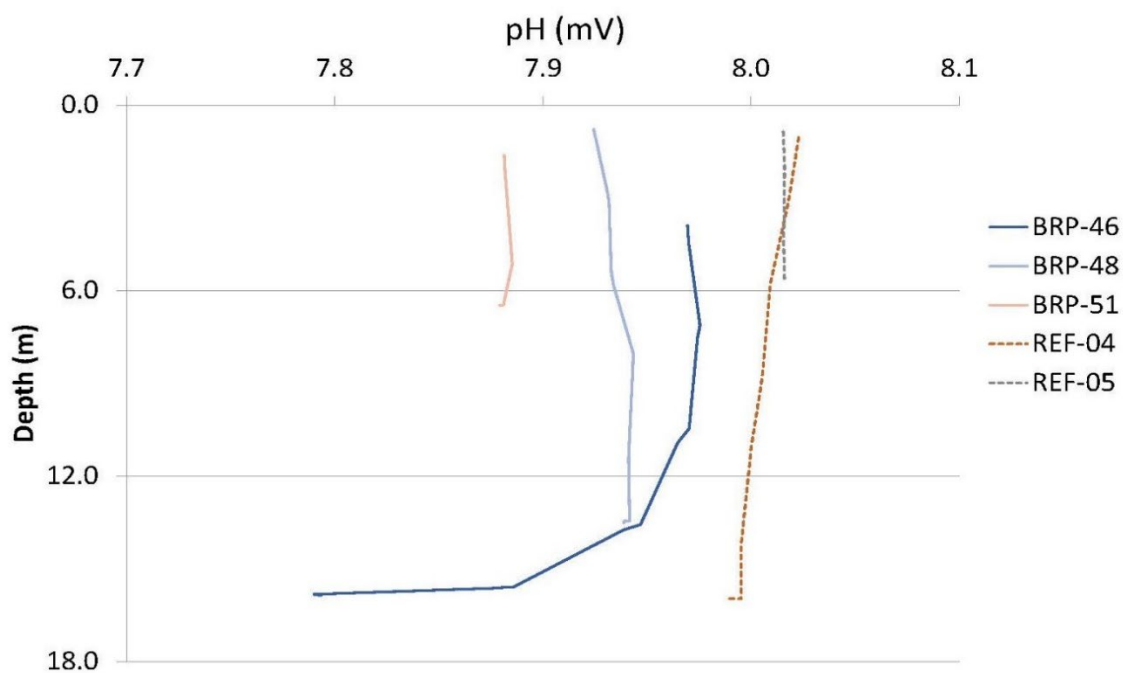
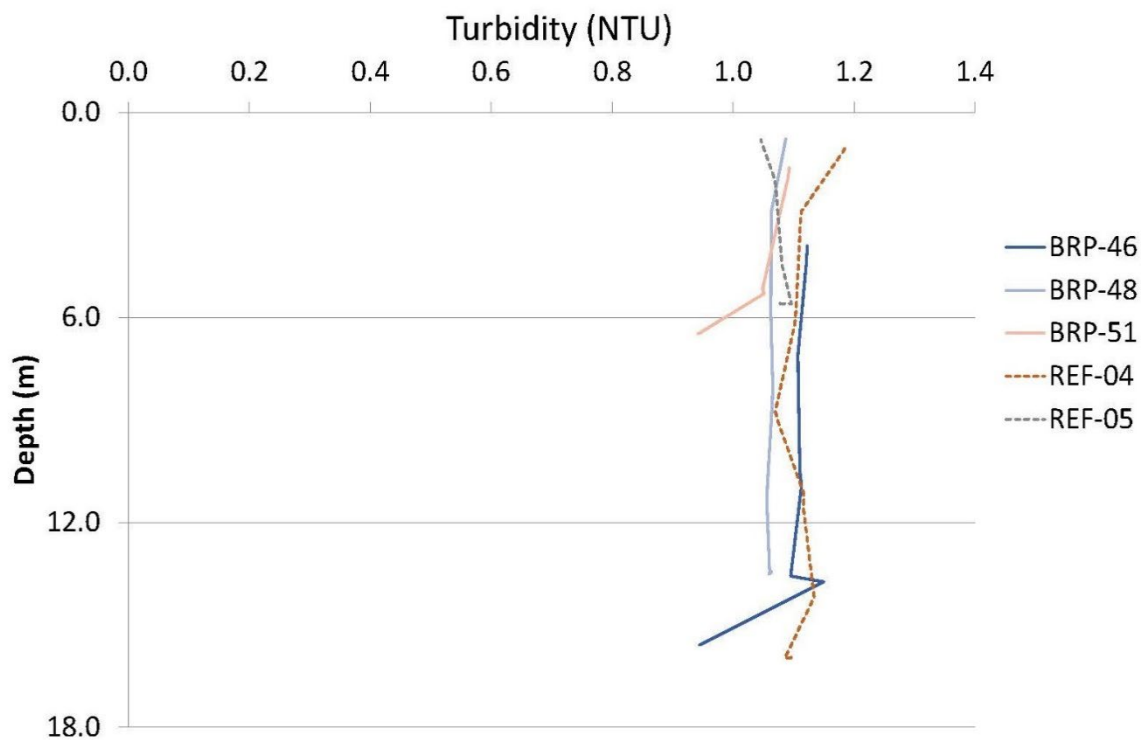


Figure 4 April 2023 Turbidity and pH Profiles at the MLA and Reference Stations

4.2 Water Quality

Water quality sampling was conducted at the MLA and reference stations, with sampling at both the surface (1 m below the ice) and near the sea floor at deeper stations (collection depth of 13.4 m at BRP-46, 12.0 m at BRP-48 and 14.3 m at REF-04). Individual analyte values as well as summary statistics including mean, minimum, maximum, and standard deviation are summarized by sampling location can compared to mean concentrations from the 2018 MLA sampling program in Table 4. 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 2023 (refer to Appendix C).

Table 4 Water Quality Summary

| Parameters | Lowest Detection Limit | Units | MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ) | | | | MLA (BRP-48D-WQ, BRP-46D-WQ) | | | | 2018 Mean MLA Concentrations | Reference (REF04S-WQ, REF05-WQ) | | | | Reference (REF04D-WQ) | 2018 Mean Reference Concentrations |
|--------------------------------------------|------------------------------|----------|-----------------------------------------|---------|----------|----------|------------------------------|---------|----------|----------|------------------------------------|---------------------------------|-----------|-----------|-----------|--------------------------|------------------------------------------|
| | | | MLA | MLA | MLA | MLA | MLA | MLA | MLA | MLA | | Reference | Reference | Reference | Reference | Reference | |
| | | | Shallow | Shallow | Shallow | Shallow | Deep | Deep | Deep | Deep | | Shallow | Shallow | Shallow | Shallow | 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 | µS/cm | 41600 | 265 | 41300 | 41800 | 41700 | 0 | 41700 | 41700 | 41870 | 41500 | 141 | 41400 | 41600 | 41600 | 42000 |
| Hardness (as CaCO3), dissolved | 0.60 | mg/L | 4910 | 20 | 4890 | 4930 | 4860 | 14 | 4850 | 4870 | 4716 | 4845 | 35 | 4820 | 4870 | 4840 | 4604 |
| Hardness (as CaCO3), from total Ca/Mg | 0.60 | mg/L | 5040 | 164 | 4900 | 5220 | 5010 | 99 | 4940 | 5080 | - | 4970 | 85 | 4910 | 5030 | 4880 | - |
| pH | 0.10 | pH units | 7.77 | 0.01 | 7.77 | 7.78 | 7.78 | 0 | 7.78 | 7.78 | 7.86 | 7.80 | 0.01 | 7.79 | 7.80 | 7.79 | 7.84 |
| Solids, total dissolved (TDS) | 10 | mg/L | 28333 | 950 | 27400 | 29300 | 27950 | 636 | 27500 | 28400 | - | 28300 | 707 | 27800 | 28800 | 27900 | - |
| Solids, total suspended (TSS) | 3.0 | mg/L | 4.5 | 1.3 | 3.6 | 6.0 | 1.5 | 0 | 1.5 | 1.5 | 1.0 | 2.4 | 1.2 | 1.5 | 3.2 | 1.5 | 1.22 |
| Turbidity | 0.10 | NTU | 0.12 | 0.07 | 0.05 | 0.19 | 0.10 | 0.06 | 0.05 | 0.14 | 0.17 | 0.14 | 0.12 | 0.05 | 0.22 | 0.18 | 0.23 |
| Salinity | 1.0 | psu | 26.6 | 1.1 | 25.8 | 27.8 | 26.3 | 0.1 | 26.2 | 26.4 | 27.34 | 26.6 | 0.1 | 26.5 | 26.7 | 26.8 | 27.16 |
| | | | | | | | | | | | | | | | | | |
| Anions and Nutrients (Matrix: Water) | | | | | | | | | | | | | | | | | |
| Ammonia, total (as N) | 0.0050 | mg/L | 0.007 | 0.001 | 0.006 | 0.008 | 0.006 | 0.001 | 0.005 | 0.007 | 0.00439 | 0.005 | 0.003 | 0.003 | 0.007 | 0.003 | 0.0053 |
| Bromide | 0.050 | mg/L | 48.5 | 1.4 | 47.1 | 49.9 | 47.9 | 1.0 | 47.2 | 48.6 | 47.8 | 47.2 | 0.1 | 47.1 | 47.3 | 48.0 | 45.3 |
| Chloride | 0.50 | mg/L | 14267 | 351 | 13900 | 14600 | 14100 | 0 | 14100 | 14100 | 13650 | 13950 | 71 | 13900 | 14000 | 14100 | 13080 |
| Fluoride | 0.020 | mg/L | 1.0 | 0 | 1.0 | 1.0 | 1.0 | 0 | 1.0 | 1.0 | 0.5 | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 | 0.5 |
| Nitrate (as N) | 0.0050 | mg/L | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0 | 0.250 | 0.250 | 0.071 | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0.092 |
| Nitrite (as N) | 0.0010 | mg/L | 0.050 | 0 | 0.050 | 0.050 | 0.050 | 0 | 0.050 | 0.050 | 0.005 | 0.050 | 0 | 0.050 | 0.050 | 0.050 | 0.005 |
| Nitrogen, total | 0.030 | mg/L | 0.075 | 0 | 0.075 | 0.075 | 0.075 | 0 | 0.075 | 0.075 | 0.0386 | 0.075 | 0 | 0.075 | 0.075 | 0.075 | - |
| Phosphate, ortho-, dissolved (as P) | 0.0010 | mg/L | 0.0296 | 0.0025 | 0.0273 | 0.0322 | 0.0324 | 0.0016 | 0.0312 | 0.0335 | 0.0368 | 0.0322 | 0.0009 | 0.0315 | 0.0328 | 0.0324 | 0.0426 |
| Phosphorous, total | 0.0020 | mg/L | 0.0395 | 0.0006 | 0.0390 | 0.0401 | 0.0395 | 0.0001 | 0.0394 | 0.0396 | 0.0411 | 0.0381 | 0.0004 | 0.0378 | 0.0384 | 0.0391 | 0.0403 |
| Silicate (as SiO2) | 0.50 | mg/L | 1.16 | 0.02 | 1.14 | 1.17 | 1.15 | 0 | 1.15 | 1.15 | 1.16 | 1.12 | 0 | 1.12 | 1.12 | 1.16 | 1.32 |
| Sulfate (as SO4) | 0.30 | mg/L | 1966.67 | 65.06 | 1900.00 | 2030.00 | 1945.00 | 7.07 | 1940.00 | 1950.00 | 1923 | 1925.00 | 7.07 | 1920.00 | 1930.00 | 1970.00 | 1850 |
| | | | | | | | | | | | | | | | | | |
| Organic / Inorganic Carbon (Matrix: Water) | | | | | | | | | | | | | | | | | |
| Carbon, total organic (TOC) | 0.50 | mg/L | 1.76 | 0.31 | 1.51 | 2.10 | 1.69 | 0.07 | 1.64 | 1.74 | 1.27 | 1.79 | 0.34 | 1.55 | 2.03 | 1.67 | 1.21 |
| | | | | | | | | | | | | | | | | | |
| Total Metals (Matrix: Water) | | | | | | | | | | | | | | | | | |
| Aluminum, total | 0.0030 | mg/L | 0.0750 | 0 | 0.0750 | 0.0750 | 0.0750 | 0 | 0.0750 | 0.0750 | 0.0025 | 0.0750 | 0 | 0.0750 | 0.0750 | 0.0750 | 0.0025 |
| Antimony, total | 0.00010 | mg/L | 0.00250 | 0 | 0.00250 | 0.00250 | 0.00250 | 0 | 0.00250 | 0.00250 | 0.00025 | 0.00250 | 0 | 0.00250 | 0.00250 | 0.00250 | 0.00025 |
| Arsenic, total | 0.00010 | mg/L | 0.00250 | 0 | 0.00250 | 0.00250 | 0.00250 | 0 | 0.00250 | 0.00250 | 0.001 | 0.00250 | 0 | 0.00250 | 0.00250 | 0.00250 | 0.001 |
| Barium, total | 0.00010 | mg/L | 0.01163 | 0.00055 | 0.01110 | 0.01220 | 0.01125 | 0.00007 | 0.01120 | 0.01130 | 0.0112 | 0.01140 | 0.00028 | 0.01120 | 0.01160 | 0.01110 | 0.0107 |
| Beryllium, total | 0.000100 | mg/L | 0.00050 | 0 | 0.00050 | 0.00050 | 0.00050 | 0 | 0.00050 | 0.00050 | 0.00025 | 0.00050 | 0 | 0.00050 | 0.00050 | 0.00050 | 0.00025 |
| Bismuth, total | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00025 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.00025 |
| Boron, total | 0.010 | mg/L | 3.447 | 0.180 | 3.270 | 3.630 | 3.405 | 0.092 | 3.340 | 3.470 | 3.69 | 3.440 | 0.057 | 3.400 | 3.480 | 3.340 | 3.55 |
| Cadmium, total | 0.0000050 | mg/L | 0.000125 | 0 | 0.000125 | 0.000125 | 0.000125 | 0 | 0.000125 | 0.000125 | 0.0000373 | 0.000125 | 0 | 0.000125 | 0.000125 | 0.000125 | 0.0000448 |
| Calcium, total | 0.050 | mg/L | 325.0 | 15.4 | 312.0 | 342.0 | 317.5 | 3.5 | 315.0 | 320.0 | 326 | 317.0 | 2.8 | 315.0 | 319.0 | 310.0 | 305 |
| Cesium, total | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Chromium, total | 0.00050 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00025 |
| Cobalt, total | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.000025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.000031 |
| Copper, total | 0.00050 | mg/L | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.00060 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0.00044 |
| Iron, total | 0.010 | mg/L | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0 | 0.250 | 0.250 | 0.005 | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0.005 |
| Lead, total | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00015 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.00015 |
| Lithium, total | 0.0010 | mg/L | 0.1387 | 0.0070 | 0.1320 | 0.1460 | 0.1375 | 0.0035 | 0.1350 | 0.1400 | 0.158 | 0.1365 | 0.0007 | 0.1360 | 0.1370 | 0.1330 | 0.164 |
| Magnesium, total | 0.0050 | mg/L | 1027 | 31 | 1000 | 1060 | 1025 | 21 | 1010 | 1040 | 919 | 1014 | 23 | 998 | 1030 | 996 | 922 |
| Manganese, total | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00147 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00128 |

Table 4 Water Quality Summary

| Parameters | Lowest Detection Limit | Units | MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ) | | | | MLA (BRP-48D-WQ, BRP-46D-WQ) | | | | 2018 Mean MLA Concentrations | Reference (REF04S-WQ, REF05-WQ) | | | | Reference (REF04D-WQ) | 2018 Mean Reference Concentrations |
|-----------------------------------------|------------------------------|-------|-----------------------------------------|---------|-----------|-----------|------------------------------|---------|-----------|-----------|------------------------------------|---------------------------------|-----------|-----------|-----------|--------------------------|------------------------------------------|
| | | | MLA | MLA | MLA | MLA | MLA | MLA | MLA | MLA | | Reference | Reference | Reference | Reference | Reference | |
| | | | Shallow | Shallow | Shallow | Shallow | Deep | Deep | Deep | Deep | | Shallow | Shallow | Shallow | Shallow | REF04D-WQ | |
| | | | Mean | Std Dev | Min | Max | Mean | Std Dev | Min | Max | | Mean | Std Dev | Min | Max | Sample value | |
| Mercury, total | 0.0000050 | mg/L | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.00025 | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.0000025 | 0.00025 |
| Molybdenum, total | 0.000050 | mg/L | 0.00892 | 0.00042 | 0.00850 | 0.00934 | 0.00827 | 0.00004 | 0.00824 | 0.00830 | 0.0092 | 0.00871 | 0.00046 | 0.00838 | 0.00903 | 0.00840 | 0.0087 |
| Nickel, total | 0.00050 | mg/L | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.000625 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0.00056 |
| Phosphorous, total | 0.050 | mg/L | 0.039 | 0.001 | 0.039 | 0.040 | 0.040 | 0 | 0.039 | 0.040 | 0.025 | 0.038 | 0 | 0.038 | 0.038 | 0.039 | 0.025 |
| Potassium, total | 0.050 | mg/L | 317.0 | 7.2 | 311.0 | 325.0 | 316.5 | 0.7 | 316.0 | 317.0 | 291 | 315.5 | 2.1 | 314.0 | 317.0 | 311.0 | 285 |
| Rubidium, total | 0.00020 | mg/L | 0.08523 | 0.00232 | 0.08370 | 0.08790 | 0.08745 | 0.00134 | 0.08650 | 0.08840 | 0.09690 | 0.08725 | 0.00318 | 0.08500 | 0.08950 | 0.08200 | 0.0926 |
| Selenium, total | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00111 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.001 |
| Silicon, total | 0.10 | mg/L | 2.50 | 0 | 2.50 | 2.50 | 2.50 | 0 | 2.50 | 2.50 | 0.5 | 2.50 | 0 | 2.50 | 2.50 | 2.50 | 0.5 |
| Silver, total | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00005 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00005 |
| Sodium, total | 0.050 | mg/L | 8207 | 223 | 8040 | 8460 | 8105 | 49 | 8070 | 8140 | 7649 | 8005 | 134 | 7910 | 8100 | 7910 | 7630 |
| Strontium, total | 0.00020 | mg/L | 6.060 | 0.203 | 5.880 | 6.280 | 5.930 | 0.014 | 5.920 | 5.940 | 5.66 | 5.880 | 0.085 | 5.820 | 5.940 | 5.810 | 5.82 |
| Sulfur, total | 0.50 | mg/L | 765 | 33 | 732 | 798 | 765 | 29 | 744 | 785 | 739 | 747 | 8 | 741 | 752 | 731 | 740 |
| Tellurium, total | 0.00020 | mg/L | 0.0050 | 0 | 0.0050 | 0.0050 | 0.0050 | 0 | 0.0050 | 0.0050 | 0.00025 | 0.0050 | 0 | 0.0050 | 0.0050 | 0.0050 | 0.00025 |
| Thallium, total | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.000025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.000025 |
| Thorium, total | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00025 |
| Tin, total | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0005 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.0005 |
| Titanium, total | 0.00030 | mg/L | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0025 | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0075 | 0.0025 |
| Tungsten, total | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0005 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.0005 |
| Uranium, total | 0.000010 | mg/L | 0.00259 | 0.00011 | 0.00251 | 0.00272 | 0.00248 | 0.00003 | 0.00246 | 0.00250 | 0.00263 | 0.00238 | 0.00018 | 0.00225 | 0.00251 | 0.00244 | 0.00251 |
| Vanadium, total | 0.00050 | mg/L | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.00066 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0.00069 |
| Zinc, total | 0.0030 | mg/L | 0.075 | 0 | 0.075 | 0.075 | 0.075 | 0 | 0.075 | 0.075 | 0.00169 | 0.075 | 0 | 0.075 | 0.075 | 0.075 | 0.0015 |
| Zirconium, total | 0.00020 | mg/L | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0 | 0.005 | 0.005 | 0.00037 | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0.0005 |
| | | | | | | | | | | | | | | | | | |
| Dissolved Metals (Matrix: Water) | | | | | | | | | | | | | | | | | |
| Aluminum, dissolved | 0.0010 | mg/L | 0.025 | 0 | 0.025 | 0.025 | 0.025 | 0 | 0.025 | 0.025 | 0.0025 | 0.025 | 0 | 0.025 | 0.025 | 0.025 | 0.0025 |
| Antimony, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00025 |
| Arsenic, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.001 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.001 |
| Barium, dissolved | 0.00010 | mg/L | 0.0109 | 0.0004 | 0.0105 | 0.0113 | 0.0111 | 0.0002 | 0.0109 | 0.0112 | 0.0117 | 0.0113 | 0.0002 | 0.0111 | 0.0114 | 0.0107 | 0.0107 |
| Beryllium, dissolved | 0.000100 | mg/L | 0.0005 | 0 | 0.0005 | 0.0005 | 0.0005 | 0 | 0.0005 | 0.0005 | 0.00025 | 0.0005 | 0 | 0.0005 | 0.0005 | 0.0005 | 0.00025 |
| Bismuth, dissolved | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00025 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.00025 |
| Boron, dissolved | 0.010 | mg/L | 3.81 | 0.04 | 3.78 | 3.83 | 3.73 | 0.03 | 3.71 | 3.75 | 3.77 | 3.78 | 0.01 | 3.77 | 3.79 | 3.87 | 3.64 |
| Cadmium, dissolved | 0.0000050 | mg/L | 0.000125 | 0 | 0.000125 | 0.000125 | 0.000125 | 0 | 0.000125 | 0.000125 | 0.0000489 | 0.000125 | 0 | 0.000125 | 0.000125 | 0.000125 | 0.000034 |
| Calcium, dissolved | 0.050 | mg/L | 324.0 | 4.2 | 321.0 | 327.0 | 317.0 | 5.7 | 313.0 | 321.0 | 330 | 320.0 | 1.4 | 319.0 | 321.0 | 328.0 | 314 |
| Cesium, dissolved | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| Chromium, dissolved | 0.00050 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00025 |
| Cobalt, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0000276 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.0000304 |
| Copper, dissolved | 0.00020 | mg/L | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0 | 0.005 | 0.005 | 0.000394 | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0.00025 |
| Iron, dissolved | 0.010 | mg/L | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0 | 0.250 | 0.250 | 0.005 | 0.250 | 0 | 0.250 | 0.250 | 0.250 | 0.005 |
| Lead, dissolved | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00015 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.00015 |
| Lithium, dissolved | 0.0010 | mg/L | 0.147 | 0.001 | 0.146 | 0.147 | 0.144 | 0.003 | 0.142 | 0.146 | 0.165 | 0.145 | 0 | 0.145 | 0.145 | 0.149 | 0.166 |
| Magnesium, dissolved | 0.0050 | mg/L | 995 | 3 | 992 | 998 | 988 | 1 | 987 | 989 | 945 | 983 | 8 | 977 | 989 | 976 | 928 |
| Manganese, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00163 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00140 |
| Mercury, dissolved | 0.0000050 | mg/L | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.00025 | 0.0000025 | 0 | 0.0000025 | 0.0000025 | 0.0000025 | 0.00025 |
| Molybdenum, dissolved | 0.000050 | mg/L | 0.00843 | 0.00036 | 0.00820 | 0.00885 | 0.00835 | 0.00016 | 0.00823 | 0.00846 | 0.0094 | 0.00877 | 0.00009 | 0.00870 | 0.00883 | 0.00795 | 0.0089 |
| Nickel, dissolved | 0.00050 | mg/L | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.00063 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0.00042 |

Table 4 Water Quality Summary

| Parameters | Lowest Detection Limit | Units | MLA (BRP-51-WQ, BRP-48S-WQ, BRP-46S-WQ) | | | | MLA (BRP-48D-WQ, BRP-46D-WQ) | | | | 2018 Mean MLA Concentrations | Reference (REF04S-WQ, REF05-WQ) | | | | Reference (REF04D-WQ) | 2018 Mean Reference Concentrations |
|------------------------------|------------------------------|-------|-----------------------------------------|---------|---------|---------|------------------------------|---------|---------|---------|------------------------------------|---------------------------------|-----------|-----------|-----------|--------------------------|------------------------------------------|
| | | | MLA | MLA | MLA | MLA | MLA | MLA | MLA | MLA | | Reference | Reference | Reference | Reference | Reference | |
| | | | Shallow | Shallow | Shallow | Shallow | Deep | Deep | Deep | Deep | | Shallow | Shallow | Shallow | Shallow | REF04D-WQ | |
| | | | Mean | Std Dev | Min | Max | Mean | Std Dev | Min | Max | | Mean | Std Dev | Min | Max | Sample value | |
| Phosphorous, dissolved | 0.050 | mg/L | 1.25 | 0 | 1.25 | 1.25 | 1.25 | 0 | 1.25 | 1.25 | 0.025 | 1.25 | 0 | 1.25 | 1.25 | 1.25 | 0.025 |
| Potassium, dissolved | 0.050 | mg/L | 317.3 | 4.0 | 313.0 | 321.0 | 309.5 | 0.7 | 309.0 | 310.0 | 292 | 317.5 | 2.1 | 316.0 | 319.0 | 319.0 | 294 |
| Rubidium, dissolved | 0.00020 | mg/L | 0.0820 | 0.0034 | 0.0784 | 0.0851 | 0.0819 | 0.0065 | 0.0773 | 0.0865 | 0.1014 | 0.0815 | 0.0007 | 0.0810 | 0.0820 | 0.0845 | 0.0941 |
| Selenium, dissolved | 0.000050 | mg/L | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.001 | 0.00125 | 0 | 0.00125 | 0.00125 | 0.00125 | 0.001 |
| Silicon, dissolved | 0.050 | mg/L | 1.25 | 0 | 1.25 | 1.25 | 1.25 | 0 | 1.25 | 1.25 | 0.5 | 1.25 | 0 | 1.25 | 1.25 | 1.25 | 0.5 |
| Silver, dissolved | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00005 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.00005 |
| Sodium, dissolved | 0.050 | mg/L | 8160 | 60 | 8100 | 8220 | 8070 | 57 | 8030 | 8110 | 7682 | 8105 | 78 | 8050 | 8160 | 8130 | 7718 |
| Strontium, dissolved | 0.00020 | mg/L | 5.797 | 0.091 | 5.730 | 5.900 | 5.670 | 0.042 | 5.640 | 5.700 | 5.68 | 5.850 | 0.071 | 5.800 | 5.900 | 5.800 | 5.89 |
| Sulfur, dissolved | 0.50 | mg/L | 735.7 | 5.5 | 732.0 | 742.0 | 716.0 | 1.4 | 715.0 | 717.0 | 757 | 737.5 | 20.5 | 723.0 | 752.0 | 741.0 | 751 |
| Tellurium, dissolved | 0.00020 | mg/L | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0 | 0.005 | 0.005 | 0.00025 | 0.005 | 0 | 0.005 | 0.005 | 0.005 | 0.00025 |
| Thallium, dissolved | 0.000010 | mg/L | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.000025 | 0.00025 | 0 | 0.00025 | 0.00025 | 0.00025 | 0.000025 |
| Thorium, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.00025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.00025 |
| Tin, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0005 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.0005 |
| Titanium, dissolved | 0.00030 | mg/L | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0025 | 0.0075 | 0 | 0.0075 | 0.0075 | 0.0075 | 0.0025 |
| Tungsten, dissolved | 0.00010 | mg/L | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0005 | 0.0025 | 0 | 0.0025 | 0.0025 | 0.0025 | 0.0005 |
| Uranium, dissolved | 0.000010 | mg/L | 0.00227 | 0.00012 | 0.00219 | 0.00241 | 0.00228 | 0.00004 | 0.00225 | 0.00231 | 0.00260 | 0.00230 | 0.00006 | 0.00226 | 0.00234 | 0.00236 | 0.00249 |
| Vanadium, dissolved | 0.00050 | mg/L | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.00067 | 0.0125 | 0 | 0.0125 | 0.0125 | 0.0125 | 0.00064 |
| Zinc, dissolved | 0.0010 | mg/L | 0.025 | 0 | 0.025 | 0.025 | 0.025 | 0 | 0.025 | 0.025 | 0.0015 | 0.025 | 0 | 0.025 | 0.025 | 0.025 | 0.0015 |
| Zirconium, dissolved | 0.00020 | mg/L | 0.0050 | 0 | 0.0050 | 0.0050 | 0.0050 | 0 | 0.0050 | 0.0050 | 0.00046 | 0.0050 | 0 | 0.0050 | 0.0050 | 0.0050 | 0.00070 |
| | | | | | | | | | | | | | | | | | |
| Hydrocarbons (Matrix: Water) | | | | | | | | | | | | | | | | | |
| EPH (C10-C19) | 250 | µg/L | 125 | 0 | 125 | 0 | 125 | 0 | 125 | 125 | - | 125 | 0 | 125 | 125 | 0 | - |
| EPH (C19-C32) | 250 | µg/L | 125 | 0 | 125 | 0 | 125 | 0 | 125 | 125 | - | 125 | 0 | 125 | 125 | 0 | - |
| F1 (C6-C10) | 100 | µg/L | 50 | 0 | 50 | 50 | 50 | 0 | 50 | 50 | 0.05 | 50 | 0 | 50 | 50 | 50 | 0.05 |
| F2 (C10-C16) | 100 | µg/L | 50 | 0 | 50 | 50 | 50 | 0 | 50 | 50 | 0.05 | 50 | 0 | 50 | 50 | 50 | 0.05 |
| F3 (C16-C34) | 250 | µg/L | 125 | 0 | 125 | 125 | 125 | 0 | 125 | 125 | 0.125 | 125 | 0 | 125 | 125 | 125 | 0.125 |
| F4 (C34-C50) | 250 | µg/L | 125 | 0 | 125 | 125 | 125 | 0 | 125 | 125 | 0.125 | 125 | 0 | 125 | 125 | 125 | 0.125 |
| TEH (C10-C30), BC | 250 | µg/L | 125 | 0 | 125 | 125 | 125 | 0 | 125 | 125 | - | 125 | 0 | 125 | 125 | 125 | - |
| VHw (C6-C10) | 100 | µg/L | 50 | 0 | 50 | 50 | 50 | 0 | 50 | 50 | - | 50 | 0 | 50 | 50 | 50 | - |
| F1-BTEX | 100 | µg/L | 50 | 0 | 50 | 50 | 50 | 0 | 50 | 50 | - | 50 | 0 | 50 | 50 | 50 | - |
| LEPHw | 250 | µg/L | 125 | 0 | 125 | 125 | 125 | 0 | 125 | 125 | - | 125 | 0 | 125 | 125 | 125 | - |
| VPHw | 100 | µg/L | 50 | 0 | 50 | 50 | 50 | 0 | 50 | 50 | - | 50 | 0 | 50 | 50 | 50 | - |
| HEPHw | 250 | µg/L | 125 | 0 | 125 | 125 | 125 | 0 | 125 | 125 | - | 125 | 0 | 125 | 125 | 125 | - |
| | | | | | | | | | | | | | | | | | |

"-" Parameters were not sampled in 2018

4.2.1 Desalination effluent

Influent and effluent samples for the desalination plant were collected by B2Gold Nunavut on six occasions during desalination of seawater at the MLA in 2023. Influent samples were collected from the uptake line, which draws water from Bathurst Inlet at a location approximately 50 m offshore of the MLA desalination plant/barge loading area, and represent raw water from Bathurst Inlet. The desalination effluent is discharged approximately 5 m offshore in the same area of shoreline and approximately 45 m from the intake. The desalination plant is operated in a manner to avoid discharging effluent at a salt content greater than 10% higher than the influent salt concentration (Sabina 2018). The results and calculated RPD between the influent and effluent samples are presented in Table 5. The percent difference between salinity concentration in the influent and effluent samples during any of the sampling events were all $\leq 10\%$ (Table 5).

Table 5 Salinity Concentrations of Desalination Influent and Effluent

| Sampling Dates | Salinity psu* | | Relative percent difference |
|----------------|-------------------------------------|----------------------------------------|-----------------------------|
| | Desalination Intake/Influent Sample | Desalination Discharge/Effluent Sample | |
| 06-01-2023 | 24.6 | 24.5 | 0% |
| 31-03-2023 | 26.1 | 26.5 | 2% |
| 08-08-2023 | 18.1 | 18.8 | 4% |
| 12-09-2023 | 21.8 | 22.6 | 4% |
| 07-11-2023 | 24.3 | 25.6 | 5% |
| 19-12-2023 | 24.6 | 25.1 | 2% |

*practical salinity unit

4.3 Phytoplankton Biomass

Phytoplankton biomass (as Chlorophyll *a*) was collected in triplicate at the MLA and reference stations during the April 2023 sampling program. Results with standard error bars are presented in Figure 5. Supporting data summarized in Appendix E. Laboratory COAs are provided in Appendix D.

Chlorophyll *a* concentrations were higher at the reference stations than the MLA stations and may reflect natural variability across sites. It is not clear what factors contributed to the observed difference. The mean Chlorophyll *a* concentration ranged between 0.222 to 0.312 $\mu\text{g/L}$ at the reference stations and 0.104 to 0.178 $\mu\text{g/L}$ at the MLA stations. This is the first time that these reference stations have been sampled and for the April sampling program. The MLA station Chlorophyll *a* concentrations are similar to those observed during the 2018 winter sampling event (Sabina, 2019) and baseline sampling throughout Bathurst inlet (Sabina, 2015).

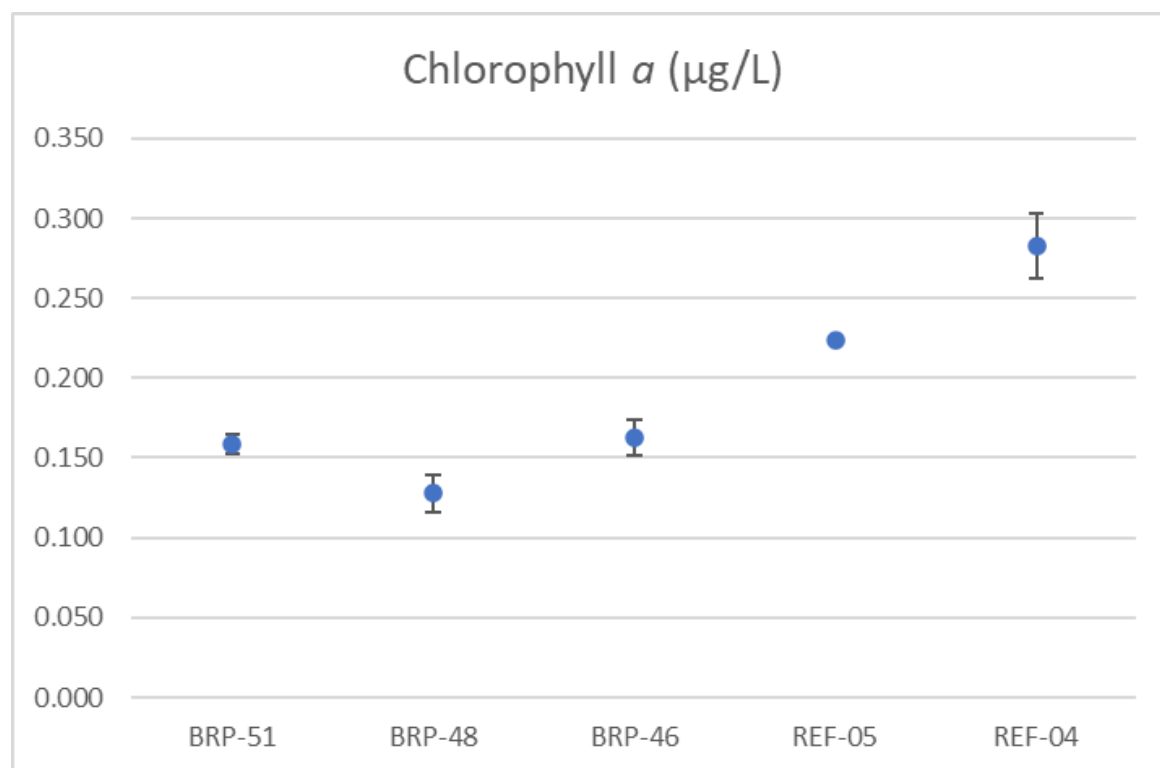


Figure 5 2023 April Chlorophyll *a* Concentrations at the MLA and Reference Stations

4.4 Quality Assurance and Quality Control

QA/QC samples constituted approximately 20% of all water quality samples collected during the 2023 sampling program. A summary of QA/QC results and evaluation can be found in Appendix F and analytical laboratory reports are provided in Appendix D. The field replicate sample, field blank sample and trip blank sample were assessed as described in Section 3.5. Concentrations of all parameters analyzed in the field blank and trip blank samples were below the laboratory RDLs. The exception is pH, which was reported at a level (field blank 5.54, Trip blank 5.51) that is expected for deionized water.

Calculated RPDs between the parent sample (BRP-48S-WQ) and its corresponding field replicate sample (Field DUP) were below 20% for all parameters analyzed, indicating acceptable analytical precision and field sampling technique.

Based on these results the water quality data collected are considered representative of good marine water quality for the protection of marine aquatic life. QA/QC results indicate that the MLA and Reference Area samples are representative of the water being sampled and were not significantly influenced by field or laboratory methodologies.

5.0 References

CCME (Canadian Council of Ministers of the Environment). 1999 (with updates to 2022). Canadian Environmental Quality Guidelines for the Protection of Aquatic Life – Summary Table. Available at: <http://st-ts.ccme.ca/>. Accessed: May 2022.

RainCoast Environmental Services Ltd., 2022. Back River Project 2021 Marine Sampling Report.

Sabina Gold & Silver Corp., 2015. Back River Project Final Environmental Impact Statement Volume 7. Marine Environment

Sabina Gold & Silver Corp., 2018. Back River Project Marine Monitoring Plan.

Sabina Gold & Silver Corp., 2019. Back River Project 2018 Marine Monitoring Report.

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Appendix A Sampling Details of the April 2023 BRP Marine Monitoring Program

Table A1 Sampling Details of the 2023 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) | Ice Depth (m) | Number of Phytoplankton Biomass Samples Taken | Water Profile Taken (Y/N) |
|-----------|---------|--------------|---------------|----------------|-----------------|------------|---------------------------------------|--------------------------------|---------------|-----------------------------------------------|---------------------------|
| MLA | BRP-46 | 15-Apr-23 | 66°38'58.46"N | 107°40'47.13"W | 14.4 | deep | 2 | 1, 13.4 | 1.8 | 3 | Y |
| MLA | BRP-48 | 15-Apr-23 | 66°39'0.06"N | 107°40'49.99"W | 13 | deep | 2 | 1, 12 | 2 | 3 | Y |
| MLA | BRP-51 | 16-Apr-23 | 66°39'4.08"N | 107°40'58.49"W | 5.2 | shallow | 1 | 1 | 1.8 | 3 | Y |
| Reference | REF-04 | 16-Apr-23 | 66°41'29.80"N | 107°44'45.15"W | 15.3 | deep | 2 | 1, 14.3 | 1.8 | 3 | Y |
| Reference | REF-05 | 16-Apr-23 | 66°41'29.41"N | 107°44'48.83"W | 4.7 | shallow | 1 | 1 | 2.3 | 3 | Y |

Appendix B Physical Oceanographic Profile Data

Table B1Physical Oceanographic Profile Data

| Area | Station | Depth (m) | Temp (°C) | Salinity (PSU) | DO (%) | DO (mg/L) | Turbidity (NTU) | pH |
|------|---------|-----------|-----------|----------------|--------|-----------|-----------------|------|
| MLA | BRP-46 | 15.59 | 0.44 | 26.58 | 85.89 | 10.92 | 0.94 | 7.89 |
| | | 13.74 | 0.41 | 26.54 | 86.67 | 11.06 | 1.15 | 7.94 |
| | | 13.66 | 0.40 | 26.53 | 86.63 | 11.06 | 1.12 | 7.94 |
| | | 13.57 | 0.40 | 26.51 | 86.60 | 11.06 | 1.10 | 7.95 |
| | | 10.93 | 0.39 | 26.58 | 88.45 | 11.31 | 1.11 | 7.96 |
| | | 10.77 | 0.39 | 26.59 | 88.54 | 11.33 | 1.11 | 7.97 |
| | | 10.62 | 0.39 | 26.59 | 88.64 | 11.34 | 1.11 | 7.97 |
| | | 10.47 | 0.39 | 26.59 | 88.73 | 11.35 | 1.11 | 7.97 |
| | | 7.50 | 0.39 | 26.62 | 90.73 | 11.61 | 1.11 | 7.97 |
| | | 7.31 | 0.39 | 26.62 | 90.85 | 11.63 | 1.11 | 7.97 |
| | | 7.13 | 0.39 | 26.62 | 90.98 | 11.64 | 1.11 | 7.98 |
| | | 4.44 | 0.38 | 26.63 | 92.44 | 11.83 | 1.12 | 7.97 |
| | | 4.26 | 0.38 | 26.63 | 92.54 | 11.85 | 1.12 | 7.97 |
| | | 4.08 | 0.38 | 26.63 | 92.65 | 11.86 | 1.12 | 7.97 |
| | | 3.90 | 0.38 | 26.63 | 92.75 | 11.87 | 1.12 | 7.97 |
| | BRP-48 | 13.51 | -1.41 | 26.85 | 98.55 | 12.65 | 1.06 | 7.94 |
| | | 13.51 | -1.41 | 26.85 | 98.55 | 12.65 | 1.06 | 7.94 |
| | | 13.51 | -1.41 | 26.85 | 98.55 | 12.65 | 1.06 | 7.94 |
| | | 13.46 | -1.40 | 26.85 | 98.59 | 12.65 | 1.06 | 7.94 |
| | | 13.46 | -1.40 | 26.85 | 98.59 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.40 | 26.85 | 98.59 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.40 | 26.85 | 98.59 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.41 | 26.85 | 98.62 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.41 | 26.85 | 98.62 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.41 | 26.85 | 98.62 | 12.65 | 1.06 | 7.94 |
| | | 13.45 | -1.41 | 26.85 | 98.62 | 12.65 | 1.06 | 7.94 |
| | | 11.48 | -1.41 | 26.85 | 98.67 | 12.66 | 1.06 | 7.94 |
| | | 11.39 | -1.41 | 26.85 | 98.68 | 12.66 | 1.06 | 7.94 |
| | | 11.31 | -1.41 | 26.85 | 98.68 | 12.66 | 1.06 | 7.94 |
| | | 8.52 | -1.41 | 26.86 | 98.75 | 12.66 | 1.06 | 7.94 |
| | | 8.36 | -1.41 | 26.86 | 98.75 | 12.66 | 1.06 | 7.94 |
| | | 8.19 | -1.41 | 26.86 | 98.76 | 12.66 | 1.07 | 7.94 |
| | | 8.03 | -1.41 | 26.86 | 98.76 | 12.66 | 1.07 | 7.94 |
| | | 5.81 | -1.42 | 26.85 | 98.80 | 12.66 | 1.06 | 7.93 |
| | | 5.66 | -1.42 | 26.85 | 98.81 | 12.66 | 1.06 | 7.93 |
| | | 5.50 | -1.42 | 26.85 | 98.81 | 12.66 | 1.06 | 7.93 |
| | | 5.35 | -1.42 | 26.85 | 98.81 | 12.66 | 1.06 | 7.93 |
| | | 3.22 | -1.43 | 26.86 | 98.93 | 12.67 | 1.06 | 7.93 |
| | | 3.08 | -1.43 | 26.86 | 98.94 | 12.67 | 1.06 | 7.93 |
| | | 2.94 | -1.43 | 26.86 | 98.94 | 12.67 | 1.06 | 7.93 |
| | | 0.77 | -1.43 | 26.87 | 98.96 | 12.66 | 1.09 | 7.92 |
| MLA | BRP-51 | 6.48 | -1.27 | 26.29 | 98.03 | 12.50 | 0.94 | 7.88 |
| | | 5.30 | -1.27 | 26.30 | 98.02 | 12.49 | 1.05 | 7.88 |
| | | 5.25 | -1.27 | 26.30 | 98.02 | 12.49 | 1.05 | 7.88 |
| | | 5.20 | -1.27 | 26.30 | 98.02 | 12.49 | 1.05 | 7.89 |
| | | 5.15 | -1.27 | 26.30 | 98.02 | 12.49 | 1.05 | 7.89 |
| | | 1.94 | -1.29 | 26.29 | 98.13 | 12.50 | 1.09 | 7.88 |
| | | 1.78 | -1.29 | 26.29 | 98.13 | 12.51 | 1.09 | 7.88 |
| | | 1.62 | -1.29 | 26.29 | 98.14 | 12.51 | 1.09 | 7.88 |
| REF | REF-04 | 15.97 | 0.23 | 26.38 | 91.05 | 11.63 | 1.09 | 7.99 |
| | | 15.97 | 0.23 | 26.38 | 91.12 | 11.64 | 1.09 | 8.00 |
| | | 15.98 | 0.23 | 26.38 | 91.20 | 11.65 | 1.09 | 8.00 |
| | | 14.39 | 0.21 | 26.39 | 92.19 | 11.78 | 1.13 | 8.00 |
| | | 14.32 | 0.21 | 26.39 | 92.26 | 11.79 | 1.13 | 8.00 |
| | | 14.25 | 0.21 | 26.39 | 92.32 | 11.80 | 1.13 | 8.00 |
| | | 14.18 | 0.21 | 26.39 | 92.39 | 11.81 | 1.13 | 8.00 |
| | | 11.59 | 0.18 | 26.40 | 93.41 | 11.94 | 1.12 | 8.00 |
| | | 11.45 | 0.18 | 26.40 | 93.47 | 11.95 | 1.12 | 8.00 |
| | | 11.30 | 0.18 | 26.40 | 93.54 | 11.96 | 1.12 | 8.00 |
| | | 11.15 | 0.18 | 26.40 | 93.60 | 11.97 | 1.12 | 8.00 |
| | | 9.04 | 0.15 | 26.41 | 94.72 | 12.12 | 1.07 | 8.00 |
| | | 8.90 | 0.15 | 26.41 | 94.79 | 12.12 | 1.07 | 8.01 |
| | | 8.75 | 0.15 | 26.41 | 94.86 | 12.13 | 1.07 | 8.01 |
| | | 6.18 | 0.13 | 26.41 | 95.89 | 12.26 | 1.10 | 8.01 |
| | | 6.03 | 0.13 | 26.41 | 95.96 | 12.27 | 1.10 | 8.01 |
| | | 5.87 | 0.13 | 26.41 | 96.02 | 12.28 | 1.10 | 8.01 |
| | | 5.71 | 0.13 | 26.41 | 96.09 | 12.29 | 1.10 | 8.01 |
| | | 3.22 | 0.10 | 26.40 | 96.93 | 12.40 | 1.11 | 8.02 |
| | | 3.06 | 0.09 | 26.40 | 96.99 | 12.40 | 1.11 | 8.02 |
| | | 2.90 | 0.09 | 26.40 | 97.05 | 12.41 | 1.11 | 8.02 |
| | | 1.13 | 0.09 | 26.40 | 98.03 | 12.53 | 1.18 | 8.02 |
| | | 1.00 | 0.09 | 26.40 | 98.09 | 12.54 | 1.19 | 8.02 |

Table B1Physical Oceanographic Profile Data

| Area | Station | Depth (m) | Temp (°C) | Salinity (PSU) | DO (%) | DO (mg/L) | Turbidity (NTU) | pH |
|------|---------|-----------|-----------|----------------|--------|-----------|-----------------|------|
| REF | REF-05 | 5.60 | -1.45 | 26.23 | 101.43 | 12.97 | 1.08 | 8.02 |
| | | 5.60 | -1.45 | 26.23 | 101.38 | 12.97 | 1.09 | 8.02 |
| | | 5.60 | -1.45 | 26.23 | 101.38 | 12.97 | 1.09 | 8.02 |
| | | 5.60 | -1.45 | 26.23 | 101.38 | 12.97 | 1.10 | 8.02 |
| | | 5.60 | -1.45 | 26.23 | 101.38 | 12.97 | 1.10 | 8.02 |
| | | 4.48 | -1.45 | 26.24 | 101.37 | 12.97 | 1.08 | 8.02 |
| | | 4.43 | -1.45 | 26.24 | 101.37 | 12.97 | 1.08 | 8.02 |
| | | 4.38 | -1.45 | 26.24 | 101.37 | 12.97 | 1.08 | 8.02 |
| | | 4.33 | -1.45 | 26.24 | 101.36 | 12.97 | 1.08 | 8.02 |
| | | 2.30 | -1.46 | 26.23 | 101.42 | 12.97 | 1.07 | 8.02 |
| | | 2.19 | -1.46 | 26.23 | 101.42 | 12.97 | 1.07 | 8.02 |
| | | 2.09 | -1.46 | 26.23 | 101.42 | 12.98 | 1.07 | 8.02 |
| | | 1.98 | -1.46 | 26.23 | 101.42 | 12.98 | 1.07 | 8.02 |
| | | 0.80 | -1.46 | 26.23 | 101.57 | 13.00 | 1.05 | 8.02 |

Appendix C Water Quality Analytical Results Summary

Table C1 - Water Quality Analytical Results and Relevant CCME Guidelines

| Location | | | | MLA | MLA | MLA | MLA | MLA | QAQC | QAQC | Reference | Reference | Reference | |
|----------------------------------------------------|------------------------|----------|-------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Station | | | | BRP-51 | BRP-48 | BRP-48 | BRP-46 | BRP-46 | Field Replicate | Field Blank | REF04 | REF04 | REF05 | Trip Blank |
| Depth | | | | Shallow | Shallow | Deep | Shallow | Deep | QAQC | QAQC | Shallow | Deep | Shallow | |
| 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 | | | | 4/16/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/16/2023 | 4/16/2023 | 4/16/2023 | |
| Time Sampled | | | | 8:00 | 12:20 | 12:45 | 15:15 | 15:45 | 12:25 | 12:18 | 10:30 | 11:00 | 12:50 | |
| ALS Sample ID | | | | YL2300303-005 | YL2300303-003 | YL2300303-004 | YL2300303-001 | YL2300303-002 | YL2300303-009 | YL2300303-010 | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-011 |
| Analyte | Lowest Detection Limit | 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 | NA |
| Conductivity | 2.0 | µS/cm | | 41800.00 | 41700.00 | 41700.00 | 41300.00 | 41700.00 | 41400.00 | 1.00 | 41600.00 | 41600.00 | 41400.00 | 1.00 |
| Hardness (as CaCO ₃), dissolved | 0.60 | mg/L | | 4910.00 | 4890.00 | 4870.00 | 4930.00 | 4850.00 | 4870.00 | 0.30 | 4820.00 | 4840.00 | 4870.00 | 0.30 |
| Hardness (as CaCO ₃), from total Ca/Mg | 0.60 | mg/L | | 5220.00 | 5000.00 | 5080.00 | 4900.00 | 4940.00 | 4810.00 | 0.30 | 4910.00 | 4880.00 | 5030.00 | 0.30 |
| pH | 0.10 | pH units | Long-term: 7.0-8.7 and <0.2 anthropogenic change | 7.78 | 7.77 | 7.78 | 7.77 | 7.78 | 7.79 | 5.54 | 7.79 | 7.79 | 7.80 | 5.51 |
| Solids, total dissolved (TDS) | 10 | mg/L | | 28300.00 | 29300.00 | 28400.00 | 27400.00 | 27500.00 | 27900.00 | 5.00 | 27800.00 | 27900.00 | 28800.00 | 5.00 |
| Solids, total suspended (TSS) | 3.0 | mg/L | Dependent on background levels, flow and length of exposure | 3.60 | 3.80 | 1.50 | 6.00 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 3.20 | 1.50 |
| Turbidity | 0.10 | NTU | Dependent on background levels, flow and length of exposure | 0.05 | 0.19 | 0.05 | 0.13 | 0.14 | 0.24 | 0.05 | 0.22 | 0.18 | 0.05 | 0.05 |
| Salinity | 1.0 | psu | | 26.20 | 25.80 | 26.20 | 27.80 | 26.40 | 27.00 | 0.50 | 26.70 | 26.80 | 26.50 | 0.50 |
| Anions and Nutrients (Matrix: Water) | | | | | | | | | | | | | | |
| Ammonia, total (as N) | 0.0050 | mg/L | | 0.0056 | 0.0079 | 0.0071 | 0.0068 | 0.0054 | 0.0062 | 0.0025 | 0.0025 | 0.0025 | 0.0065 | 0.0025 |
| Bromide | 0.050 | mg/L | | 48.500 | 47.100 | 47.200 | 49.900 | 48.600 | 48.300 | 0.025 | 47.300 | 48.000 | 47.100 | 0.025 |
| Chloride | 0.50 | mg/L | | 14300.00 | 13900.00 | 14100.00 | 14600.00 | 14100.00 | 14300.00 | 0.25 | 14000.00 | 14100.00 | 13900.00 | 0.25 |
| Fluoride | 0.020 | mg/L | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.010 | 1.000 | 1.000 | 1.000 | 0.010 |
| Nitrate (as N) | 0.0050 | mg/L | Short-term: 1500, Long-term: 200 | 0.2500 | 0.2500 | 0.2500 | 0.2500 | 0.2500 | 0.2500 | 0.0025 | 0.2500 | 0.2500 | 0.2500 | 0.0025 |
| Nitrite (as N) | 0.0010 | mg/L | | 0.0500 | 0.0500 | 0.0500 | 0.0500 | 0.0500 | 0.0500 | 0.0005 | 0.0500 | 0.0500 | 0.0500 | 0.0005 |
| Nitrogen, total | 0.030 | mg/L | | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.015 | 0.075 | 0.075 | 0.075 | 0.015 |
| Phosphate, ortho-, dissolved (as P) | 0.0010 | mg/L | | 0.0293 | 0.0322 | 0.0335 | 0.0273 | 0.0312 | 0.0306 | 0.0005 | 0.0328 | 0.0324 | 0.0315 | 0.0005 |
| Phosphorous, total | 0.0020 | mg/L | | 0.0393 | 0.0401 | 0.0396 | 0.0390 | 0.0394 | 0.0389 | 0.0010 | 0.0384 | 0.0391 | 0.0378 | 0.0010 |
| Silicate (as SiO ₂) | 0.50 | mg/L | | 1.14 | 1.16 | 1.15 | 1.17 | 1.15 | 1.17 | 0.25 | 1.12 | 1.16 | 1.12 | 0.25 |
| Sulfate (as SO ₄) | 0.30 | mg/L | | 1970.00 | 1900.00 | 1940.00 | 2030.00 | 1950.00 | 1990.00 | 0.15 | 1930.00 | 1970.00 | 1920.00 | 0.15 |
| Organic / Inorganic Carbon (Matrix: Water) | | | | | | | | | | | | | | |
| Carbon, dissolved organic (DOC) | 0.50 | mg/L | | 1.74 | 2.04 | 2.23 | 1.64 | 2.38 | 1.82 | 0.25 | 1.67 | 1.83 | 1.67 | 0.25 |
| Carbon, total organic (TOC) | 0.50 | mg/L | | 1.51 | 2.10 | 1.74 | 1.66 | 1.64 | 1.58 | 0.25 | 2.03 | 1.67 | 1.55 | 0.25 |
| Total Sulfides (Matrix: Water) | | | | | | | | | | | | | | |
| Sulfide, total (as S) | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Sulfide, total (as H ₂ S) | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Metals (Matrix: Water) | | | | | | | | | | | | | | |
| Aluminum, total | 0.0030 | mg/L | | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0015 | 0.0750 | 0.0750 | 0.0750 | 0.0015 |
| Antimony, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Arsenic, total | 0.00010 | mg/L | Long-term: 0.0125 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Barium, total | 0.00010 | mg/L | | 0.01220 | 0.01160 | 0.01120 | 0.01110 | 0.01130 | 0.01150 | 0.00005 | 0.01120 | 0.01110 | 0.01160 | 0.00005 |
| Beryllium, total | 0.000100 | mg/L | | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000050 | 0.000500 | 0.000500 | 0.000500 | 0.000050 |
| Bismuth, total | 0.000050 | mg/L | | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.000025 | 0.001250 | 0.001250 | 0.001250 | 0.000025 |
| Boron, total | 0.010 | mg/L | | 3.630 | 3.440 | 3.470 | 3.270 | 3.340 | 3.210 | 0.005 | 3.480 | 3.340 | 3.400 | 0.005 |
| Cadmium, total | 0.0000050 | mg/L | Long-term: 0.00012 | 0.000125 | 0.000125 | 0.000125 | 0.000125 | 0.000125 | 0.000125 | 0.000003 | 0.000125 | 0.000125 | 0.000125 | 0.000003 |
| Calcium, total | 0.050 | mg/L | | 342.000 | 321.000 | 320.000 | 312.000 | 315.000 | 312.000 | 0.025 | 319.000 | 310.000 | 315.000 | 0.025 |

Table C1 - Water Quality Analytical Results and Relevant CCME Guidelines

| Location | | | | MLA | MLA | MLA | MLA | MLA | QAQC | QAQC | Reference | Reference | Reference | |
|--------------------|------------------------|-------|------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Station | | | | BRP-51 | BRP-48 | BRP-48 | BRP-46 | BRP-46 | Field Replicate | Field Blank | REF04 | REF04 | REF05 | Trip Blank |
| Depth | | | | Shallow | Shallow | Deep | Shallow | Deep | QAQC | QAQC | Shallow | Deep | Shallow | |
| 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 | | | | 4/16/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/16/2023 | 4/16/2023 | 4/16/2023 | |
| Time Sampled | | | | 8:00 | 12:20 | 12:45 | 15:15 | 15:45 | 12:25 | 12:18 | 10:30 | 11:00 | 12:50 | |
| ALS Sample ID | | | | YL2300303-005 | YL2300303-003 | YL2300303-004 | YL2300303-001 | YL2300303-002 | YL2300303-009 | YL2300303-010 | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-011 |
| Analyte | Lowest Detection Limit | 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 |
| Cesium, total | 0.000010 | mg/L | | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Chromium, total | 0.00050 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00025 | 0.00250 | 0.00250 | 0.00250 | 0.00025 |
| Cobalt, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Copper, total | 0.00050 | mg/L | | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.00025 | 0.01250 | 0.01250 | 0.01250 | 0.00025 |
| Gallium, total | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iron, total | 0.010 | mg/L | | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.005 | 0.250 | 0.250 | 0.250 | 0.005 |
| Lead, total | 0.000050 | mg/L | | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.000025 | 0.001250 | 0.001250 | 0.001250 | 0.000025 |
| Lithium, total | 0.0010 | mg/L | | 0.1460 | 0.1380 | 0.1400 | 0.1320 | 0.1350 | 0.1320 | 0.0005 | 0.1370 | 0.1330 | 0.1360 | 0.0005 |
| Magnesium, total | 0.0050 | mg/L | | 1060.0000 | 1020.0000 | 1040 | 1000.0000 | 1010.0000 | 979.0000 | 0.0025 | 998.0000 | 996.0000 | 1030.0000 | 0.0025 |
| Manganese, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Mercury, total | 0.0000050 | mg/L | Long-term Inorganic Hg: 0.016 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 |
| Molybdenum, total | 0.000050 | mg/L | | 0.00893 | 0.00934 | 0.00824 | 0.00850 | 0.00830 | 0.00822 | 0.00003 | 0.00903 | 0.00840 | 0.00838 | 0.00003 |
| Nickel, total | 0.00050 | mg/L | | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.00025 | 0.01250 | 0.01250 | 0.01250 | 0.00025 |
| Phosphorous, total | 0.050 | mg/L | | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 0.025 | 1.250 | 1.250 | 1.250 | 0.025 |
| Potassium, total | 0.050 | mg/L | | 325.000 | 315.000 | 316 | 311.000 | 317.000 | 314.000 | 0.025 | 314.000 | 311.000 | 317.000 | 0.025 |
| Rhenium, total | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Rubidium, total | 0.00020 | mg/L | | 0.08790 | 0.08370 | 0.08650 | 0.08410 | 0.08840 | 0.08950 | 0.00010 | 0.08500 | 0.08200 | 0.08950 | 0.00010 |
| Selenium, total | 0.000050 | mg/L | | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.000025 | 0.001250 | 0.001250 | 0.001250 | 0.000025 |
| Silicon, total | 0.10 | mg/L | | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 0.05 | 2.50 | 2.50 | 2.50 | 0.05 |
| Silver, total | 0.000010 | mg/L | Short-term: 0.0075 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Sodium, total | 0.050 | mg/L | | 8460.000 | 8120.000 | 8140.000 | 8040.000 | 8070.000 | 7800.000 | 0.025 | 7910.000 | 7910.000 | 8100.000 | 0.025 |
| Strontium, total | 0.00020 | mg/L | | 6.2800 | 5.8800 | 5.9400 | 6.0200 | 5.9200 | 5.6900 | 0.0001 | 5.8200 | 5.8100 | 5.9400 | 0.0001 |
| Sulfur, total | 0.50 | mg/L | | 798.00 | 764.00 | 785.00 | 732.00 | 744.00 | 718.00 | 0.25 | 752.00 | 731.00 | 741.00 | 0.25 |
| Tellurium, total | 0.00020 | mg/L | | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00010 | 0.00500 | 0.00500 | 0.00500 | 0.00010 |
| Thallium, total | 0.000010 | mg/L | | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Thorium, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Tin, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Titanium, total | 0.00030 | mg/L | | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00015 | 0.00750 | 0.00750 | 0.00750 | 0.00015 |
| Tungsten, total | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Uranium, total | 0.000010 | mg/L | | 0.002720 | 0.002540 | 0.002500 | 0.002510 | 0.002460 | 0.002600 | 0.000005 | 0.002510 | 0.002440 | 0.002250 | 0.000005 |
| Vanadium, total | 0.00050 | mg/L | | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.00025 | 0.01250 | 0.01250 | 0.01250 | 0.00025 |
| Yttrium, total | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc, total | 0.0030 | mg/L | | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0750 | 0.0015 | 0.0750 | 0.0750 | 0.0750 | 0.0015 |
| Zirconium, total | 0.00020 | mg/L | | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00010 | 0.00500 | 0.00500 | 0.00500 | 0.00010 |

Table C1 - Water Quality Analytical Results and Relevant CCME Guidelines

| Location | | | | MLA | MLA | MLA | MLA | MLA | QAQC | QAQC | Reference | Reference | Reference | |
|----------------------------------|------------------------|-------|------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Station | | | | BRP-51 | BRP-48 | BRP-48 | BRP-46 | BRP-46 | Field Replicate | Field Blank | REF04 | REF04 | REF05 | Trip Blank |
| Depth | | | | Shallow | Shallow | Deep | Shallow | Deep | QAQC | QAQC | Shallow | Deep | Shallow | |
| 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 | | | | 4/16/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/16/2023 | 4/16/2023 | 4/16/2023 | |
| Time Sampled | | | | 8:00 | 12:20 | 12:45 | 15:15 | 15:45 | 12:25 | 12:18 | 10:30 | 11:00 | 12:50 | |
| ALS Sample ID | | | | YL2300303-005 | YL2300303-003 | YL2300303-004 | YL2300303-001 | YL2300303-002 | YL2300303-009 | YL2300303-010 | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-011 |
| Analyte | Lowest Detection Limit | 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 | | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0005 | 0.0250 | 0.0250 | 0.0250 | 0.0005 |
| Antimony, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Arsenic, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Barium, dissolved | 0.00010 | mg/L | | 0.01050 | 0.01130 | 0.01090 | 0.01100 | 0.01120 | 0.01070 | 0.00005 | 0.01140 | 0.01070 | 0.01110 | 0.00005 |
| Beryllium, dissolved | 0.000100 | mg/L | | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000500 | 0.000050 | 0.000500 | 0.000500 | 0.000500 | 0.000050 |
| Bismuth, dissolved | 0.000050 | mg/L | | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.000025 | 0.001250 | 0.001250 | 0.001250 | 0.000025 |
| Boron, dissolved | 0.010 | mg/L | | 3.76 | 3.830 | 3.750 | 3.780 | 3.710 | 3.860 | 0.005 | 3.770 | 3.870 | 3.790 | 0.005 |
| Cadmium, dissolved | 0.0000050 | mg/L | | 0.0001250 | 0.0001250 | 0.0001250 | 0.0001250 | 0.0001250 | 0.0001250 | 0.0000025 | 0.0001250 | 0.0001250 | 0.0001250 | 0.0000025 |
| Calcium, dissolved | 0.050 | mg/L | | 323 | 321.000 | 321.000 | 327.000 | 313.000 | 324.000 | 0.025 | 319.000 | 328.000 | 321.000 | 0.025 |
| Cesium, dissolved | 0.000010 | mg/L | | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Chromium, dissolved | 0.00050 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00025 | 0.00250 | 0.00250 | 0.00250 | 0.00025 |
| Cobalt, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Copper, dissolved | 0.00020 | mg/L | | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00500 | 0.00010 | 0.00500 | 0.00500 | 0.00500 | 0.00010 |
| Gallium, dissolved | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iron, dissolved | 0.010 | mg/L | | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.005 | 0.250 | 0.250 | 0.250 | 0.005 |
| Lead, dissolved | 0.000050 | mg/L | | 0.00125 | 0.00125 | 0.00125 | 0.00125 | 0.00125 | 0.00125 | 0.00003 | 0.00125 | 0.00125 | 0.00125 | 0.00003 |
| Lithium, dissolved | 0.0010 | mg/L | | 0.1470 | 0.1470 | 0.1460 | 0.1460 | 0.1420 | 0.1470 | 0.0005 | 0.1450 | 0.1490 | 0.1450 | 0.0005 |
| Magnesium, dissolved | 0.0050 | mg/L | | 996.0000 | 992.0000 | 989.0000 | 998.0000 | 987.0000 | 987.0000 | 0.0025 | 977.0000 | 976.0000 | 989.0000 | 0.0025 |
| Manganese, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Mercury, dissolved | 0.0000050 | mg/L | | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 | 0.0000025 |
| Molybdenum, dissolved | 0.000050 | mg/L | | 0.008850 | 0.008240 | 0.008230 | 0.008200 | 0.008460 | 0.008870 | 0.000025 | 0.008830 | 0.007950 | 0.008700 | 0.000025 |
| Nickel, dissolved | 0.00050 | mg/L | | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.01250 | 0.00025 | 0.01250 | 0.01250 | 0.01250 | 0.00025 |
| Phosphorous, dissolved | 0.050 | mg/L | | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 0.025 | 1.250 | 1.250 | 1.250 | 0.025 |
| Potassium, dissolved | 0.050 | mg/L | | 313.000 | 318.000 | 309.000 | 321.000 | 310.000 | 313.000 | 0.025 | 316.000 | 319.000 | 319.000 | 0.025 |
| Rhenium, dissolved | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Rubidium, dissolved | 0.00020 | mg/L | | 0.08240 | 0.07840 | 0.07730 | 0.08510 | 0.08650 | 0.08220 | 0.00010 | 0.08100 | 0.08450 | 0.08200 | 0.00010 |
| Selenium, dissolved | 0.000050 | mg/L | | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.001250 | 0.000025 | 0.001250 | 0.001250 | 0.001250 | 0.000025 |
| Silicon, dissolved | 0.050 | mg/L | | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 1.250 | 0.025 | 1.250 | 1.250 | 1.250 | 0.025 |
| Silver, dissolved | 0.000010 | mg/L | | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Sodium, dissolved | 0.050 | mg/L | | 8160.000 | 8100.000 | 8030.000 | 8220.000 | 8110.000 | 8050.000 | 0.025 | 8050.000 | 8130.000 | 8160.000 | 0.025 |
| Strontium, dissolved | 0.00020 | mg/L | | 5.7600 | 5.7300 | 5.6400 | 5.9000 | 5.7000 | 5.8300 | 0.0001 | 5.8000 | 5.8000 | 5.9000 | 0.0001 |
| Sulfur, dissolved | 0.50 | mg/L | | 733.00 | 742.00 | 717.00 | 732.00 | 715.00 | 732.00 | 0.25 | 723.00 | 741.00 | 752.00 | 0.25 |
| Tellurium, dissolved | 0.00020 | mg/L | | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0001 | 0.0050 | 0.0050 | 0.0050 | 0.0001 |
| Thallium, dissolved | 0.000010 | mg/L | | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000250 | 0.000005 | 0.000250 | 0.000250 | 0.000250 | 0.000005 |
| Thorium, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Tin, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Titanium, dissolved | 0.00030 | mg/L | | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00750 | 0.00015 | 0.00750 | 0.00750 | 0.00750 | 0.00015 |
| Tungsten, dissolved | 0.00010 | mg/L | | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00250 | 0.00005 | 0.00250 | 0.00250 | 0.00250 | 0.00005 |
| Uranium, dissolved | 0.000010 | mg/L | | 0.002210 | 0.002190 | 0.002250 | 0.002410 | 0.002310 | 0.002260 | 0.000005 | 0.002260 | 0.002360 | 0.002340 | 0.000005 |
| Vanadium, dissolved | 0.00050 | mg/L | | 0.0125 | 0.0125 | 0.0125 | 0.0125 | 0.0125 | 0.0125 | 0.0003 | 0.0125 | 0.0125 | 0.0125 | 0.0003 |
| Yttrium, dissolved | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc, dissolved | 0.0010 | mg/L | | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0250 | 0.0005 | 0.0250 | 0.0250 | 0.0250 | 0.0005 |
| Zirconium, dissolved | 0.00020 | mg/L | | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0050 | 0.0001 | 0.0050 | 0.0050 | 0.0050 | 0.0001 |

Table C1 - Water Quality Analytical Results and Relevant CCME Guidelines

| Location | | | | MLA | MLA | MLA | MLA | MLA | QAQC | QAQC | Reference | Reference | Reference | |
|-------------------------------------------------------|------------------------|-------|------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Station | | | | BRP-51 | BRP-48 | BRP-48 | BRP-46 | BRP-46 | Field Replicate | Field Blank | REF04 | REF04 | REF05 | Trip Blank |
| Depth | | | | Shallow | Shallow | Deep | Shallow | Deep | QAQC | QAQC | Shallow | Deep | Shallow | |
| 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 | | | | 4/16/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/15/2023 | 4/16/2023 | 4/16/2023 | 4/16/2023 | |
| Time Sampled | | | | 8:00 | 12:20 | 12:45 | 15:15 | 15:45 | 12:25 | 12:18 | 10:30 | 11:00 | 12:50 | |
| ALS Sample ID | | | | YL2300303-005 | YL2300303-003 | YL2300303-004 | YL2300303-001 | YL2300303-002 | YL2300303-009 | YL2300303-010 | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-011 |
| Analyte | Lowest Detection Limit | 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 |
| Aggregate Organics (Matrix: Water) | | | | | | | | | | | | | | |
| Oil & grease (gravimetric) | - | - | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Volatile Organic Compounds Surrogates (Matrix: Water) | | | | | | | | | | | | | | |
| bromofluorobenzene, 4- | 1.0 | % | | 98.1 | 96.3 | 94.6 | 96.5 | 97.2 | 97.1 | 94.4 | 94.6 | 95.4 | 97.2 | 95.0 |
| difluorobenzene, 1,4- | 1.0 | % | | 101.0 | 100.0 | 99.5 | 100.0 | 100.0 | 102.0 | 101.0 | 102.0 | 101.0 | 101.0 | 100.0 |
| Volatile Organic Compounds [Fuels] (Matrix: Water) | | | | | | | | | | | | | | |
| Benzene | 0.50 | µg/L | Long-term: 0.11 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Ethylbenzene | 0.50 | µg/L | Long-term: 0.025 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Methyl-tert-butyl ether (MBTE) | 0.50 | µg/L | Long-term: 5.000 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Styrene | 0.50 | µg/L | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Toluene | 0.50 | µg/L | Long-term: 0.215 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Xylene, m+p- | 0.40 | µg/L | | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Xylene, o- | 0.30 | µg/L | | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Xylenes, total | 0.50 | µg/L | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| 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 | | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 |
| F2 (C10-C16) | 100 | µg/L | | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 |
| F3 (C16-C34) | 150 | µg/L | | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 |
| F4 (C34-C50) | 150 | µg/L | | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 | 125.00 |
| 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 | | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 |
| 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 |
| Hydrocarbons Surrogates (Matrix: Water) | | | | | | | | | | | | | | |
| bromobenzotrifluoride, 2- (EPH surr) | 1.0 | % | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bromobenzotrifluoride, 2- (F2-F4 surr) | 1.0 | % | | 85.7 | 86.0 | 88.2 | 84.7 | 89.0 | 87.1 | 81.8 | 89.1 | 86.2 | 87.0 | 88.9 |
| dichlorotoluene, 3,4- | 1.0 | % | | 110.0 | 105.0 | 111.0 | 110.0 | 110.0 | 110.0 | 84.3 | 105.0 | 113.0 | 108.0 | 108.0 |

NA- Not Available

Appendix D Laboratory Reports

CERTIFICATE OF ANALYSIS

| | | | |
|--------------------------------|---------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------|
| Work Order | : YL2300303 | Page | : 1 of 19 |
| Client | : Stantec Consulting Ltd. | Laboratory | : Yellowknife - Environmental |
| 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 | : 18-Apr-2023 19:00 |
| PO | : ---- | Date Analysis Commenced | : 20-Apr-2023 |
| C-O-C number | : ---- | Issue Date | : 28-Apr-2023 18:55 |
| Sampler | : MW/NO | | |
| Site | : ---- | | |
| Quote number | : VA22-STAC100-001 | | |
| No. of samples received | : 26 | | |
| No. of samples analysed | : 26 | | |

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.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|--------------------------------------------|-------------------------------------------|
| Anshim Anshim | Lab Assistant | Metals, Burnaby, British Columbia |
| Cecilia Zhang | Account Manager Assistant | Administration, Burnaby, British Columbia |
| Hamideh Moradi | Analyst | Metals, Burnaby, British Columbia |
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Metals, Burnaby, British Columbia |
| Lindsay Gung | Supervisor - Water Chemistry | Inorganics, Burnaby, British Columbia |
| Miles Gropen | Department Manager - Inorganics | Inorganics, Burnaby, British Columbia |
| Ophelia Chiu | Department Manager - Organics | Organics, Burnaby, British Columbia |
| Owen Cheng | | Metals, Burnaby, British Columbia |
| Parnian Sane | Analyst | Metals, Burnaby, British Columbia |
| Tracy Harley | Supervisor - Water Quality Instrumentation | Inorganics, Burnaby, British Columbia |



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 |
| µg/L | micrograms per litre |
| µg/sample | micrograms per sample |
| µS/cm | microsiemens per centimetre |
| L | litres |
| 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.

Workorder Comments

Sample(s) ALL: Container for sulfide analysis not received at laboratory, but requested on Chain of Custody / analytical request form; subsample cannot be obtained from other containers to meet request. The requested analysis cannot be performed.

Qualifiers

| Qualifier | Description |
|-----------|---------------------------------------------------------------------------------------------------|
| DLA | Detection Limit adjusted for required dilution. |
| DLDS | Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity. |



DLM *Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).*



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | BRP-46S-WQ | BRP-46D-WQ | BRP-48S-WQ | BRP-48D-WQ | BRP-515-WQ |
|---------------------------------------|------------|------------|----------|----------|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------|
| (Matrix: Water) | | | | | | | | | | |
| | | | | | Client sampling date / time | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-001 | YL2300303-002 | YL2300303-003 | YL2300303-004 | YL2300303-005 | |
| | | | | | Result | Result | Result | Result | Result | |
| Physical Tests | | | | | | | | | | |
| Conductivity | ---- | E100 | 2.0 | µS/cm | 41300 | 41700 | 41700 | 41700 | 41800 | |
| Hardness (as CaCO3), dissolved | ---- | EC100 | 0.60 | mg/L | 4930 | 4850 | 4890 | 4870 | 4910 | |
| Hardness (as CaCO3), from total Ca/Mg | ---- | EC100A | 0.60 | mg/L | 4900 | 4940 | 5000 | 5080 | 5220 | |
| pH | ---- | E108 | 0.10 | pH units | 7.77 | 7.78 | 7.77 | 7.78 | 7.78 | |
| Salinity | ---- | EC100S | 1.0 | psu | 27.8 | 26.4 | 25.8 | 26.2 | 26.2 | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | 27400 | 27500 | 29300 | 28400 | 28300 | |
| Solids, total suspended [TSS] | ---- | E160 | 3.0 | mg/L | 6.0 | <3.0 | 3.8 | <3.0 | 3.6 | |
| Turbidity | ---- | E121 | 0.10 | NTU | 0.13 | 0.14 | 0.19 | <0.10 | <0.10 | |
| Anions and Nutrients | | | | | | | | | | |
| Ammonia, total (as N) | 7664-41-7 | E298 | 0.0050 | mg/L | 0.0068 | 0.0054 | 0.0079 | 0.0071 | 0.0056 | |
| Bromide | 24959-67-9 | E235.Br-L | 0.050 | mg/L | 49.9 | 48.6 | 47.1 | 47.2 | 48.5 | |
| Chloride | 16887-00-6 | E235.Cl | 0.50 | mg/L | 14600 | 14100 | 13900 | 14100 | 14300 | |
| Fluoride | 16984-48-8 | E235.F | 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 | 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 | 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 | 0.030 | mg/L | <0.150 ^{DLM} | <0.150 ^{DLM} | <0.150 ^{DLM} | <0.150 ^{DLM} | <0.150 ^{DLM} | |
| Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.0010 | mg/L | 0.0273 | 0.0312 | 0.0322 | 0.0335 | 0.0293 | |
| Phosphorus, total | 7723-14-0 | E372-U | 0.0020 | mg/L | 0.0390 | 0.0394 | 0.0401 | 0.0396 | 0.0393 | |
| Silicate (as SiO2) | 7631-86-9 | E392 | 0.50 | mg/L | 1.17 | 1.15 | 1.16 | 1.15 | 1.14 | |
| Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.30 | mg/L | 2030 | 1950 | 1900 | 1940 | 1970 | |
| Organic / Inorganic Carbon | | | | | | | | | | |
| Carbon, dissolved organic [DOC] | ---- | E358-L | 0.50 | mg/L | 1.64 | 2.38 | 2.04 | 2.23 | 1.74 | |
| Carbon, total organic [TOC] | ---- | E355-L | 0.50 | mg/L | 1.66 | 1.64 | 2.10 | 1.74 | 1.51 | |
| Total Metals | | | | | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.0030 | mg/L | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | |
| Antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | |
| Arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | |
| Barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0111 | 0.0113 | 0.0116 | 0.0112 | 0.0122 | |
| Beryllium, total | 7440-41-7 | E420 | 0.000100 | mg/L | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | |



Analytical Results

| | | | | | | | | | | |
|-----------------------------|------------|--------|-----------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | BRP-46S-WQ | BRP-46D-WQ | BRP-48S-WQ | BRP-48D-WQ | BRP-51S-WQ |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-001 | YL2300303-002 | YL2300303-003 | YL2300303-004 | YL2300303-005 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Bismuth, total | 7440-69-9 | E420 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Boron, total | 7440-42-8 | E420 | 0.010 | mg/L | 3.27 | 3.34 | 3.44 | 3.47 | 3.63 | |
| Cadmium, total | 7440-43-9 | E420 | 0.0000050 | mg/L | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA |
| Calcium, total | 7440-70-2 | E420 | 0.050 | mg/L | 312 | 315 | 321 | 320 | 342 | |
| Cesium, total | 7440-46-2 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Chromium, total | 7440-47-3 | E420 | 0.00050 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Cobalt, total | 7440-48-4 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Copper, total | 7440-50-8 | E420 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA |
| Iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA |
| Lead, total | 7439-92-1 | E420 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Lithium, total | 7439-93-2 | E420 | 0.0010 | mg/L | 0.132 | 0.135 | 0.138 | 0.140 | 0.146 | |
| Magnesium, total | 7439-95-4 | E420 | 0.0050 | mg/L | 1000 | 1010 | 1020 | 1040 | 1060 | |
| Manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Mercury, total | 7439-97-6 | E508 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 |
| Molybdenum, total | 7439-98-7 | E420 | 0.000050 | mg/L | 0.00850 | 0.00830 | 0.00934 | 0.00824 | 0.00893 | |
| Nickel, total | 7440-02-0 | E420 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA |
| Phosphorus, total | 7723-14-0 | E420 | 0.050 | mg/L | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA |
| Potassium, total | 7440-09-7 | E420 | 0.050 | mg/L | 311 | 317 | 315 | 316 | 325 | |
| Rubidium, total | 7440-17-7 | E420 | 0.00020 | mg/L | 0.0841 | 0.0884 | 0.0837 | 0.0865 | 0.0879 | |
| Selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Silicon, total | 7440-21-3 | E420 | 0.10 | mg/L | <5.00 DLA | <5.00 DLA | <5.00 DLA | <5.00 DLA | <5.00 DLA | <5.00 DLA |
| Silver, total | 7440-22-4 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Sodium, total | 7440-23-5 | E420 | 0.050 | mg/L | 8040 | 8070 | 8120 | 8140 | 8460 | |
| Strontium, total | 7440-24-6 | E420 | 0.00020 | mg/L | 6.02 | 5.92 | 5.88 | 5.94 | 6.28 | |
| Sulfur, total | 7704-34-9 | E420 | 0.50 | mg/L | 732 | 744 | 764 | 785 | 798 | |
| Tellurium, total | 13494-80-9 | E420 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA |
| Thallium, total | 7440-28-0 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Thorium, total | 7440-29-1 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Tin, total | 7440-31-5 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Titanium, total | 7440-32-6 | E420 | 0.00030 | mg/L | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | BRP-46S-WQ | BRP-46D-WQ | BRP-48S-WQ | BRP-48D-WQ | BRP-51S-WQ |
|-----------------------------|------------|--------|-----------|------|------------------|---------------|---------------|---------------|---------------|---------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | | | | | |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-001 | YL2300303-002 | YL2300303-003 | YL2300303-004 | YL2300303-005 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Tungsten, total | 7440-33-7 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.00251 | 0.00246 | 0.00254 | 0.00250 | 0.00272 | |
| Vanadium, total | 7440-62-2 | E420 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA |
| Zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.150 DLA | <0.150 DLA | <0.150 DLA | <0.150 DLA | <0.150 DLA | <0.150 DLA |
| Zirconium, total | 7440-67-7 | E420 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA |
| Dissolved Metals | | | | | | | | | | |
| Aluminum, dissolved | 7429-90-5 | E421 | 0.0010 | mg/L | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA |
| Antimony, dissolved | 7440-36-0 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Arsenic, dissolved | 7440-38-2 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Barium, dissolved | 7440-39-3 | E421 | 0.00010 | mg/L | 0.0110 | 0.0112 | 0.0113 | 0.0109 | 0.0105 | |
| Beryllium, dissolved | 7440-41-7 | E421 | 0.000100 | mg/L | <0.00100 DLA | <0.00100 DLA | <0.00100 DLA | <0.00100 DLA | <0.00100 DLA | <0.00100 DLA |
| Bismuth, dissolved | 7440-69-9 | E421 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Boron, dissolved | 7440-42-8 | E421 | 0.010 | mg/L | 3.78 | 3.71 | 3.83 | 3.75 | 3.76 | |
| Cadmium, dissolved | 7440-43-9 | E421 | 0.0000050 | mg/L | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA |
| Calcium, dissolved | 7440-70-2 | E421 | 0.050 | mg/L | 327 | 313 | 321 | 321 | 323 | |
| Cesium, dissolved | 7440-46-2 | E421 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Chromium, dissolved | 7440-47-3 | E421 | 0.00050 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Cobalt, dissolved | 7440-48-4 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Copper, dissolved | 7440-50-8 | E421 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA |
| Iron, dissolved | 7439-89-6 | E421 | 0.010 | mg/L | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA |
| Lead, dissolved | 7439-92-1 | E421 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Lithium, dissolved | 7439-93-2 | E421 | 0.0010 | mg/L | 0.146 | 0.142 | 0.147 | 0.146 | 0.147 | |
| Magnesium, dissolved | 7439-95-4 | E421 | 0.0050 | mg/L | 998 | 987 | 992 | 989 | 996 | |
| Manganese, dissolved | 7439-96-5 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Mercury, dissolved | 7439-97-6 | E509 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 |
| Molybdenum, dissolved | 7439-98-7 | E421 | 0.000050 | mg/L | 0.00820 | 0.00846 | 0.00824 | 0.00823 | 0.00885 | |
| Nickel, dissolved | 7440-02-0 | E421 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA |
| Phosphorus, dissolved | 7723-14-0 | E421 | 0.050 | mg/L | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA |
| Potassium, dissolved | 7440-09-7 | E421 | 0.050 | mg/L | 321 | 310 | 318 | 309 | 313 | |
| Rubidium, dissolved | 7440-17-7 | E421 | 0.00020 | mg/L | 0.0851 | 0.0865 | 0.0784 | 0.0773 | 0.0824 | |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | BRP-46S-WQ | BRP-46D-WQ | BRP-48S-WQ | BRP-48D-WQ | BRP-51S-WQ |
|---------------------------------------|-------------|------------|----------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-001 | YL2300303-002 | YL2300303-003 | YL2300303-004 | YL2300303-005 | |
| | | | | | Result | Result | Result | Result | Result | |
| Dissolved Metals | | | | | | | | | | |
| Selenium, dissolved | 7782-49-2 | E421 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA |
| Silicon, dissolved | 7440-21-3 | E421 | 0.050 | mg/L | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA |
| Silver, dissolved | 7440-22-4 | E421 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Sodium, dissolved | 7440-23-5 | E421 | 0.050 | mg/L | 8220 | 8110 | 8100 | 8030 | 8160 | |
| Strontium, dissolved | 7440-24-6 | E421 | 0.00020 | mg/L | 5.90 | 5.70 | 5.73 | 5.64 | 5.76 | |
| Sulfur, dissolved | 7704-34-9 | E421 | 0.50 | mg/L | 732 | 715 | 742 | 717 | 733 | |
| Tellurium, dissolved | 13494-80-9 | E421 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA |
| Thallium, dissolved | 7440-28-0 | E421 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA |
| Thorium, dissolved | 7440-29-1 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Tin, dissolved | 7440-31-5 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Titanium, dissolved | 7440-32-6 | E421 | 0.00030 | mg/L | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA |
| Tungsten, dissolved | 7440-33-7 | E421 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA |
| Uranium, dissolved | 7440-61-1 | E421 | 0.000010 | mg/L | 0.00241 | 0.00231 | 0.00219 | 0.00225 | 0.00221 | |
| Vanadium, dissolved | 7440-62-2 | E421 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA |
| Zinc, dissolved | 7440-66-6 | E421 | 0.0010 | mg/L | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA | <0.0500 DLA |
| Zirconium, dissolved | 7440-67-7 | E421 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA |
| Dissolved mercury filtration location | ---- | EP509 | - | - | Field | Field | Field | Field | Field | Field |
| Dissolved metals filtration location | ---- | EP421 | - | - | Field | Field | Field | Field | Field | Field |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| Benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 |
| Xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | <0.30 | <0.30 | <0.30 | <0.30 | <0.30 |
| Xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | <100 |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | <100 |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | BRP-46S-WQ | BRP-46D-WQ | BRP-48S-WQ | BRP-48D-WQ | BRP-515-WQ |
|----------------------------------------------|------------|------------|-----|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | | | | | |
| | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-001 | YL2300303-002 | YL2300303-003 | YL2300303-004 | YL2300303-005 | |
| | | | | | Result | Result | Result | Result | Result | |
| Hydrocarbons | | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | <100 |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | <250 | <250 | <250 | <250 | <250 |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | <250 | <250 | <250 | <250 | <250 |
| Hydrocarbons Surrogates | | | | | | | | | | |
| Bromobenzotrifluoride, 2- (F2-F4 surrogate) | 392-83-6 | E601 | 1.0 | % | 84.7 | 89.0 | 86.0 | 88.2 | 85.7 | |
| Dichlorotoluene, 3,4- | 95-75-0 | E581.VH+F1 | 1.0 | % | 110 | 110 | 105 | 111 | 110 | |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| Bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 96.5 | 97.2 | 96.3 | 94.6 | 98.1 | |
| Difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 100 | 100 | 100 | 99.5 | 101 | |

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



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | REF045-WQ | REF040-WQ | REF055-WQ | Field DUP | FB |
|---------------------------------------|------------|------------|----------|----------|-------------------------|-------------------------|-------------------------|-------------------------|---------------|----|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | | | | | |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-009 | YL2300303-010 | |
| | | | | | Result | Result | Result | Result | Result | |
| Physical Tests | | | | | | | | | | |
| Conductivity | ---- | E100 | 2.0 | µS/cm | 41600 | 41600 | 41400 | 41400 | <2.0 | |
| Hardness (as CaCO3), dissolved | ---- | EC100 | 0.60 | mg/L | 4820 | 4840 | 4870 | 4870 | <0.60 | |
| Hardness (as CaCO3), from total Ca/Mg | ---- | EC100A | 0.60 | mg/L | 4910 | 4880 | 5030 | 4810 | <0.60 | |
| pH | ---- | E108 | 0.10 | pH units | 7.79 | 7.79 | 7.80 | 7.79 | 5.54 | |
| Salinity | ---- | EC100S | 1.0 | psu | 26.7 | 26.8 | 26.5 | 27.0 | <1.0 | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | 27800 | 27900 | 28800 | 27900 | <10 | |
| Solids, total suspended [TSS] | ---- | E160 | 3.0 | mg/L | <3.0 | <3.0 | 3.2 | <3.0 | <3.0 | |
| Turbidity | ---- | E121 | 0.10 | NTU | 0.22 | 0.18 | <0.10 | 0.24 | <0.10 | |
| Anions and Nutrients | | | | | | | | | | |
| Ammonia, total (as N) | 7664-41-7 | E298 | 0.0050 | mg/L | <0.0050 | <0.0050 | 0.0065 | 0.0062 | <0.0050 | |
| Bromide | 24959-67-9 | E235.Br-L | 0.050 | mg/L | 47.3 | 48.0 | 47.1 | 48.3 | <0.050 | |
| Chloride | 16887-00-6 | E235.Cl | 0.50 | mg/L | 14000 | 14100 | 13900 | 14300 | <0.50 | |
| Fluoride | 16984-48-8 | E235.F | 0.020 | mg/L | <2.0 ^{DLDS} | <2.0 ^{DLDS} | <2.0 ^{DLDS} | <2.0 ^{DLDS} | <0.020 | |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 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 | 0.0010 | mg/L | <0.100 ^{DLDS} | <0.100 ^{DLDS} | <0.100 ^{DLDS} | <0.100 ^{DLDS} | <0.0010 | |
| Nitrogen, total | 7727-37-9 | E366 | 0.030 | mg/L | <0.150 ^{DLM} | <0.150 ^{DLM} | <0.150 ^{DLM} | <0.150 | <0.030 | |
| Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.0010 | mg/L | 0.0328 | 0.0324 | 0.0315 | 0.0306 | <0.0010 | |
| Phosphorus, total | 7723-14-0 | E372-U | 0.0020 | mg/L | 0.0384 | 0.0391 | 0.0378 | 0.0389 | <0.0020 | |
| Silicate (as SiO2) | 7631-86-9 | E392 | 0.50 | mg/L | 1.12 | 1.16 | 1.12 | 1.17 | <0.50 | |
| Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.30 | mg/L | 1930 | 1970 | 1920 | 1990 | <0.30 | |
| Organic / Inorganic Carbon | | | | | | | | | | |
| Carbon, dissolved organic [DOC] | ---- | E358-L | 0.50 | mg/L | 1.67 | 1.83 | 1.67 | 1.82 | <0.50 | |
| Carbon, total organic [TOC] | ---- | E355-L | 0.50 | mg/L | 2.03 | 1.67 | 1.55 | 1.58 | <0.50 | |
| Total Metals | | | | | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.0030 | mg/L | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.0030 | |
| Antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0112 | 0.0111 | 0.0116 | 0.0115 | <0.00010 | |
| Beryllium, total | 7440-41-7 | E420 | 0.000100 | mg/L | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.000100 | |
| Bismuth, total | 7440-69-9 | E420 | 0.000050 | mg/L | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.000050 | |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | REF045-WQ | REF040-WQ | REF055-WQ | Field DUP | FB |
|-----------------------------|------------|--------|-----------|------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-009 | YL2300303-010 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Boron, total | 7440-42-8 | E420 | 0.010 | mg/L | 3.48 | 3.34 | 3.40 | 3.21 | <0.010 | |
| Cadmium, total | 7440-43-9 | E420 | 0.0000050 | mg/L | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.000250 DLA | <0.0000050 | |
| Calcium, total | 7440-70-2 | E420 | 0.050 | mg/L | 319 | 310 | 315 | 312 | <0.050 | |
| Cesium, total | 7440-46-2 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000010 | |
| Chromium, total | 7440-47-3 | E420 | 0.00050 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00050 | |
| Cobalt, total | 7440-48-4 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00010 | |
| Copper, total | 7440-50-8 | E420 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.00050 | |
| Iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.500 DLA | <0.010 | |
| Lead, total | 7439-92-1 | E420 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.000050 | |
| Lithium, total | 7439-93-2 | E420 | 0.0010 | mg/L | 0.137 | 0.133 | 0.136 | 0.132 | <0.0010 | |
| Magnesium, total | 7439-95-4 | E420 | 0.0050 | mg/L | 998 | 996 | 1030 | 979 | <0.0050 | |
| Manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00010 | |
| Mercury, total | 7439-97-6 | E508 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | |
| Molybdenum, total | 7439-98-7 | E420 | 0.000050 | mg/L | 0.00903 | 0.00840 | 0.00838 | 0.00822 | <0.000050 | |
| Nickel, total | 7440-02-0 | E420 | 0.00050 | mg/L | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.0250 DLA | <0.00050 | |
| Phosphorus, total | 7723-14-0 | E420 | 0.050 | mg/L | <2.50 DLA | <2.50 DLA | <2.50 DLA | <2.50 DLA | <0.050 | |
| Potassium, total | 7440-09-7 | E420 | 0.050 | mg/L | 314 | 311 | 317 | 314 | <0.050 | |
| Rubidium, total | 7440-17-7 | E420 | 0.00020 | mg/L | 0.0850 | 0.0820 | 0.0895 | 0.0895 | <0.00020 | |
| Selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.00250 DLA | <0.000050 | |
| Silicon, total | 7440-21-3 | E420 | 0.10 | mg/L | <5.00 DLA | <5.00 DLA | <5.00 DLA | <5.00 DLA | <0.10 | |
| Silver, total | 7440-22-4 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000010 | |
| Sodium, total | 7440-23-5 | E420 | 0.050 | mg/L | 7910 | 7910 | 8100 | 7800 | <0.050 | |
| Strontium, total | 7440-24-6 | E420 | 0.00020 | mg/L | 5.82 | 5.81 | 5.94 | 5.69 | <0.00020 | |
| Sulfur, total | 7704-34-9 | E420 | 0.50 | mg/L | 752 | 731 | 741 | 718 | <0.50 | |
| Tellurium, total | 13494-80-9 | E420 | 0.00020 | mg/L | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.0100 DLA | <0.00020 | |
| Thallium, total | 7440-28-0 | E420 | 0.000010 | mg/L | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000500 DLA | <0.000010 | |
| Thorium, total | 7440-29-1 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00010 | |
| Tin, total | 7440-31-5 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00010 | |
| Titanium, total | 7440-32-6 | E420 | 0.00030 | mg/L | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.0150 DLA | <0.00030 | |
| Tungsten, total | 7440-33-7 | E420 | 0.00010 | mg/L | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00500 DLA | <0.00010 | |



Analytical Results

| Sub-Matrix: Water (Matrix: Water) | | | | | Client sample ID | REF045-WQ | REF040-WQ | REF055-WQ | Field DUP | FB |
|--------------------------------------|------------|--------|-----------|------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|----|
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-009 | YL2300303-010 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.00251 | 0.00244 | 0.00225 | 0.00260 | <0.000010 | |
| Vanadium, total | 7440-62-2 | E420 | 0.00050 | mg/L | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.00050 | |
| Zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.150 ^{DLA} | <0.0030 | |
| Zirconium, total | 7440-67-7 | E420 | 0.00020 | mg/L | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.00020 | |
| Dissolved Metals | | | | | | | | | | |
| Aluminum, dissolved | 7429-90-5 | E421 | 0.0010 | mg/L | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0010 | |
| Antimony, dissolved | 7440-36-0 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Arsenic, dissolved | 7440-38-2 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Barium, dissolved | 7440-39-3 | E421 | 0.00010 | mg/L | 0.0114 | 0.0107 | 0.0111 | 0.0107 | <0.00010 | |
| Beryllium, dissolved | 7440-41-7 | E421 | 0.000100 | mg/L | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.00100 ^{DLA} | <0.000100 | |
| Bismuth, dissolved | 7440-69-9 | E421 | 0.000050 | mg/L | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.000050 | |
| Boron, dissolved | 7440-42-8 | E421 | 0.010 | mg/L | 3.77 | 3.87 | 3.79 | 3.86 | <0.010 | |
| Cadmium, dissolved | 7440-43-9 | E421 | 0.0000050 | mg/L | <0.000250 ^{DLA} | <0.000250 ^{DLA} | <0.000250 ^{DLA} | <0.000250 ^{DLA} | <0.0000050 | |
| Calcium, dissolved | 7440-70-2 | E421 | 0.050 | mg/L | 319 | 328 | 321 | 324 | <0.050 | |
| Cesium, dissolved | 7440-46-2 | E421 | 0.000010 | mg/L | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000010 | |
| Chromium, dissolved | 7440-47-3 | E421 | 0.00050 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00050 | |
| Cobalt, dissolved | 7440-48-4 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Copper, dissolved | 7440-50-8 | E421 | 0.00020 | mg/L | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.00020 | |
| Iron, dissolved | 7439-89-6 | E421 | 0.010 | mg/L | <0.500 ^{DLA} | <0.500 ^{DLA} | <0.500 ^{DLA} | <0.500 ^{DLA} | <0.010 | |
| Lead, dissolved | 7439-92-1 | E421 | 0.000050 | mg/L | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.000050 | |
| Lithium, dissolved | 7439-93-2 | E421 | 0.0010 | mg/L | 0.145 | 0.149 | 0.145 | 0.147 | <0.0010 | |
| Magnesium, dissolved | 7439-95-4 | E421 | 0.0050 | mg/L | 977 | 976 | 989 | 987 | <0.0050 | |
| Manganese, dissolved | 7439-96-5 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Mercury, dissolved | 7439-97-6 | E509 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | |
| Molybdenum, dissolved | 7439-98-7 | E421 | 0.000050 | mg/L | 0.00883 | 0.00795 | 0.00870 | 0.00887 | <0.000050 | |
| Nickel, dissolved | 7440-02-0 | E421 | 0.00050 | mg/L | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.00050 | |
| Phosphorus, dissolved | 7723-14-0 | E421 | 0.050 | mg/L | <2.50 ^{DLA} | <2.50 ^{DLA} | <2.50 ^{DLA} | <2.50 ^{DLA} | <0.050 | |
| Potassium, dissolved | 7440-09-7 | E421 | 0.050 | mg/L | 316 | 319 | 319 | 313 | <0.050 | |
| Rubidium, dissolved | 7440-17-7 | E421 | 0.00020 | mg/L | 0.0810 | 0.0845 | 0.0820 | 0.0822 | <0.00020 | |
| Selenium, dissolved | 7782-49-2 | E421 | 0.000050 | mg/L | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.00250 ^{DLA} | <0.000050 | |



Analytical Results

| | | | | | | | | | | |
|---------------------------------------|-------------|------------|----------|------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | REF045-WQ | REF040-WQ | REF055-WQ | Field DUP | FB |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-009 | YL2300303-010 | |
| | | | | | Result | Result | Result | Result | Result | |
| Dissolved Metals | | | | | | | | | | |
| Silicon, dissolved | 7440-21-3 | E421 | 0.050 | mg/L | <2.50 ^{DLA} | <2.50 ^{DLA} | <2.50 ^{DLA} | <2.50 ^{DLA} | <0.050 | |
| Silver, dissolved | 7440-22-4 | E421 | 0.000010 | mg/L | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000010 | |
| Sodium, dissolved | 7440-23-5 | E421 | 0.050 | mg/L | 8050 | 8130 | 8160 | 8050 | <0.050 | |
| Strontium, dissolved | 7440-24-6 | E421 | 0.00020 | mg/L | 5.80 | 5.80 | 5.90 | 5.83 | <0.00020 | |
| Sulfur, dissolved | 7704-34-9 | E421 | 0.50 | mg/L | 723 | 741 | 752 | 732 | <0.50 | |
| Tellurium, dissolved | 13494-80-9 | E421 | 0.00020 | mg/L | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.00020 | |
| Thallium, dissolved | 7440-28-0 | E421 | 0.000010 | mg/L | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000500 ^{DLA} | <0.000010 | |
| Thorium, dissolved | 7440-29-1 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Tin, dissolved | 7440-31-5 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Titanium, dissolved | 7440-32-6 | E421 | 0.00030 | mg/L | <0.0150 ^{DLA} | <0.0150 ^{DLA} | <0.0150 ^{DLA} | <0.0150 ^{DLA} | <0.00030 | |
| Tungsten, dissolved | 7440-33-7 | E421 | 0.00010 | mg/L | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00500 ^{DLA} | <0.00010 | |
| Uranium, dissolved | 7440-61-1 | E421 | 0.000010 | mg/L | 0.00226 | 0.00236 | 0.00234 | 0.00226 | <0.000010 | |
| Vanadium, dissolved | 7440-62-2 | E421 | 0.00050 | mg/L | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.0250 ^{DLA} | <0.00050 | |
| Zinc, dissolved | 7440-66-6 | E421 | 0.0010 | mg/L | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0500 ^{DLA} | <0.0010 | |
| Zirconium, dissolved | 7440-67-7 | E421 | 0.00020 | mg/L | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.0100 ^{DLA} | <0.00020 | |
| Dissolved mercury filtration location | ---- | EP509 | - | - | Field | Field | Field | Field | Field | |
| Dissolved metals filtration location | ---- | EP421 | - | - | Field | Field | Field | Field | Field | |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| Benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | |
| Xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | <0.30 | <0.30 | <0.30 | <0.30 | |
| Xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | <100 | <100 | <100 | <100 | |



Analytical Results

| | | | | | | | | | | |
|---------------------------------------------|------------|------------|-----|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | REF045-WQ | REF040-WQ | REF055-WQ | Field DUP | FB |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 | 15-Apr-2023 18:15 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-006 | YL2300303-007 | YL2300303-008 | YL2300303-009 | YL2300303-010 | |
| | | | | | Result | Result | Result | Result | Result | Result |
| Hydrocarbons | | | | | | | | | | |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | <250 | <250 | <250 | <250 | <250 |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | <250 | <250 | <250 | <250 | <250 |
| Hydrocarbons Surrogates | | | | | | | | | | |
| Bromobenzotrifluoride, 2- (F2-F4 surrogate) | 392-83-6 | E601 | 1.0 | % | 89.1 | 86.2 | 87.0 | 87.1 | 81.8 | |
| Dichlorotoluene, 3,4- | 95-75-0 | E581.VH+F1 | 1.0 | % | 105 | 113 | 108 | 110 | 84.3 | |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| Bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 94.6 | 95.4 | 97.2 | 97.1 | 94.4 | |
| Difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 102 | 101 | 101 | 102 | 101 | |

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



Analytical Results

| | | | | | | | | | | |
|---------------------------------------|------------|------------|---------|----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | TB | BRP-46-01-PP | BRP-46-02-PP | BRP-46-03-PP | BRP-48-01-PP |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-011 | YL2300303-012 | YL2300303-013 | YL2300303-014 | YL2300303-015 | |
| | | | | | Result | Result | Result | Result | Result | |
| Field Tests | | | | | | | | | | |
| Sampling volume, field | ---- | EF003 | 0.010 | L | ---- | 1.27 | 1.28 | 1.35 | 1.31 | |
| Physical Tests | | | | | | | | | | |
| Conductivity | ---- | E100 | 2.0 | µS/cm | <2.0 | ---- | ---- | ---- | ---- | ---- |
| Hardness (as CaCO3), dissolved | ---- | EC100 | 0.60 | mg/L | <0.60 | ---- | ---- | ---- | ---- | ---- |
| Hardness (as CaCO3), from total Ca/Mg | ---- | EC100A | 0.60 | mg/L | <0.60 | ---- | ---- | ---- | ---- | ---- |
| pH | ---- | E108 | 0.10 | pH units | 5.51 | ---- | ---- | ---- | ---- | ---- |
| Salinity | ---- | EC100S | 1.0 | psu | <1.0 | ---- | ---- | ---- | ---- | ---- |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | <10 | ---- | ---- | ---- | ---- | ---- |
| Solids, total suspended [TSS] | ---- | E160 | 3.0 | mg/L | <3.0 | ---- | ---- | ---- | ---- | ---- |
| Turbidity | ---- | E121 | 0.10 | NTU | <0.10 | ---- | ---- | ---- | ---- | ---- |
| Anions and Nutrients | | | | | | | | | | |
| Ammonia, total (as N) | 7664-41-7 | E298 | 0.0050 | mg/L | <0.0050 | ---- | ---- | ---- | ---- | ---- |
| Bromide | 24959-67-9 | E235.Br-L | 0.050 | mg/L | <0.050 | ---- | ---- | ---- | ---- | ---- |
| Chloride | 16887-00-6 | E235.Cl | 0.50 | mg/L | <0.50 | ---- | ---- | ---- | ---- | ---- |
| Fluoride | 16984-48-8 | E235.F | 0.020 | mg/L | <0.020 | ---- | ---- | ---- | ---- | ---- |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.0050 | mg/L | <0.0050 | ---- | ---- | ---- | ---- | ---- |
| Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.0010 | mg/L | <0.0010 | ---- | ---- | ---- | ---- | ---- |
| Nitrogen, total | 7727-37-9 | E366 | 0.030 | mg/L | <0.030 | ---- | ---- | ---- | ---- | ---- |
| Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.0010 | mg/L | <0.0010 | ---- | ---- | ---- | ---- | ---- |
| Phosphorus, total | 7723-14-0 | E372-U | 0.0020 | mg/L | <0.0020 | ---- | ---- | ---- | ---- | ---- |
| Silicate (as SiO2) | 7631-86-9 | E392 | 0.50 | mg/L | <0.50 | ---- | ---- | ---- | ---- | ---- |
| Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.30 | mg/L | <0.30 | ---- | ---- | ---- | ---- | ---- |
| Organic / Inorganic Carbon | | | | | | | | | | |
| Carbon, dissolved organic [DOC] | ---- | E358-L | 0.50 | mg/L | <0.50 | ---- | ---- | ---- | ---- | ---- |
| Carbon, total organic [TOC] | ---- | E355-L | 0.50 | mg/L | <0.50 | ---- | ---- | ---- | ---- | ---- |
| Total Metals | | | | | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.0030 | mg/L | <0.0030 | ---- | ---- | ---- | ---- | ---- |
| Antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | ---- |
| Arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | ---- |
| Barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | ---- |



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | TB | BRP-46-01-PP | BRP-46-02-PP | BRP-46-03-PP | BRP-48-01-PP |
|-----------------------------|------------|--------|-----------|------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-011 | YL2300303-012 | YL2300303-013 | YL2300303-014 | YL2300303-015 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Beryllium, total | 7440-41-7 | E420 | 0.000100 | mg/L | <0.000100 | ---- | ---- | ---- | ---- | |
| Bismuth, total | 7440-69-9 | E420 | 0.000050 | mg/L | <0.000050 | ---- | ---- | ---- | ---- | |
| Boron, total | 7440-42-8 | E420 | 0.010 | mg/L | <0.010 | ---- | ---- | ---- | ---- | |
| Cadmium, total | 7440-43-9 | E420 | 0.0000050 | mg/L | <0.0000050 | ---- | ---- | ---- | ---- | |
| Calcium, total | 7440-70-2 | E420 | 0.050 | mg/L | <0.050 | ---- | ---- | ---- | ---- | |
| Cesium, total | 7440-46-2 | E420 | 0.000010 | mg/L | <0.000010 | ---- | ---- | ---- | ---- | |
| Chromium, total | 7440-47-3 | E420 | 0.00050 | mg/L | <0.00050 | ---- | ---- | ---- | ---- | |
| Cobalt, total | 7440-48-4 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | |
| Copper, total | 7440-50-8 | E420 | 0.00050 | mg/L | <0.00050 | ---- | ---- | ---- | ---- | |
| Iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.010 | ---- | ---- | ---- | ---- | |
| Lead, total | 7439-92-1 | E420 | 0.000050 | mg/L | <0.000050 | ---- | ---- | ---- | ---- | |
| Lithium, total | 7439-93-2 | E420 | 0.0010 | mg/L | <0.0010 | ---- | ---- | ---- | ---- | |
| Magnesium, total | 7439-95-4 | E420 | 0.0050 | mg/L | <0.0050 | ---- | ---- | ---- | ---- | |
| Manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | |
| Mercury, total | 7439-97-6 | E508 | 0.0000050 | mg/L | <0.0000050 | ---- | ---- | ---- | ---- | |
| Molybdenum, total | 7439-98-7 | E420 | 0.000050 | mg/L | <0.000050 | ---- | ---- | ---- | ---- | |
| Nickel, total | 7440-02-0 | E420 | 0.00050 | mg/L | <0.00050 | ---- | ---- | ---- | ---- | |
| Phosphorus, total | 7723-14-0 | E420 | 0.050 | mg/L | <0.050 | ---- | ---- | ---- | ---- | |
| Potassium, total | 7440-09-7 | E420 | 0.050 | mg/L | <0.050 | ---- | ---- | ---- | ---- | |
| Rubidium, total | 7440-17-7 | E420 | 0.00020 | mg/L | <0.00020 | ---- | ---- | ---- | ---- | |
| Selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | <0.000050 | ---- | ---- | ---- | ---- | |
| Silicon, total | 7440-21-3 | E420 | 0.10 | mg/L | <0.10 | ---- | ---- | ---- | ---- | |
| Silver, total | 7440-22-4 | E420 | 0.000010 | mg/L | <0.000010 | ---- | ---- | ---- | ---- | |
| Sodium, total | 7440-23-5 | E420 | 0.050 | mg/L | <0.050 | ---- | ---- | ---- | ---- | |
| Strontium, total | 7440-24-6 | E420 | 0.00020 | mg/L | <0.00020 | ---- | ---- | ---- | ---- | |
| Sulfur, total | 7704-34-9 | E420 | 0.50 | mg/L | <0.50 | ---- | ---- | ---- | ---- | |
| Tellurium, total | 13494-80-9 | E420 | 0.00020 | mg/L | <0.00020 | ---- | ---- | ---- | ---- | |
| Thallium, total | 7440-28-0 | E420 | 0.000010 | mg/L | <0.000010 | ---- | ---- | ---- | ---- | |
| Thorium, total | 7440-29-1 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | |
| Tin, total | 7440-31-5 | E420 | 0.00010 | mg/L | <0.00010 | ---- | ---- | ---- | ---- | |



Analytical Results

| | | | | | | | | | | |
|-----------------------|------------|--------|-----------|------|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | TB | BRP-46-01-PP | BRP-46-02-PP | BRP-46-03-PP | BRP-48-01-PP |
| (Matrix: Water) | | | | | | | | | | |
| | | | | | Client sampling date / time | 15-Apr-2023 18:15 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-011 | YL2300303-012 | YL2300303-013 | YL2300303-014 | YL2300303-015 | |
| | | | | | Result | Result | Result | Result | Result | |
| Total Metals | | | | | | | | | | |
| Titanium, total | 7440-32-6 | E420 | 0.00030 | mg/L | <0.00030 | --- | --- | --- | --- | --- |
| Tungsten, total | 7440-33-7 | E420 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | <0.000010 | --- | --- | --- | --- | --- |
| Vanadium, total | 7440-62-2 | E420 | 0.00050 | mg/L | <0.00050 | --- | --- | --- | --- | --- |
| Zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.0030 | --- | --- | --- | --- | --- |
| Zirconium, total | 7440-67-7 | E420 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Dissolved Metals | | | | | | | | | | |
| Aluminum, dissolved | 7429-90-5 | E421 | 0.0010 | mg/L | <0.0010 | --- | --- | --- | --- | --- |
| Antimony, dissolved | 7440-36-0 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Arsenic, dissolved | 7440-38-2 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Barium, dissolved | 7440-39-3 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Beryllium, dissolved | 7440-41-7 | E421 | 0.000100 | mg/L | <0.000100 | --- | --- | --- | --- | --- |
| Bismuth, dissolved | 7440-69-9 | E421 | 0.000050 | mg/L | <0.000050 | --- | --- | --- | --- | --- |
| Boron, dissolved | 7440-42-8 | E421 | 0.010 | mg/L | <0.010 | --- | --- | --- | --- | --- |
| Cadmium, dissolved | 7440-43-9 | E421 | 0.0000050 | mg/L | <0.0000050 | --- | --- | --- | --- | --- |
| Calcium, dissolved | 7440-70-2 | E421 | 0.050 | mg/L | <0.050 | --- | --- | --- | --- | --- |
| Cesium, dissolved | 7440-46-2 | E421 | 0.000010 | mg/L | <0.000010 | --- | --- | --- | --- | --- |
| Chromium, dissolved | 7440-47-3 | E421 | 0.00050 | mg/L | <0.00050 | --- | --- | --- | --- | --- |
| Cobalt, dissolved | 7440-48-4 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Copper, dissolved | 7440-50-8 | E421 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Iron, dissolved | 7439-89-6 | E421 | 0.010 | mg/L | <0.010 | --- | --- | --- | --- | --- |
| Lead, dissolved | 7439-92-1 | E421 | 0.000050 | mg/L | <0.000050 | --- | --- | --- | --- | --- |
| Lithium, dissolved | 7439-93-2 | E421 | 0.0010 | mg/L | <0.0010 | --- | --- | --- | --- | --- |
| Magnesium, dissolved | 7439-95-4 | E421 | 0.0050 | mg/L | <0.0050 | --- | --- | --- | --- | --- |
| Manganese, dissolved | 7439-96-5 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Mercury, dissolved | 7439-97-6 | E509 | 0.0000050 | mg/L | <0.0000050 | --- | --- | --- | --- | --- |
| Molybdenum, dissolved | 7439-98-7 | E421 | 0.000050 | mg/L | <0.000050 | --- | --- | --- | --- | --- |
| Nickel, dissolved | 7440-02-0 | E421 | 0.00050 | mg/L | <0.00050 | --- | --- | --- | --- | --- |
| Phosphorus, dissolved | 7723-14-0 | E421 | 0.050 | mg/L | <0.050 | --- | --- | --- | --- | --- |
| Potassium, dissolved | 7440-09-7 | E421 | 0.050 | mg/L | <0.050 | --- | --- | --- | --- | --- |



Analytical Results

| | | | | | | | | | | |
|---------------------------------------|-------------|------------|----------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | TB | BRP-46-01-PP | BRP-46-02-PP | BRP-46-03-PP | BRP-48-01-PP |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | 15-Apr-2023 18:15 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-011 | YL2300303-012 | YL2300303-013 | YL2300303-014 | YL2300303-015 | |
| | | | | | Result | Result | Result | Result | Result | |
| Dissolved Metals | | | | | | | | | | |
| Rubidium, dissolved | 7440-17-7 | E421 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Selenium, dissolved | 7782-49-2 | E421 | 0.000050 | mg/L | <0.000050 | --- | --- | --- | --- | --- |
| Silicon, dissolved | 7440-21-3 | E421 | 0.050 | mg/L | <0.050 | --- | --- | --- | --- | --- |
| Silver, dissolved | 7440-22-4 | E421 | 0.000010 | mg/L | <0.000010 | --- | --- | --- | --- | --- |
| Sodium, dissolved | 7440-23-5 | E421 | 0.050 | mg/L | <0.050 | --- | --- | --- | --- | --- |
| Strontium, dissolved | 7440-24-6 | E421 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Sulfur, dissolved | 7704-34-9 | E421 | 0.50 | mg/L | <0.50 | --- | --- | --- | --- | --- |
| Tellurium, dissolved | 13494-80-9 | E421 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Thallium, dissolved | 7440-28-0 | E421 | 0.000010 | mg/L | <0.000010 | --- | --- | --- | --- | --- |
| Thorium, dissolved | 7440-29-1 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Tin, dissolved | 7440-31-5 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Titanium, dissolved | 7440-32-6 | E421 | 0.00030 | mg/L | <0.00030 | --- | --- | --- | --- | --- |
| Tungsten, dissolved | 7440-33-7 | E421 | 0.00010 | mg/L | <0.00010 | --- | --- | --- | --- | --- |
| Uranium, dissolved | 7440-61-1 | E421 | 0.000010 | mg/L | <0.000010 | --- | --- | --- | --- | --- |
| Vanadium, dissolved | 7440-62-2 | E421 | 0.00050 | mg/L | <0.00050 | --- | --- | --- | --- | --- |
| Zinc, dissolved | 7440-66-6 | E421 | 0.0010 | mg/L | <0.0010 | --- | --- | --- | --- | --- |
| Zirconium, dissolved | 7440-67-7 | E421 | 0.00020 | mg/L | <0.00020 | --- | --- | --- | --- | --- |
| Dissolved mercury filtration location | ---- | EP509 | - | - | N/A | --- | --- | --- | --- | --- |
| Dissolved metals filtration location | ---- | EP421 | - | - | Field | --- | --- | --- | --- | --- |
| Volatile Organic Compounds [Fuels] | | | | | | | | | | |
| Benzene | 71-43-2 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Ethylbenzene | 100-41-4 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Styrene | 100-42-5 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Toluene | 108-88-3 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Xylene, m+p- | 179601-23-1 | E611A | 0.40 | µg/L | <0.40 | --- | --- | --- | --- | --- |
| Xylene, o- | 95-47-6 | E611A | 0.30 | µg/L | <0.30 | --- | --- | --- | --- | --- |
| Xylenes, total | 1330-20-7 | E611A | 0.50 | µg/L | <0.50 | --- | --- | --- | --- | --- |
| Hydrocarbons | | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | --- | --- | --- | --- | --- |



Analytical Results

| | | | | | | | | | | |
|---------------------------------------------|------------|------------|--------|-----------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | TB | BRP-46-01-PP | BRP-46-02-PP | BRP-46-03-PP | BRP-48-01-PP |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | 15-Apr-2023 18:15 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-011 | YL2300303-012 | YL2300303-013 | YL2300303-014 | YL2300303-015 | |
| | | | | | Result | Result | Result | Result | Result | |
| Hydrocarbons | | | | | | | | | | |
| F1-BTEX | ---- | EC580 | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | ---- |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- | ---- | ---- | ---- | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | ---- | ---- | ---- | ---- | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | ---- | ---- | ---- | ---- | ---- |
| Hydrocarbons Surrogates | | | | | | | | | | |
| Bromobenzotrifluoride, 2- (F2-F4 surrogate) | 392-83-6 | E601 | 1.0 | % | 88.9 | ---- | ---- | ---- | ---- | ---- |
| Dichlorotoluene, 3,4- | 95-75-0 | E581.VH+F1 | 1.0 | % | 108 | ---- | ---- | ---- | ---- | ---- |
| Volatile Organic Compounds Surrogates | | | | | | | | | | |
| Bromofluorobenzene, 4- | 460-00-4 | E611A | 1.0 | % | 95.0 | ---- | ---- | ---- | ---- | ---- |
| Difluorobenzene, 1,4- | 540-36-3 | E611A | 1.0 | % | 100 | ---- | ---- | ---- | ---- | ---- |
| Plant Pigments | | | | | | | | | | |
| Chlorophyll a | 479-61-8 | EC870A | 0.010 | µg/L | ---- | 0.168 | 0.142 | 0.178 | 0.104 | |
| Chlorophyll a | 479-61-8 | E870A | 0.0020 | µg/sample | ---- | 0.213 | 0.182 | 0.241 | 0.136 | |

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

Analytical Results

| | | | | | | | | | | |
|-----------------------------|------------|--------|--------|-----------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sub-Matrix: Water | | | | | Client sample ID | BRP-48-02-PP | BRP-48-03-PP | BRP-51-01-PP | BRP-51-02-PP | BRP-51-03-PP |
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-016 | YL2300303-017 | YL2300303-018 | YL2300303-019 | YL2300303-020 | |
| | | | | | Result | Result | Result | Result | Result | |
| Field Tests | | | | | | | | | | |
| Sampling volume, field | ---- | EF003 | 0.010 | L | 1.18 | 1.26 | 1.22 | 1.19 | 1.23 | |
| Plant Pigments | | | | | | | | | | |
| Chlorophyll a | 479-61-8 | EC870A | 0.010 | µg/L | 0.140 | 0.139 | 0.170 | 0.151 | 0.154 | |
| Chlorophyll a | 479-61-8 | E870A | 0.0020 | µg/sample | 0.165 | 0.175 | 0.208 | 0.180 | 0.190 | |

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



Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | REF05-01-PP | REF05-02-PP | REF05-03-PP | REF04-01-PP | REF04-02-PP |
|-----------------------------|------------|--------|--------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | | | | | |
| | | | | | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 | 18-Apr-2023 03:00 |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-021 | YL2300303-022 | YL2300303-023 | YL2300303-024 | YL2300303-025 | |
| | | | | | Result | Result | Result | Result | Result | |
| Field Tests | | | | | | | | | | |
| Sampling volume, field | ---- | EF003 | 0.010 | L | 1.27 | 1.24 | 1.27 | 1.27 | 1.27 | 1.25 |
| Plant Pigments | | | | | | | | | | |
| Chlorophyll a | 479-61-8 | EC870A | 0.010 | µg/L | 0.224 | 0.222 | 0.225 | 0.255 | 0.312 | |
| Chlorophyll a | 479-61-8 | E870A | 0.0020 | µg/sample | 0.284 | 0.275 | 0.286 | 0.324 | 0.390 | |

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

Analytical Results

| Sub-Matrix: Water | | | | | Client sample ID | REF04-03-PP | ---- | ---- | ---- | ---- |
|-----------------------------|------------|--------|--------|-----------|----------------------|-------------|-------|-------|-------|-------|
| (Matrix: Water) | | | | | | | | | | |
| Client sampling date / time | | | | | | | | | | |
| | | | | | 18-Apr-2023 03:00 | ---- | ---- | ---- | ---- | ---- |
| Analyte | CAS Number | Method | LOR | Unit | YL2300303-026 | ----- | ----- | ----- | ----- | ----- |
| | | | | | Result | ---- | ---- | ---- | ---- | ---- |
| Field Tests | | | | | | | | | | |
| Sampling volume, field | ---- | EF003 | 0.010 | L | 1.28 | ---- | ---- | ---- | ---- | ---- |
| Plant Pigments | | | | | | | | | | |
| Chlorophyll a | 479-61-8 | EC870A | 0.010 | µg/L | 0.281 | ---- | ---- | ---- | ---- | ---- |
| Chlorophyll a | 479-61-8 | E870A | 0.0020 | µg/sample | 0.360 | ---- | ---- | ---- | ---- | ---- |

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

QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|-------------------------|-------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|
| Work Order | : YL2300303 | Page | : 1 of 45 |
| Client | : Stantec Consulting Ltd. | Laboratory | : Yellowknife - Environmental |
| 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 | : 18-Apr-2023 19:00 |
| PO | : ---- | Issue Date | : 28-Apr-2023 18:56 |
| C-O-C number | : ---- | | |
| Sampler | : MW/NO | | |
| Site | : ---- | | |
| Quote number | : VA22-STAC100-001 | | |
| No. of samples received | : 26 | | |
| No. of samples analysed | : 26 | | |

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 Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- 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.



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: **Water** Evaluation: ***** = Holding time exceedance ; **✓** = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-------------------------------------------------|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46D-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46S-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48D-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48S-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-515-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) FB | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) Field DUP | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-----------------------------------------------------------|-----------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF040-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF045-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF055-WQ | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Anions and Nutrients : Ammonia by Fluorescence | | | | | | | | | | |
| Amber glass total (sulfuric acid) TB | E298 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-48S-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE FB | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE Field DUP | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF040-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF045-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF055-WQ | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Bromide in Water by IC (Low Level) | | | | | | | | | | |
| HDPE TB | E235.Br-L | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group 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 : Chloride in Water by IC | | | | | | | | | | |
| HDPE BRP-48S-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE FB | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE Field DUP | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE REF040-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE REF045-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE REF055-WQ | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Chloride in Water by IC | | | | | | | | | | |
| HDPE TB | E235.Cl | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 | | | | | | | | | | |
| | | | | | | | | | | |
| HDPE BRP-46D-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | ✖ EHTL |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group 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) | | | | | | | | | | |
| HDPE BRP-46S-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE BRP-48D-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE BRP-48S-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE BRP-515-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE FB | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE Field DUP | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001) | | | | | | | | | | |
| HDPE REF040-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | <div>✖ EHTL</div> |



Matrix: **Water**

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

| Analyte Group 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 | | | | | | | | | | |
| HDPE REF045-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | ✖ EHTL |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 | | | | | | | | | | |
| HDPE REF055-WQ | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | ✖ EHTL |
| Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 | | | | | | | | | | |
| HDPE TB | E378-U | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 3 days | 11 days | ✖ EHTL |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE BRP-48S-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group 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 : Fluoride in Water by IC | | | | | | | | | | |
| HDPE FB | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE Field DUP | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE REF040-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE REF045-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE REF055-WQ | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Fluoride in Water by IC | | | | | | | | | | |
| HDPE TB | E235.F | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✓ |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | ✖ EHTL |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | ✖ EHTL |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | ✖ EHTL |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-----------------------------------------------------------|------------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------------------------------|
| Container / Client Sample ID(s) | | | 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 BRP-48S-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE FB | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE Field DUP | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF040-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF045-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF055-WQ | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrate in Water by IC (Low Level) | | | | | | | | | | |
| HDPE TB | E235.NO3-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-----------------------------------------------------------|------------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------------------------------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-48S-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE FB | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE Field DUP | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF040-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF045-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |
| Anions and Nutrients : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE REF055-WQ | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | <div>✖</div> <div>EHTL</div> |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 : Nitrite in Water by IC (Low Level) | | | | | | | | | | |
| HDPE TB | E235.NO2-L | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 3 days | 5 days | ✖ EHTL |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE BRP-46D-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE BRP-46S-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE BRP-48D-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE BRP-48S-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE BRP-515-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE FB | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE Field DUP | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE REF040-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE REF045-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE REF055-WQ | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Reactive Silica by Colourimetry | | | | | | | | | | |
| HDPE TB | E392 | 15-Apr-2023 | ---- | ---- | ---- | | 25-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE BRP-46D-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE BRP-46S-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE BRP-48D-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE BRP-48S-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE BRP-515-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE FB | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-------------------------------------------------------|----------|---------------|--------------------------|---------------|--------|------|---------------|---------------|---------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE Field DUP | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE REF040-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE REF045-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE REF055-WQ | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Sulfate in Water by IC | | | | | | | | | | |
| HDPE TB | E235.SO4 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 10 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46D-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46S-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48D-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48S-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-515-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) FB | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) Field DUP | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF040-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF045-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF055-WQ | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Nitrogen by Colourimetry | | | | | | | | | | |
| Amber glass total (sulfuric acid) TB | E366 | 15-Apr-2023 | 25-Apr-2023 | ---- | ---- | | 26-Apr-2023 | 28 days | 11 days | ✔ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46D-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 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 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✔ |



Matrix: Water

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48D-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 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 | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-515-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) FB | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) Field DUP | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF040-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF045-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF055-WQ | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L) | | | | | | | | | | |
| Amber glass total (sulfuric acid) TB | E372-U | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) BRP-46D-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) BRP-46S-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) BRP-48D-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) BRP-48S-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) BRP-515-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) FB | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) Field DUP | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) REF040-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) REF045-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✔ |



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) REF055-WQ | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Dissolved Metals : Dissolved Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial dissolved (hydrochloric acid) TB | E509 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 6 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) BRP-46D-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) BRP-46S-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) BRP-48D-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) BRP-48S-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) BRP-515-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) FB | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) Field DUP | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) REF040-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) REF045-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) REF055-WQ | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Dissolved Metals : Dissolved Metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE dissolved (nitric acid) TB | E421 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✓ |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-01-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-02-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-03-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-01-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-02-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

| Analyte Group 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 | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-03-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-01-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-02-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-03-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF04-01-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF04-02-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF04-03-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF05-01-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF05-02-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Field Tests : Field Volume (L) | | | | | | | | | | |
| Opaque HDPE tube REF05-03-PP | EF003 | 18-Apr-2023 | ---- | ---- | ---- | | 24-Apr-2023 | ---- | ---- | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) BRP-46D-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) BRP-46S-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) BRP-48D-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) BRP-48S-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) BRP-515-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) FB | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) Field DUP | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) REF040-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) REF045-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) REF055-WQ | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : CCME PHCs - F2-F4 by GC-FID | | | | | | | | | | |
| Amber glass/Teflon lined cap (sodium bisulfate) TB | E601 | 15-Apr-2023 | 26-Apr-2023 | 14 days | 11 days | ✓ | 27-Apr-2023 | 40 days | 1 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-46D-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-46S-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-48D-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-48S-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-515-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) FB | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

| Analyte Group 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 | |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) Field DUP | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF040-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF045-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF055-WQ | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Hydrocarbons : VH and F1 by Headspace GC-FID | | | | | | | | | | |
| Glass vial (sodium bisulfate) TB | E581.VH+F1 | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) BRP-46D-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✔ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) BRP-46S-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✔ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) BRP-48D-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✔ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) BRP-48S-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✔ |



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---------------------------------------------------------------------------------------------|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) BRP-515-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) FB | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) Field DUP | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) REF040-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) REF045-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) REF055-WQ | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level) | | | | | | | | | | |
| Amber glass dissolved (sulfuric acid) TB | E358-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46D-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-46S-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |



Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48D-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-48S-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) BRP-515-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) FB | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) Field DUP | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF040-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF045-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) REF055-WQ | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |
| Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | | | | | | | | | | |
| Amber glass total (sulfuric acid) TB | E355-L | 15-Apr-2023 | 20-Apr-2023 | ---- | ---- | | 20-Apr-2023 | 28 days | 5 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE BRP-46D-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE BRP-46S-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE BRP-48D-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE BRP-48S-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE BRP-515-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE FB | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE Field DUP | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE REF040-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE REF045-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE REF055-WQ | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : Conductivity in Water | | | | | | | | | | |
| HDPE TB | E100 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 5 days | ✓ |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE BRP-46D-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE BRP-46S-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE BRP-48D-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE BRP-48S-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE BRP-515-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE FB | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE Field DUP | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE REF040-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE REF045-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE REF055-WQ | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : pH by Meter | | | | | | | | | | |
| HDPE TB | E108 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 0.25 hrs | 5.25 hrs | ✖ EHTR-FM |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE BRP-46D-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE BRP-46S-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE BRP-48D-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE BRP-48S-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE BRP-515-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE FB | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE Field DUP | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE REF040-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE REF045-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE REF055-WQ | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TDS by Gravimetry | | | | | | | | | | |
| HDPE TB | E162 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 7 days | 5 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE BRP-46D-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE BRP-46S-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE BRP-48D-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE BRP-48S-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE BRP-515-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE FB | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE Field DUP | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE REF040-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE REF045-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE REF055-WQ | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : TSS by Gravimetry | | | | | | | | | | |
| HDPE TB | E160 | 15-Apr-2023 | ---- | ---- | ---- | | 22-Apr-2023 | 7 days | 6 days | ✓ |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE BRP-46D-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | ✖ EHTL |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group 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 | |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE BRP-46S-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE BRP-48D-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE BRP-48S-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE BRP-515-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE FB | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE Field DUP | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE REF040-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE REF045-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE REF055-WQ | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | <div>✖ EHTL</div> |



Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|-------------------------------------------------------------------|--------|---------------|--------------------------|---------------|---------|------|---------------|---------------|--------|-----------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Physical Tests : Turbidity by Nephelometry | | | | | | | | | | |
| HDPE TB | E121 | 15-Apr-2023 | ---- | ---- | ---- | | 21-Apr-2023 | 3 days | 6 days | ✖ EHTL |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-01-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-02-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-46-03-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-01-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-02-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-48-03-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-01-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-02-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube BRP-51-03-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF04-01-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF04-02-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF04-03-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF05-01-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF05-02-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg) | | | | | | | | | | |
| Opaque HDPE tube REF05-03-PP | E870A | 18-Apr-2023 | 27-Apr-2023 | 28 days | 10 days | ✓ | 28-Apr-2023 | 28 days | 1 days | ✓ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) FB | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) Field DUP | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✓ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 | |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) REF040-WQ | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) REF045-WQ | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) REF055-WQ | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) TB | E508 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 28 days | 6 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) BRP-46D-WQ | E508 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 7 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) BRP-46S-WQ | E508 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 7 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) BRP-48D-WQ | E508 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 7 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) BRP-48S-WQ | E508 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 7 days | ✔ |
| Total Metals : Total Mercury in Water by CVAAS | | | | | | | | | | |
| Glass vial total (hydrochloric acid) BRP-515-WQ | E508 | 15-Apr-2023 | 22-Apr-2023 | ---- | ---- | | 22-Apr-2023 | 28 days | 7 days | ✔ |



Matrix: **Water** Evaluation: **✖** = Holding time exceedance ; **✔** = Within Holding Time

| Analyte Group 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 | |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) BRP-46D-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) BRP-46S-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) BRP-48D-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) BRP-48S-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) BRP-515-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) FB | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) Field DUP | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) REF040-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) REF045-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|--------------------------------------------------------------|--------|---------------|--------------------------|---------------|--------|------|---------------|---------------|--------|------|
| Container / Client Sample ID(s) | | | Preparation Date | Holding Times | | Eval | Analysis Date | Holding Times | | Eval |
| | | | | Rec | Actual | | | Rec | Actual | |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) REF055-WQ | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Total Metals : Total metals in Water by CRC ICPMS | | | | | | | | | | |
| HDPE total (nitric acid) TB | E420 | 15-Apr-2023 | 21-Apr-2023 | ---- | ---- | | 21-Apr-2023 | 180 days | 5 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-46D-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-46S-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-48D-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-48S-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) BRP-515-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) FB | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) Field DUP | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✔ |

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 Work Order : YL2300303
 Client : Stantec Consulting Ltd.
 Project : 121417593



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

| Analyte Group 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 [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF040-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF045-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) REF055-WQ | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |
| Volatile Organic Compounds [Fuels] : BTEX by Headspace GC-MS | | | | | | | | | | |
| Glass vial (sodium bisulfate) TB | E611A | 15-Apr-2023 | 23-Apr-2023 | ---- | ---- | | 23-Apr-2023 | 14 days | 8 days | ✓ |

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended
 EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
 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: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

| Quality Control Sample Type | Method | QC Lot # | Count | | Frequency (%) | | |
|-------------------------------------------------------------------------|------------|----------|-------|---------|---------------|----------|------------|
| Analytical Methods | | | QC | Regular | Actual | Expected | Evaluation |
| Laboratory Duplicates (DUP) | | | | | | | |
| Ammonia by Fluorescence | E298 | 905201 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Bromide in Water by IC (Low Level) | E235.Br-L | 910479 | 1 | 13 | 7.6 | 5.0 | ✓ |
| BTEX by Headspace GC-MS | E611A | 907699 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Chloride in Water by IC | E235.Cl | 910475 | 1 | 14 | 7.1 | 5.0 | ✓ |
| Conductivity in Water | E100 | 905566 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Dissolved Mercury in Water by CVAAS | E509 | 907080 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Dissolved Metals in Water by CRC ICPMS | E421 | 905369 | 1 | 15 | 6.6 | 5.0 | ✓ |
| Dissolved Organic Carbon by Combustion (Low Level) | E358-L | 905198 | 1 | 12 | 8.3 | 5.0 | ✓ |
| Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L) | E378-U | 910480 | 1 | 12 | 8.3 | 5.0 | ✓ |
| Fluoride in Water by IC | E235.F | 910478 | 1 | 14 | 7.1 | 5.0 | ✓ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 905570 | 1 | 17 | 5.8 | 5.0 | ✓ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 905571 | 1 | 17 | 5.8 | 5.0 | ✓ |
| pH by Meter | E108 | 905564 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Reactive Silica by Colourimetry | E392 | 909655 | 1 | 13 | 7.6 | 5.0 | ✓ |
| Sulfate in Water by IC | E235.SO4 | 910474 | 1 | 14 | 7.1 | 5.0 | ✓ |
| TDS by Gravimetry | E162 | 907075 | 2 | 27 | 7.4 | 5.0 | ✓ |
| Total Mercury in Water by CVAAS | E508 | 906035 | 2 | 33 | 6.0 | 5.0 | ✓ |
| Total metals in Water by CRC ICPMS | E420 | 905243 | 1 | 19 | 5.2 | 5.0 | ✓ |
| Total Nitrogen by Colourimetry | E366 | 909225 | 1 | 14 | 7.1 | 5.0 | ✓ |
| Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | E355-L | 905199 | 1 | 11 | 9.0 | 5.0 | ✓ |
| Total Phosphorus by Colourimetry (0.002 mg/L) | E372-U | 905200 | 1 | 11 | 9.0 | 5.0 | ✓ |
| TSS by Gravimetry | E160 | 907058 | 1 | 19 | 5.2 | 5.0 | ✓ |
| Turbidity by Nephelometry | E121 | 905837 | 1 | 12 | 8.3 | 5.0 | ✓ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 907700 | 1 | 19 | 5.2 | 5.0 | ✓ |
| Laboratory Control Samples (LCS) | | | | | | | |
| Ammonia by Fluorescence | E298 | 905201 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Bromide in Water by IC (Low Level) | E235.Br-L | 910479 | 1 | 13 | 7.6 | 5.0 | ✓ |
| BTEX by Headspace GC-MS | E611A | 907699 | 1 | 20 | 5.0 | 5.0 | ✓ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 910913 | 2 | 11 | 18.1 | 5.0 | ✓ |
| Chloride in Water by IC | E235.Cl | 910475 | 1 | 14 | 7.1 | 5.0 | ✓ |
| Chlorophyll-a by Fluorometry (Field Filtered µg) | E870A | 913655 | 1 | 20 | 5.0 | 5.0 | ✓ |
| Conductivity in Water | E100 | 905566 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Dissolved Mercury in Water by CVAAS | E509 | 907080 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Dissolved Metals in Water by CRC ICPMS | E421 | 905369 | 1 | 15 | 6.6 | 5.0 | ✓ |
| Dissolved Organic Carbon by Combustion (Low Level) | E358-L | 905198 | 1 | 12 | 8.3 | 5.0 | ✓ |
| Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L) | E378-U | 910480 | 1 | 12 | 8.3 | 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 | | | | | | | |
| Fluoride in Water by IC | E235.F | 910478 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 905570 | 1 | 17 | 5.8 | 5.0 | ✔ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 905571 | 1 | 17 | 5.8 | 5.0 | ✔ |
| pH by Meter | E108 | 905564 | 1 | 16 | 6.2 | 5.0 | ✔ |
| Reactive Silica by Colourimetry | E392 | 909655 | 1 | 13 | 7.6 | 5.0 | ✔ |
| Sulfate in Water by IC | E235.SO4 | 910474 | 1 | 14 | 7.1 | 5.0 | ✔ |
| TDS by Gravimetry | E162 | 907075 | 2 | 27 | 7.4 | 5.0 | ✔ |
| Total Mercury in Water by CVAAS | E508 | 906035 | 2 | 33 | 6.0 | 5.0 | ✔ |
| Total metals in Water by CRC ICPMS | E420 | 905243 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Total Nitrogen by Colourimetry | E366 | 909225 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | E355-L | 905199 | 1 | 11 | 9.0 | 5.0 | ✔ |
| Total Phosphorus by Colourimetry (0.002 mg/L) | E372-U | 905200 | 1 | 11 | 9.0 | 5.0 | ✔ |
| TSS by Gravimetry | E160 | 907058 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Turbidity by Nephelometry | E121 | 905837 | 1 | 12 | 8.3 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 907700 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Method Blanks (MB) | | | | | | | |
| Ammonia by Fluorescence | E298 | 905201 | 1 | 20 | 5.0 | 5.0 | ✔ |
| Bromide in Water by IC (Low Level) | E235.Br-L | 910479 | 1 | 13 | 7.6 | 5.0 | ✔ |
| BTEX by Headspace GC-MS | E611A | 907699 | 1 | 20 | 5.0 | 5.0 | ✔ |
| CCME PHCs - F2-F4 by GC-FID | E601 | 910913 | 2 | 11 | 18.1 | 5.0 | ✔ |
| Chloride in Water by IC | E235.Cl | 910475 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Chlorophyll-a by Fluorometry (Field Filtered µg) | E870A | 913655 | 1 | 20 | 5.0 | 5.0 | ✔ |
| Conductivity in Water | E100 | 905566 | 1 | 16 | 6.2 | 5.0 | ✔ |
| Dissolved Mercury in Water by CVAAS | E509 | 907080 | 1 | 16 | 6.2 | 5.0 | ✔ |
| Dissolved Metals in Water by CRC ICPMS | E421 | 905369 | 1 | 15 | 6.6 | 5.0 | ✔ |
| Dissolved Organic Carbon by Combustion (Low Level) | E358-L | 905198 | 1 | 12 | 8.3 | 5.0 | ✔ |
| Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L) | E378-U | 910480 | 1 | 12 | 8.3 | 5.0 | ✔ |
| Fluoride in Water by IC | E235.F | 910478 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 905570 | 1 | 17 | 5.8 | 5.0 | ✔ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 905571 | 1 | 17 | 5.8 | 5.0 | ✔ |
| Reactive Silica by Colourimetry | E392 | 909655 | 1 | 13 | 7.6 | 5.0 | ✔ |
| Sulfate in Water by IC | E235.SO4 | 910474 | 1 | 14 | 7.1 | 5.0 | ✔ |
| TDS by Gravimetry | E162 | 907075 | 2 | 27 | 7.4 | 5.0 | ✔ |
| Total Mercury in Water by CVAAS | E508 | 906035 | 2 | 33 | 6.0 | 5.0 | ✔ |
| Total metals in Water by CRC ICPMS | E420 | 905243 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Total Nitrogen by Colourimetry | E366 | 909225 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | E355-L | 905199 | 1 | 11 | 9.0 | 5.0 | ✔ |
| Total Phosphorus by Colourimetry (0.002 mg/L) | E372-U | 905200 | 1 | 11 | 9.0 | 5.0 | ✔ |
| TSS by Gravimetry | E160 | 907058 | 1 | 19 | 5.2 | 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 |
| Method Blanks (MB) - Continued | | | | | | | |
| Turbidity by Nephelometry | E121 | 905837 | 1 | 12 | 8.3 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 907700 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Matrix Spikes (MS) | | | | | | | |
| Ammonia by Fluorescence | E298 | 905201 | 1 | 20 | 5.0 | 5.0 | ✔ |
| Bromide in Water by IC (Low Level) | E235.Br-L | 910479 | 1 | 13 | 7.6 | 5.0 | ✔ |
| BTEX by Headspace GC-MS | E611A | 907699 | 1 | 20 | 5.0 | 5.0 | ✔ |
| Chloride in Water by IC | E235.Cl | 910475 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Dissolved Mercury in Water by CVAAS | E509 | 907080 | 1 | 16 | 6.2 | 5.0 | ✔ |
| Dissolved Metals in Water by CRC ICPMS | E421 | 905369 | 1 | 15 | 6.6 | 5.0 | ✔ |
| Dissolved Organic Carbon by Combustion (Low Level) | E358-L | 905198 | 1 | 12 | 8.3 | 5.0 | ✔ |
| Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L) | E378-U | 910480 | 1 | 12 | 8.3 | 5.0 | ✔ |
| Fluoride in Water by IC | E235.F | 910478 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 905570 | 1 | 17 | 5.8 | 5.0 | ✔ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 905571 | 1 | 17 | 5.8 | 5.0 | ✔ |
| Reactive Silica by Colourimetry | E392 | 909655 | 1 | 13 | 7.6 | 5.0 | ✔ |
| Sulfate in Water by IC | E235.SO4 | 910474 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Total Mercury in Water by CVAAS | E508 | 906035 | 2 | 33 | 6.0 | 5.0 | ✔ |
| Total metals in Water by CRC ICPMS | E420 | 905243 | 1 | 19 | 5.2 | 5.0 | ✔ |
| Total Nitrogen by Colourimetry | E366 | 909225 | 1 | 14 | 7.1 | 5.0 | ✔ |
| Total Organic Carbon (Non-Purgeable) by Combustion (Low Level) | E355-L | 905199 | 1 | 11 | 9.0 | 5.0 | ✔ |
| Total Phosphorus by Colourimetry (0.002 mg/L) | E372-U | 905200 | 1 | 11 | 9.0 | 5.0 | ✔ |
| VH and F1 by Headspace GC-FID | E581.VH+F1 | 907700 | 1 | 19 | 5.2 | 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 |
|------------------------------------|------------------------------------------------|--------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conductivity in Water | E100 Vancouver - Environmental | 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 Vancouver - Environmental | Water | APHA 4500-H (mod) | pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^\circ\text{C}$). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time. |
| Turbidity by Nephelometry | E121 Vancouver - Environmental | 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 Vancouver - Environmental | 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 $104 \pm 1^\circ\text{C}$, 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 Vancouver - Environmental | 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 $180 \pm 2^\circ\text{C}$ for 16 hours or to constant weight, with gravimetric measurement of the residue. |
| Bromide in Water by IC (Low Level) | E235.Br-L Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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 |
|-------------------------------------------------------------------------|---------------------------------------------|--------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nitrate in Water by IC (Low Level) | E235.NO3-L Vancouver - Environmental | 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 Vancouver - Environmental | Water | EPA 300.1 (mod) | Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection. |
| Ammonia by Fluorescence | E298 Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | Water | APHA 4500-P J (mod) | Total Nitrogen is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample. |
| Total Phosphorus by Colourimetry (0.002 mg/L) | E372-U Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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 |



| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|--------------------------------------------------|---------------------------------------------|--------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total metals in Water by CRC ICPMS | E420 Vancouver - Environmental | 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. |
| Dissolved Metals in Water by CRC ICPMS | E421 Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | 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. |
| CCME PHCs - F2-F4 by GC-FID | E601 Vancouver - Environmental | Water | CCME PHC in Soil - Tier 1 | Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). |
| BTEX by Headspace GC-MS | E611A Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | Water | APHA 2340B | "Hardness (as CaCO ₃), 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 Vancouver - Environmental | Water | APHA 2340B | "Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total 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. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters. |
| Salinity in Water (calculation) | EC100S Vancouver - Environmental | 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 Vancouver - Environmental | 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 Vancouver - Environmental | Water | CALC | Convert results to sample concentration based on field information. |
| Field Volume (L) | EF003 Vancouver - Environmental | 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 |
|---------------------------------------------------------|----------------------------------------|--------|----------------------|--------------------------------------------------------------------|
| Preparation for Ammonia | EP298 Vancouver - Environmental | Water | | Sample preparation for Preserved Nutrients Water Quality Analysis. |
| Preparation for Total Organic Carbon by Combustion | EP355 Vancouver - Environmental | Water | | Preparation for Total Organic Carbon by Combustion |
| Preparation for Dissolved Organic Carbon for Combustion | EP358 Vancouver - Environmental | Water | APHA 5310 B (mod) | Preparation for Dissolved Organic Carbon |
| Digestion for Total Nitrogen in water | EP366 Vancouver - Environmental | Water | APHA 4500-P J (mod) | Samples are heated with a persulfate digestion reagent. |
| Digestion for Total Phosphorus in water | EP372 Vancouver - Environmental | Water | APHA 4500-P E (mod). | Samples are heated with a persulfate digestion reagent. |



| <i>Preparation Methods</i> | <i>Method / Lab</i> | <i>Matrix</i> | <i>Method Reference</i> | <i>Method Descriptions</i> |
|-------------------------------------------|--------------------------------------------|---------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dissolved Metals Water Filtration | EP421 Vancouver - Environmental | Water | APHA 3030B | Water samples are filtered (0.45 um), and preserved with HNO ₃ . |
| Dissolved Mercury Water Filtration | EP509 Vancouver - Environmental | Water | APHA 3030B | Water samples are filtered (0.45 um), and preserved with HCl. |
| VOCs Preparation for Headspace Analysis | EP581 Vancouver - Environmental | 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 the GC/MS-FID system. |
| PHCs and PAHs Hexane Extraction | EP601 Vancouver - Environmental | 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 Vancouver - Environmental | Water | EPA 445.0 (mod) | Chlorophyll-a solvent extraction. |

QUALITY CONTROL REPORT

| | | | |
|--------------------------------|-------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| Work Order | : YL2300303 | Page | : 1 of 21 |
| Client | : Stantec Consulting Ltd. | Laboratory | : Yellowknife - Environmental |
| 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 | : 18-Apr-2023 19:00 |
| PO | : ---- | Date Analysis Commenced | : 20-Apr-2023 |
| C-O-C number | : ---- | Issue Date | : 28-Apr-2023 18:56 |
| Sampler | : MW/NO ---- | | |
| Site | : ---- | | |
| Quote number | : VA22-STAC100-001 | | |
| No. of samples received | : 26 | | |
| No. of samples analysed | : 26 | | |

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
- 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.

| <i>Signatories</i> | <i>Position</i> | <i>Laboratory Department</i> |
|--------------------|--------------------------------------------|-----------------------------------------------------|
| Anshim Anshim | Lab Assistant | Vancouver Metals, Burnaby, British Columbia |
| Cecilia Zhang | Account Manager Assistant | Vancouver Administration, Burnaby, British Columbia |
| Hamideh Moradi | Analyst | Vancouver Metals, Burnaby, British Columbia |
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Vancouver Metals, Burnaby, British Columbia |
| Lindsay Gung | Supervisor - Water Chemistry | Vancouver Inorganics, Burnaby, British Columbia |
| Miles Gropen | Department Manager - Inorganics | Vancouver Inorganics, Burnaby, British Columbia |
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| Owen Cheng | | Vancouver Metals, Burnaby, British Columbia |
| Parnian Sane | Analyst | Vancouver Metals, Burnaby, British Columbia |
| Tracy Harley | Supervisor - Water Quality Instrumentation | Vancouver Inorganics, Burnaby, British Columbia |



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: 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: 905564) | | | | | | | | | | | |
| VA23A8494-001 | Anonymous | pH | ---- | E108 | 0.10 | pH units | 6.86 | 6.91 | 0.726% | 4% | ---- |
| Physical Tests (QC Lot: 905566) | | | | | | | | | | | |
| VA23A8494-001 | Anonymous | Conductivity | ---- | E100 | 2.0 | µS/cm | 958 | 958 | 0.00% | 10% | ---- |
| Physical Tests (QC Lot: 905837) | | | | | | | | | | | |
| YL2300303-001 | BRP-46S-WQ | Turbidity | ---- | E121 | 0.10 | NTU | 0.13 | 0.14 | 0.01 | Diff <2x LOR | ---- |
| Physical Tests (QC Lot: 907058) | | | | | | | | | | | |
| YL2300300-021 | Anonymous | Solids, total suspended [TSS] | ---- | E160 | 3.0 | mg/L | <3.0 | <3.0 | 0 | Diff <2x LOR | ---- |
| Physical Tests (QC Lot: 907075) | | | | | | | | | | | |
| YL2300300-001 | Anonymous | Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | <10 | <10 | 0 | Diff <2x LOR | ---- |
| Physical Tests (QC Lot: 907076) | | | | | | | | | | | |
| YL2300303-005 | BRP-515-WQ | Solids, total dissolved [TDS] | ---- | E162 | 400 | mg/L | 28300 | 27300 | 3.60% | 20% | ---- |
| Anions and Nutrients (QC Lot: 905200) | | | | | | | | | | | |
| YL2300303-001 | BRP-46S-WQ | Phosphorus, total | 7723-14-0 | E372-U | 0.0020 | mg/L | 0.0390 | 0.0386 | 1.03% | 20% | ---- |
| Anions and Nutrients (QC Lot: 905201) | | | | | | | | | | | |
| YL2300300-001 | 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: 905570) | | | | | | | | | | | |
| VA23A8470-001 | Anonymous | Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.0050 | mg/L | 2.07 | 2.07 | 0.147% | 20% | ---- |
| Anions and Nutrients (QC Lot: 905571) | | | | | | | | | | | |
| VA23A8470-001 | Anonymous | Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.0010 | mg/L | 0.0011 | 0.0011 | 0.00001 | Diff <2x LOR | ---- |
| Anions and Nutrients (QC Lot: 909225) | | | | | | | | | | | |
| VA23A8490-001 | Anonymous | Nitrogen, total | 7727-37-9 | E366 | 0.030 | mg/L | 0.281 | 0.282 | 0.0002 | Diff <2x LOR | ---- |
| Anions and Nutrients (QC Lot: 909655) | | | | | | | | | | | |
| VA23A8747-001 | Anonymous | Silicate (as SiO2) | 7631-86-9 | E392 | 2.50 | mg/L | 114 | 114 | 0.226% | 20% | ---- |
| Anions and Nutrients (QC Lot: 910474) | | | | | | | | | | | |
| VA23A8818-001 | Anonymous | Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.30 | mg/L | 13.1 | 13.1 | 0.0870% | 20% | ---- |
| Anions and Nutrients (QC Lot: 910475) | | | | | | | | | | | |
| VA23A8818-001 | Anonymous | Chloride | 16887-00-6 | E235.Cl | 0.50 | mg/L | 1.08 | 1.09 | 0.005 | Diff <2x LOR | ---- |
| Anions and Nutrients (QC Lot: 910478) | | | | | | | | | | | |
| VA23A8818-001 | Anonymous | Fluoride | 16984-48-8 | E235.F | 0.020 | mg/L | 0.075 | 0.073 | 0.002 | Diff <2x LOR | ---- |
| Anions and Nutrients (QC Lot: 910479) | | | | | | | | | | | |



| 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: 910479) - continued | | | | | | | | | | | |
| VA23A8818-001 | Anonymous | Bromide | 24959-67-9 | E235.Br-L | 0.050 | mg/L | <0.050 | <0.050 | 0 | Diff <2x LOR | ---- |
| Anions and Nutrients (QC Lot: 910480) | | | | | | | | | | | |
| VA23A8816-001 | Anonymous | Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.0010 | mg/L | 0.0032 | 0.0046 | 0.0014 | Diff <2x LOR | ---- |
| Organic / Inorganic Carbon (QC Lot: 905198) | | | | | | | | | | | |
| YL2300302-001 | Anonymous | Carbon, dissolved organic [DOC] | ---- | E358-L | 0.50 | mg/L | 50.3 | 52.0 | 3.39% | 20% | ---- |
| Organic / Inorganic Carbon (QC Lot: 905199) | | | | | | | | | | | |
| YL2300303-001 | BRP-46S-WQ | Carbon, total organic [TOC] | ---- | E355-L | 0.50 | mg/L | 1.66 | 1.55 | 0.11 | Diff <2x LOR | ---- |
| Total Metals (QC Lot: 905243) | | | | | | | | | | | |
| KS2301226-001 | Anonymous | Aluminum, total | 7429-90-5 | E420 | 0.0100 | mg/L | <0.0100 | <0.0100 | 0 | Diff <2x LOR | ---- |
| | | Antimony, total | 7440-36-0 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | Diff <2x LOR | ---- |
| | | Arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | 0.00010 | <0.00010 | 0.000004 | Diff <2x LOR | ---- |
| | | Barium, total | 7440-39-3 | E420 | 0.0200 | mg/L | 0.0312 | 0.0304 | 0.00075 | Diff <2x LOR | ---- |
| | | 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 | 0.100 | mg/L | <0.100 | <0.100 | 0 | Diff <2x LOR | ---- |
| | | Cadmium, total | 7440-43-9 | E420 | 0.000200 | mg/L | <0.000200 | <0.000200 | 0 | Diff <2x LOR | ---- |
| | | Calcium, total | 7440-70-2 | E420 | 0.100 | mg/L | 78.0 | 77.5 | 0.703% | 20% | ---- |
| | | Cesium, total | 7440-46-2 | E420 | 0.000010 | mg/L | <0.000010 | <0.000010 | 0 | Diff <2x LOR | ---- |
| | | Chromium, total | 7440-47-3 | E420 | 0.00200 | mg/L | <0.00200 | <0.00200 | 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 | 0.00100 | mg/L | 0.00301 | 0.00301 | 0.000004 | Diff <2x LOR | ---- |
| | | Iron, total | 7439-89-6 | E420 | 0.030 | mg/L | <0.030 | <0.030 | 0 | Diff <2x LOR | ---- |
| | | Lead, total | 7439-92-1 | E420 | 0.000500 | mg/L | <0.000500 | <0.000500 | 0 | Diff <2x LOR | ---- |
| | | Lithium, total | 7439-93-2 | E420 | 0.0010 | mg/L | 0.0029 | 0.0029 | 0.000004 | Diff <2x LOR | ---- |
| | | Magnesium, total | 7439-95-4 | E420 | 0.100 | mg/L | 18.9 | 18.7 | 0.906% | 20% | ---- |
| | | Manganese, total | 7439-96-5 | E420 | 0.00200 | mg/L | <0.00200 | <0.00200 | 0 | Diff <2x LOR | ---- |
| | | Molybdenum, total | 7439-98-7 | E420 | 0.000050 | mg/L | 0.00136 | 0.00141 | 3.80% | 20% | ---- |
| | | Nickel, total | 7440-02-0 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | 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 | 0.100 | mg/L | 3.20 | 3.14 | 1.81% | 20% | ---- |
| | | Rubidium, total | 7440-17-7 | E420 | 0.00020 | mg/L | 0.00021 | 0.00022 | 0.000008 | Diff <2x LOR | ---- |
| | | Selenium, total | 7782-49-2 | E420 | 0.00100 | mg/L | 0.00323 | 0.00295 | 0.000282 | Diff <2x LOR | ---- |
| | | Silicon, total | 7440-21-3 | E420 | 0.10 | mg/L | 6.67 | 6.60 | 1.01% | 20% | ---- |
| | | Silver, total | 7440-22-4 | E420 | 0.000010 | mg/L | <0.000010 | <0.000010 | 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 |
| Total Metals (QC Lot: 905243) - continued | | | | | | | | | | | |
| KS2301226-001 | Anonymous | Sodium, total | 7440-23-5 | E420 | 2.00 | mg/L | 7.14 | 6.85 | 0.290 | Diff <2x LOR | ---- |
| | | Strontium, total | 7440-24-6 | E420 | 0.00020 | mg/L | 0.448 | 0.442 | 1.34% | 20% | ---- |
| | | Sulfur, total | 7704-34-9 | E420 | 0.50 | mg/L | 13.7 | 13.4 | 2.41% | 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 | 0.000100 | mg/L | 0.00193 | 0.00191 | 1.06% | 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 | 0.0500 | mg/L | <0.0500 | <0.0500 | 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: 906035) | | | | | | | | | | | |
| FJ2300837-001 | Anonymous | Mercury, total | 7439-97-6 | E508 | 0.0000050 | mg/L | <0.0000050 | 0.0000052 | 0.0000002 | Diff <2x LOR | ---- |
| Total Metals (QC Lot: 907117) | | | | | | | | | | | |
| VA23A8303-001 | Anonymous | Mercury, total | 7439-97-6 | E508 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | 0 | Diff <2x LOR | ---- |
| Dissolved Metals (QC Lot: 905369) | | | | | | | | | | | |
| VA23A8463-001 | Anonymous | Aluminum, dissolved | 7429-90-5 | E421 | 0.0500 | mg/L | <50.0 µg/L | <0.0500 | 0 | Diff <2x LOR | ---- |
| | | Antimony, dissolved | 7440-36-0 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Arsenic, dissolved | 7440-38-2 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Barium, dissolved | 7440-39-3 | E421 | 0.00500 | mg/L | 16.1 µg/L | 0.0157 | 0.00036 | Diff <2x LOR | ---- |
| | | Beryllium, dissolved | 7440-41-7 | E421 | 0.00100 | mg/L | <1.00 µg/L | <0.00100 | 0 | Diff <2x LOR | ---- |
| | | Bismuth, dissolved | 7440-69-9 | E421 | 0.00250 | mg/L | <2.50 µg/L | <0.00250 | 0 | Diff <2x LOR | ---- |
| | | Boron, dissolved | 7440-42-8 | E421 | 0.500 | mg/L | 3420 µg/L | 3.57 | 0.159 | Diff <2x LOR | ---- |
| | | Cadmium, dissolved | 7440-43-9 | E421 | 0.000250 | mg/L | <0.250 µg/L | <0.000250 | 0 | Diff <2x LOR | ---- |
| | | Calcium, dissolved | 7440-70-2 | E421 | 2.50 | mg/L | 313000 µg/L | 325 | 3.60% | 20% | ---- |
| | | Cesium, dissolved | 7440-46-2 | E421 | 0.000500 | mg/L | <0.500 µg/L | <0.000500 | 0 | Diff <2x LOR | ---- |
| | | Chromium, dissolved | 7440-47-3 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Cobalt, dissolved | 7440-48-4 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Copper, dissolved | 7440-50-8 | E421 | 0.0100 | mg/L | <10.0 µg/L | <0.0100 | 0 | Diff <2x LOR | ---- |
| | | Iron, dissolved | 7439-89-6 | E421 | 0.500 | mg/L | <500 µg/L | <0.500 | 0 | Diff <2x LOR | ---- |
| | | Lead, dissolved | 7439-92-1 | E421 | 0.00250 | mg/L | <2.50 µg/L | <0.00250 | 0 | Diff <2x LOR | ---- |
| | | Lithium, dissolved | 7439-93-2 | E421 | 0.0500 | mg/L | 133 µg/L | 0.137 | 0.0043 | 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 |
| Dissolved Metals (QC Lot: 905369) - continued | | | | | | | | | | | |
| VA23A8463-001 | Anonymous | Magnesium, dissolved | 7439-95-4 | E421 | 0.250 | mg/L | 962000 µg/L | 996 | 3.39% | 20% | ---- |
| | | Manganese, dissolved | 7439-96-5 | E421 | 0.00500 | mg/L | 119 µg/L | 0.124 | 4.26% | 20% | ---- |
| | | Molybdenum, dissolved | 7439-98-7 | E421 | 0.00250 | mg/L | 9.38 µg/L | 0.00969 | 0.000310 | Diff <2x LOR | ---- |
| | | Nickel, dissolved | 7440-02-0 | E421 | 0.0250 | mg/L | <25.0 µg/L | <0.0250 | 0 | Diff <2x LOR | ---- |
| | | Phosphorus, dissolved | 7723-14-0 | E421 | 2.50 | mg/L | <2500 µg/L | <2.50 | 0 | Diff <2x LOR | ---- |
| | | Potassium, dissolved | 7440-09-7 | E421 | 2.50 | mg/L | 309000 µg/L | 316 | 2.22% | 20% | ---- |
| | | Rubidium, dissolved | 7440-17-7 | E421 | 0.0100 | mg/L | 84.7 µg/L | 0.0842 | 0.00054 | Diff <2x LOR | ---- |
| | | Selenium, dissolved | 7782-49-2 | E421 | 0.00250 | mg/L | <2.50 µg/L | <0.00250 | 0 | Diff <2x LOR | ---- |
| | | Silicon, dissolved | 7440-21-3 | E421 | 2.50 | mg/L | <2500 µg/L | <2.50 | 0 | Diff <2x LOR | ---- |
| | | Silver, dissolved | 7440-22-4 | E421 | 0.000500 | mg/L | <0.500 µg/L | <0.000500 | 0 | Diff <2x LOR | ---- |
| | | Sodium, dissolved | 7440-23-5 | E421 | 2.50 | mg/L | 7840000 µg/L | 8160 | 4.06% | 20% | ---- |
| | | Strontium, dissolved | 7440-24-6 | E421 | 0.0100 | mg/L | 5610 µg/L | 5.91 | 5.28% | 20% | ---- |
| | | Sulfur, dissolved | 7704-34-9 | E421 | 25.0 | mg/L | 705000 µg/L | 722 | 2.37% | 20% | ---- |
| | | Tellurium, dissolved | 13494-80-9 | E421 | 0.0100 | mg/L | <10.0 µg/L | <0.0100 | 0 | Diff <2x LOR | ---- |
| | | Thallium, dissolved | 7440-28-0 | E421 | 0.000500 | mg/L | <0.500 µg/L | <0.000500 | 0 | Diff <2x LOR | ---- |
| | | Thorium, dissolved | 7440-29-1 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Tin, dissolved | 7440-31-5 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Titanium, dissolved | 7440-32-6 | E421 | 0.0150 | mg/L | <15.0 µg/L | <0.0150 | 0 | Diff <2x LOR | ---- |
| | | Tungsten, dissolved | 7440-33-7 | E421 | 0.00500 | mg/L | <5.00 µg/L | <0.00500 | 0 | Diff <2x LOR | ---- |
| | | Uranium, dissolved | 7440-61-1 | E421 | 0.000500 | mg/L | 2.31 µg/L | 0.00254 | 0.000226 | Diff <2x LOR | ---- |
| | | Vanadium, dissolved | 7440-62-2 | E421 | 0.0250 | mg/L | <25.0 µg/L | <0.0250 | 0 | Diff <2x LOR | ---- |
| | | Zinc, dissolved | 7440-66-6 | E421 | 0.0500 | mg/L | <50.0 µg/L | <0.0500 | 0 | Diff <2x LOR | ---- |
| | | Zirconium, dissolved | 7440-67-7 | E421 | 0.0100 | mg/L | <10.0 µg/L | <0.0100 | 0 | Diff <2x LOR | ---- |
| Dissolved Metals (QC Lot: 907080) | | | | | | | | | | | |
| VA23A8605-001 | Anonymous | Mercury, dissolved | 7439-97-6 | E509 | 0.0000050 | mg/L | <0.0000050 | <0.0000050 | 0 | Diff <2x LOR | ---- |
| Volatile Organic Compounds (QC Lot: 907699) | | | | | | | | | | | |
| VA23A7722-001 | 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: 907700) | | | | | | | | | | | |



| 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 |
| Hydrocarbons (QC Lot: 907700) - continued | | | | | | | | | | | |
| VA23A8268-001 | 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: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---------------------------------------------------|------------|------------|-------|-------|---------|-----------|
| Physical Tests (QCLot: 905566) | | | | | | |
| Conductivity | ---- | E100 | 1 | µS/cm | <1.0 | ---- |
| Physical Tests (QCLot: 905837) | | | | | | |
| Turbidity | ---- | E121 | 0.1 | NTU | <0.10 | ---- |
| Physical Tests (QCLot: 907058) | | | | | | |
| Solids, total suspended [TSS] | ---- | E160 | 3 | mg/L | <3.0 | ---- |
| Physical Tests (QCLot: 907075) | | | | | | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | <10 | ---- |
| Physical Tests (QCLot: 907076) | | | | | | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | <10 | ---- |
| Anions and Nutrients (QCLot: 905200) | | | | | | |
| Phosphorus, total | 7723-14-0 | E372-U | 0.002 | mg/L | <0.0020 | ---- |
| Anions and Nutrients (QCLot: 905201) | | | | | | |
| Ammonia, total (as N) | 7664-41-7 | E298 | 0.005 | mg/L | <0.0050 | ---- |
| Anions and Nutrients (QCLot: 905570) | | | | | | |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.005 | mg/L | <0.0050 | ---- |
| Anions and Nutrients (QCLot: 905571) | | | | | | |
| Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.001 | mg/L | <0.0010 | ---- |
| Anions and Nutrients (QCLot: 909225) | | | | | | |
| Nitrogen, total | 7727-37-9 | E366 | 0.03 | mg/L | <0.030 | ---- |
| Anions and Nutrients (QCLot: 909655) | | | | | | |
| Silicate (as SiO2) | 7631-86-9 | E392 | 0.5 | mg/L | <0.50 | ---- |
| Anions and Nutrients (QCLot: 910474) | | | | | | |
| Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.3 | mg/L | <0.30 | ---- |
| Anions and Nutrients (QCLot: 910475) | | | | | | |
| Chloride | 16887-00-6 | E235.Cl | 0.5 | mg/L | <0.50 | ---- |
| Anions and Nutrients (QCLot: 910478) | | | | | | |
| Fluoride | 16984-48-8 | E235.F | 0.02 | mg/L | <0.020 | ---- |
| Anions and Nutrients (QCLot: 910479) | | | | | | |
| Bromide | 24959-67-9 | E235.Br-L | 0.05 | mg/L | <0.050 | ---- |
| Anions and Nutrients (QCLot: 910480) | | | | | | |
| Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.001 | mg/L | <0.0010 | ---- |
| Organic / Inorganic Carbon (QCLot: 905198) | | | | | | |



Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---------------------------------------------------------------|------------|--------|----------|------|------------|-----------|
| Organic / Inorganic Carbon (QCLot: 905198) - continued | | | | | | |
| Carbon, dissolved organic [DOC] | ---- | E358-L | 0.5 | mg/L | <0.50 | ---- |
| Organic / Inorganic Carbon (QCLot: 905199) | | | | | | |
| Carbon, total organic [TOC] | ---- | E355-L | 0.5 | mg/L | <0.50 | ---- |
| Total Metals (QCLot: 905243) | | | | | | |
| 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 | ---- |
| 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 | ---- |



Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|-------------------------------------------------|------------|--------|----------|------|------------|-----------|
| Total Metals (QCLot: 905243) - continued | | | | | | |
| 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: 906035) | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | <0.0000050 | ---- |
| Total Metals (QCLot: 907117) | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | <0.0000050 | ---- |
| Dissolved Metals (QCLot: 905369) | | | | | | |
| 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 | <0.00010 | ---- |
| 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 | ---- |
| Phosphorus, dissolved | 7723-14-0 | E421 | 0.05 | mg/L | <0.050 | ---- |
| Potassium, dissolved | 7440-09-7 | E421 | 0.05 | mg/L | <0.050 | ---- |



Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|-----------------------------------------------------|-------------|------------|----------|------|------------|-----------|
| Dissolved Metals (QCLot: 905369) - continued | | | | | | |
| 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: 907080) | | | | | | |
| Mercury, dissolved | 7439-97-6 | E509 | 0.000005 | mg/L | <0.0000050 | ---- |
| Volatile Organic Compounds (QCLot: 907699) | | | | | | |
| 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: 907700) | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | <100 | ---- |
| Hydrocarbons (QCLot: 910913) | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | ---- |
| Hydrocarbons (QCLot: 910916) | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | <100 | ---- |



Sub-Matrix: Water

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|------------------------------------------|------------|--------|-------|-----------|---------|-----------|
| Hydrocarbons (QCLot: 910916) - continued | | | | | | |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | <250 | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | <250 | ---- |
| Plant Pigments (QCLot: 913655) | | | | | | |
| Chlorophyll a | 479-61-8 | E870A | 0.002 | µg/sample | <0.0020 | ---- |



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: Water

| | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--------------------------------------|------------|------------|-------|----------|----------------------------------------|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Physical Tests (QCLot: 905564) | | | | | | | | | |
| pH | ---- | E108 | ---- | pH units | 7 pH units | 99.8 | 98.0 | 102 | ---- |
| Physical Tests (QCLot: 905566) | | | | | | | | | |
| Conductivity | ---- | E100 | 1 | µS/cm | 146.9 µS/cm | 97.3 | 90.0 | 110 | ---- |
| Physical Tests (QCLot: 905837) | | | | | | | | | |
| Turbidity | ---- | E121 | 0.1 | NTU | 200 NTU | 99.5 | 85.0 | 115 | ---- |
| Physical Tests (QCLot: 907058) | | | | | | | | | |
| Solids, total suspended [TSS] | ---- | E160 | 3 | mg/L | 150 mg/L | 103 | 85.0 | 115 | ---- |
| Physical Tests (QCLot: 907075) | | | | | | | | | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | 1000 mg/L | 90.7 | 85.0 | 115 | ---- |
| Physical Tests (QCLot: 907076) | | | | | | | | | |
| Solids, total dissolved [TDS] | ---- | E162 | 10 | mg/L | 1000 mg/L | 91.0 | 85.0 | 115 | ---- |
| Anions and Nutrients (QCLot: 905200) | | | | | | | | | |
| Phosphorus, total | 7723-14-0 | E372-U | 0.002 | mg/L | 0.05 mg/L | 107 | 80.0 | 120 | ---- |
| Anions and Nutrients (QCLot: 905201) | | | | | | | | | |
| Ammonia, total (as N) | 7664-41-7 | E298 | 0.005 | mg/L | 0.2 mg/L | 91.9 | 85.0 | 115 | ---- |
| Anions and Nutrients (QCLot: 905570) | | | | | | | | | |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.005 | mg/L | 2.5 mg/L | 100 | 90.0 | 110 | ---- |
| Anions and Nutrients (QCLot: 905571) | | | | | | | | | |
| Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.001 | mg/L | 0.5 mg/L | 96.3 | 90.0 | 110 | ---- |
| Anions and Nutrients (QCLot: 909225) | | | | | | | | | |
| Nitrogen, total | 7727-37-9 | E366 | 0.03 | mg/L | 0.5 mg/L | 96.6 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 909655) | | | | | | | | | |
| Silicate (as SiO2) | 7631-86-9 | E392 | 0.5 | mg/L | 10 mg/L | 102 | 85.0 | 115 | ---- |
| Anions and Nutrients (QCLot: 910474) | | | | | | | | | |
| Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 0.3 | mg/L | 100 mg/L | 98.0 | 90.0 | 110 | ---- |
| Anions and Nutrients (QCLot: 910475) | | | | | | | | | |
| Chloride | 16887-00-6 | E235.Cl | 0.5 | mg/L | 100 mg/L | 95.2 | 90.0 | 110 | ---- |
| Anions and Nutrients (QCLot: 910478) | | | | | | | | | |
| Fluoride | 16984-48-8 | E235.F | 0.02 | mg/L | 1 mg/L | 96.6 | 90.0 | 110 | ---- |
| Anions and Nutrients (QCLot: 910479) | | | | | | | | | |
| Bromide | 24959-67-9 | E235.Br-L | 0.05 | mg/L | 0.5 mg/L | 87.5 | 85.0 | 115 | ---- |



| Sub-Matrix: Water | | | | | Laboratory Control Sample (LCS) Report | | | | |
|--------------------------------------------|------------|--------|----------|------|----------------------------------------|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | Qualifier |
| | | | | | Concentration | LCS | Low | High | |
| Analyte | CAS Number | Method | LOR | Unit | Concentration | LCS | Low | High | Qualifier |
| Anions and Nutrients (QCLot: 910480) | | | | | | | | | |
| Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.001 | mg/L | 0.03 mg/L | 106 | 80.0 | 120 | ---- |
| Organic / Inorganic Carbon (QCLot: 905198) | | | | | | | | | |
| Carbon, dissolved organic [DOC] | ---- | E358-L | 0.5 | mg/L | 8.57 mg/L | 105 | 80.0 | 120 | ---- |
| Organic / Inorganic Carbon (QCLot: 905199) | | | | | | | | | |
| Carbon, total organic [TOC] | ---- | E355-L | 0.5 | mg/L | 8.57 mg/L | 107 | 80.0 | 120 | ---- |
| Total Metals (QCLot: 905243) | | | | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.003 | mg/L | 2 mg/L | 100 | 80.0 | 120 | ---- |
| Antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | 1 mg/L | 106 | 80.0 | 120 | ---- |
| Arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | 1 mg/L | 105 | 80.0 | 120 | ---- |
| Barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | 0.25 mg/L | 106 | 80.0 | 120 | ---- |
| Beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | 0.1 mg/L | 102 | 80.0 | 120 | ---- |
| Bismuth, total | 7440-69-9 | E420 | 0.00005 | mg/L | 1 mg/L | 95.6 | 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 | 104 | 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 | 98.6 | 80.0 | 120 | ---- |
| Chromium, total | 7440-47-3 | E420 | 0.0005 | mg/L | 0.25 mg/L | 101 | 80.0 | 120 | ---- |
| Cobalt, total | 7440-48-4 | E420 | 0.0001 | mg/L | 0.25 mg/L | 98.1 | 80.0 | 120 | ---- |
| Copper, total | 7440-50-8 | E420 | 0.0005 | mg/L | 0.25 mg/L | 99.6 | 80.0 | 120 | ---- |
| Iron, total | 7439-89-6 | E420 | 0.01 | mg/L | 1 mg/L | 101 | 80.0 | 120 | ---- |
| Lead, total | 7439-92-1 | E420 | 0.00005 | mg/L | 0.5 mg/L | 101 | 80.0 | 120 | ---- |
| Lithium, total | 7439-93-2 | E420 | 0.001 | mg/L | 0.25 mg/L | 102 | 80.0 | 120 | ---- |
| Magnesium, total | 7439-95-4 | E420 | 0.005 | mg/L | 50 mg/L | 108 | 80.0 | 120 | ---- |
| Manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | 0.25 mg/L | 97.6 | 80.0 | 120 | ---- |
| Molybdenum, total | 7439-98-7 | E420 | 0.00005 | mg/L | 0.25 mg/L | 101 | 80.0 | 120 | ---- |
| Nickel, total | 7440-02-0 | E420 | 0.0005 | mg/L | 0.5 mg/L | 100 | 80.0 | 120 | ---- |
| Phosphorus, total | 7723-14-0 | E420 | 0.05 | mg/L | 10 mg/L | 106 | 80.0 | 120 | ---- |
| Potassium, total | 7440-09-7 | E420 | 0.05 | mg/L | 50 mg/L | 107 | 80.0 | 120 | ---- |
| Rubidium, total | 7440-17-7 | E420 | 0.0002 | mg/L | 0.1 mg/L | 102 | 80.0 | 120 | ---- |
| Selenium, total | 7782-49-2 | E420 | 0.00005 | mg/L | 1 mg/L | 100 | 80.0 | 120 | ---- |
| Silicon, total | 7440-21-3 | E420 | 0.1 | mg/L | 10 mg/L | 103 | 80.0 | 120 | ---- |
| Silver, total | 7440-22-4 | E420 | 0.00001 | mg/L | 0.1 mg/L | 95.7 | 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 | 99.7 | 80.0 | 120 | ---- |



| Sub-Matrix: Water | | | | | Laboratory Control Sample (LCS) Report | | | | |
|------------------------------------------|------------|--------|----------|------|----------------------------------------|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | Qualifier |
| | | | | | Concentration | LCS | Low | High | |
| Analyte | CAS Number | Method | LOR | Unit | | | | | |
| Total Metals (QCLot: 905243) - continued | | | | | | | | | |
| Sulfur, total | 7704-34-9 | E420 | 0.5 | mg/L | 50 mg/L | 105 | 80.0 | 120 | ---- |
| Tellurium, total | 13494-80-9 | E420 | 0.0002 | mg/L | 0.1 mg/L | 107 | 80.0 | 120 | ---- |
| Thallium, total | 7440-28-0 | E420 | 0.00001 | mg/L | 1 mg/L | 101 | 80.0 | 120 | ---- |
| Thorium, total | 7440-29-1 | E420 | 0.0001 | mg/L | 0.1 mg/L | 96.7 | 80.0 | 120 | ---- |
| Tin, total | 7440-31-5 | E420 | 0.0001 | mg/L | 0.5 mg/L | 97.6 | 80.0 | 120 | ---- |
| Titanium, total | 7440-32-6 | E420 | 0.0003 | mg/L | 0.25 mg/L | 98.7 | 80.0 | 120 | ---- |
| Tungsten, total | 7440-33-7 | E420 | 0.0001 | mg/L | 0.1 mg/L | 95.9 | 80.0 | 120 | ---- |
| Uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | 0.005 mg/L | 99.9 | 80.0 | 120 | ---- |
| Vanadium, total | 7440-62-2 | E420 | 0.0005 | mg/L | 0.5 mg/L | 100 | 80.0 | 120 | ---- |
| Zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | 0.5 mg/L | 95.8 | 80.0 | 120 | ---- |
| Zirconium, total | 7440-67-7 | E420 | 0.0002 | mg/L | 0.1 mg/L | 95.8 | 80.0 | 120 | ---- |
| Total Metals (QCLot: 906035) | | | | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | 0.0001 mg/L | 99.7 | 80.0 | 120 | ---- |
| Total Metals (QCLot: 907117) | | | | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | 0.0001 mg/L | 98.0 | 80.0 | 120 | ---- |
| Dissolved Metals (QCLot: 905369) | | | | | | | | | |
| Aluminum, dissolved | 7429-90-5 | E421 | 0.001 | mg/L | 2 mg/L | 100 | 80.0 | 120 | ---- |
| Antimony, dissolved | 7440-36-0 | E421 | 0.0001 | mg/L | 1 mg/L | 106 | 80.0 | 120 | ---- |
| Arsenic, dissolved | 7440-38-2 | E421 | 0.0001 | mg/L | 1 mg/L | 101 | 80.0 | 120 | ---- |
| Barium, dissolved | 7440-39-3 | E421 | 0.0001 | mg/L | 0.25 mg/L | 102 | 80.0 | 120 | ---- |
| Beryllium, dissolved | 7440-41-7 | E421 | 0.00002 | mg/L | 0.1 mg/L | 104 | 80.0 | 120 | ---- |
| Bismuth, dissolved | 7440-69-9 | E421 | 0.00005 | mg/L | 1 mg/L | 92.0 | 80.0 | 120 | ---- |
| Boron, dissolved | 7440-42-8 | E421 | 0.01 | mg/L | 1 mg/L | 99.5 | 80.0 | 120 | ---- |
| Cadmium, dissolved | 7440-43-9 | E421 | 0.000005 | mg/L | 0.1 mg/L | 97.6 | 80.0 | 120 | ---- |
| Calcium, dissolved | 7440-70-2 | E421 | 0.05 | mg/L | 50 mg/L | 98.8 | 80.0 | 120 | ---- |
| Cesium, dissolved | 7440-46-2 | E421 | 0.00001 | mg/L | 0.05 mg/L | 102 | 80.0 | 120 | ---- |
| Chromium, dissolved | 7440-47-3 | E421 | 0.0005 | mg/L | 0.25 mg/L | 94.3 | 80.0 | 120 | ---- |
| Cobalt, dissolved | 7440-48-4 | E421 | 0.0001 | mg/L | 0.25 mg/L | 95.5 | 80.0 | 120 | ---- |
| Copper, dissolved | 7440-50-8 | E421 | 0.0002 | mg/L | 0.25 mg/L | 95.6 | 80.0 | 120 | ---- |
| Iron, dissolved | 7439-89-6 | E421 | 0.01 | mg/L | 1 mg/L | 97.5 | 80.0 | 120 | ---- |
| Lead, dissolved | 7439-92-1 | E421 | 0.00005 | mg/L | 0.5 mg/L | 96.2 | 80.0 | 120 | ---- |
| Lithium, dissolved | 7439-93-2 | E421 | 0.001 | mg/L | 0.25 mg/L | 102 | 80.0 | 120 | ---- |
| Magnesium, dissolved | 7439-95-4 | E421 | 0.005 | mg/L | 50 mg/L | 100 | 80.0 | 120 | ---- |
| Manganese, dissolved | 7439-96-5 | E421 | 0.0001 | mg/L | 0.25 mg/L | 97.0 | 80.0 | 120 | ---- |
| Molybdenum, dissolved | 7439-98-7 | E421 | 0.00005 | mg/L | 0.25 mg/L | 104 | 80.0 | 120 | ---- |



| Sub-Matrix: Water | | | | | Laboratory Control Sample (LCS) Report | | | | |
|----------------------------------------------|-------------|------------|----------|------|----------------------------------------|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | Qualifier |
| | | | | | Concentration | LCS | Low | High | |
| Analyte | CAS Number | Method | LOR | Unit | | | | | |
| Dissolved Metals (QCLot: 905369) - continued | | | | | | | | | |
| Nickel, dissolved | 7440-02-0 | E421 | 0.0005 | mg/L | 0.5 mg/L | 95.1 | 80.0 | 120 | ---- |
| Phosphorus, dissolved | 7723-14-0 | E421 | 0.05 | mg/L | 10 mg/L | 101 | 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 | 100 | 80.0 | 120 | ---- |
| Selenium, dissolved | 7782-49-2 | E421 | 0.00005 | mg/L | 1 mg/L | 97.7 | 80.0 | 120 | ---- |
| Silicon, dissolved | 7440-21-3 | E421 | 0.05 | mg/L | 10 mg/L | 97.7 | 80.0 | 120 | ---- |
| Silver, dissolved | 7440-22-4 | E421 | 0.00001 | mg/L | 0.1 mg/L | 97.2 | 80.0 | 120 | ---- |
| Sodium, dissolved | 7440-23-5 | E421 | 0.05 | mg/L | 50 mg/L | 103 | 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 | 89.8 | 80.0 | 120 | ---- |
| Tellurium, dissolved | 13494-80-9 | E421 | 0.0002 | mg/L | 0.1 mg/L | 111 | 80.0 | 120 | ---- |
| Thallium, dissolved | 7440-28-0 | E421 | 0.00001 | mg/L | 1 mg/L | 98.1 | 80.0 | 120 | ---- |
| Thorium, dissolved | 7440-29-1 | E421 | 0.0001 | mg/L | 0.1 mg/L | 91.8 | 80.0 | 120 | ---- |
| Tin, dissolved | 7440-31-5 | E421 | 0.0001 | mg/L | 0.5 mg/L | 98.1 | 80.0 | 120 | ---- |
| Titanium, dissolved | 7440-32-6 | E421 | 0.0003 | mg/L | 0.25 mg/L | 95.4 | 80.0 | 120 | ---- |
| Tungsten, dissolved | 7440-33-7 | E421 | 0.0001 | mg/L | 0.1 mg/L | 94.5 | 80.0 | 120 | ---- |
| Uranium, dissolved | 7440-61-1 | E421 | 0.00001 | mg/L | 0.005 mg/L | 95.4 | 80.0 | 120 | ---- |
| Vanadium, dissolved | 7440-62-2 | E421 | 0.0005 | mg/L | 0.5 mg/L | 97.4 | 80.0 | 120 | ---- |
| Zinc, dissolved | 7440-66-6 | E421 | 0.001 | mg/L | 0.5 mg/L | 92.4 | 80.0 | 120 | ---- |
| Zirconium, dissolved | 7440-67-7 | E421 | 0.0002 | mg/L | 0.1 mg/L | 96.1 | 80.0 | 120 | ---- |
| Mercury, dissolved | 7439-97-6 | E509 | 0.000005 | mg/L | 0.0001 mg/L | 97.0 | 80.0 | 120 | ---- |
| Volatile Organic Compounds (QCLot: 907699) | | | | | | | | | |
| Benzene | 71-43-2 | E611A | 0.5 | µg/L | 100 µg/L | 97.2 | 70.0 | 130 | ---- |
| Ethylbenzene | 100-41-4 | E611A | 0.5 | µg/L | 100 µg/L | 100 | 70.0 | 130 | ---- |
| Methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 0.5 | µg/L | 100 µg/L | 104 | 70.0 | 130 | ---- |
| Styrene | 100-42-5 | E611A | 0.5 | µg/L | 100 µg/L | 102 | 70.0 | 130 | ---- |
| Toluene | 108-88-3 | E611A | 0.5 | µg/L | 100 µg/L | 100 | 70.0 | 130 | ---- |
| Xylene, m+p- | 179601-23-1 | E611A | 0.4 | µg/L | 200 µg/L | 101 | 70.0 | 130 | ---- |
| Xylene, o- | 95-47-6 | E611A | 0.3 | µg/L | 100 µg/L | 101 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 907700) | | | | | | | | | |
| F1 (C6-C10) | ---- | E581.VH+F1 | 100 | µg/L | 6310 µg/L | 97.5 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 910913) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | 3538 µg/L | 120 | 70.0 | 130 | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | 7053 µg/L | 111 | 70.0 | 130 | ---- |



| Sub-Matrix: Water | | | | | Laboratory Control Sample (LCS) Report | | | | |
|------------------------------------------|------------|--------|-------|-----------|----------------------------------------|--------------|---------------------|------|-----------|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| | | | | | Concentration | LCS | Low | High | Qualifier |
| Analyte | CAS Number | Method | LOR | Unit | | | | | |
| Hydrocarbons (QCLot: 910913) - continued | | | | | | | | | |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | 5051 µg/L | 116 | 70.0 | 130 | ---- |
| Hydrocarbons (QCLot: 910916) | | | | | | | | | |
| F2 (C10-C16) | ---- | E601 | 100 | µg/L | 3538 µg/L | 124 | 70.0 | 130 | ---- |
| F3 (C16-C34) | ---- | E601 | 250 | µg/L | 7053 µg/L | 117 | 70.0 | 130 | ---- |
| F4 (C34-C50) | ---- | E601 | 250 | µg/L | 5051 µg/L | 126 | 70.0 | 130 | ---- |
| Plant Pigments (QCLot: 913655) | | | | | | | | | |
| Chlorophyll a | 479-61-8 | E870A | 0.002 | µg/sample | 1 µg/sample | 95.2 | 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: 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: 905200) | | | | | | | | | | |
| YL2300303-002 | BRP-46D-WQ | Phosphorus, total | 7723-14-0 | E372-U | 0.0510 mg/L | 0.05 mg/L | 102 | 70.0 | 130 | ---- |
| Anions and Nutrients (QCLot: 905201) | | | | | | | | | | |
| YL2300300-002 | Anonymous | Ammonia, total (as N) | 7664-41-7 | E298 | 0.0887 mg/L | 0.1 mg/L | 88.7 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 905570) | | | | | | | | | | |
| VA23A8470-002 | Anonymous | Nitrate (as N) | 14797-55-8 | E235.NO3-L | 2.53 mg/L | 2.5 mg/L | 101 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 905571) | | | | | | | | | | |
| VA23A8470-002 | Anonymous | Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.516 mg/L | 0.5 mg/L | 103 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 909225) | | | | | | | | | | |
| VA23A8490-002 | Anonymous | Nitrogen, total | 7727-37-9 | E366 | ND mg/L | 0.4 mg/L | ND | 70.0 | 130 | ---- |
| Anions and Nutrients (QCLot: 909655) | | | | | | | | | | |
| VA23A8747-002 | Anonymous | Silicate (as SiO2) | 7631-86-9 | E392 | ND mg/L | 10 mg/L | ND | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 910474) | | | | | | | | | | |
| VA23A8819-001 | Anonymous | Sulfate (as SO4) | 14808-79-8 | E235.SO4 | 100 mg/L | 100 mg/L | 100 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 910475) | | | | | | | | | | |
| VA23A8819-001 | Anonymous | Chloride | 16887-00-6 | E235.Cl | 98.4 mg/L | 100 mg/L | 98.4 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 910478) | | | | | | | | | | |
| VA23A8819-001 | Anonymous | Fluoride | 16984-48-8 | E235.F | 0.994 mg/L | 1 mg/L | 99.4 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 910479) | | | | | | | | | | |
| VA23A8819-001 | Anonymous | Bromide | 24959-67-9 | E235.Br-L | 0.451 mg/L | 0.5 mg/L | 90.1 | 75.0 | 125 | ---- |
| Anions and Nutrients (QCLot: 910480) | | | | | | | | | | |
| YL2300303-001 | BRP-46S-WQ | Phosphate, ortho-, dissolved (as P) | 14265-44-2 | E378-U | 0.0316 mg/L | 0.03 mg/L | 106 | 70.0 | 130 | ---- |
| Organic / Inorganic Carbon (QCLot: 905198) | | | | | | | | | | |
| YL2300303-001 | BRP-46S-WQ | Carbon, dissolved organic [DOC] | ---- | E358-L | 5.35 mg/L | 5 mg/L | 107 | 70.0 | 130 | ---- |
| Organic / Inorganic Carbon (QCLot: 905199) | | | | | | | | | | |
| YL2300303-002 | BRP-46D-WQ | Carbon, total organic [TOC] | ---- | E355-L | 5.14 mg/L | 5 mg/L | 103 | 70.0 | 130 | ---- |
| Total Metals (QCLot: 905243) | | | | | | | | | | |
| VA23A8376-001 | Anonymous | Aluminum, total | 7429-90-5 | E420 | 0.177 mg/L | 0.2 mg/L | 88.6 | 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: 905243) - continued | | | | | | | | | | |
| VA23A8376-001 | Anonymous | Antimony, total | 7440-36-0 | E420 | 0.0195 mg/L | 0.02 mg/L | 97.7 | 70.0 | 130 | ---- |
| | | Arsenic, total | 7440-38-2 | E420 | 0.0194 mg/L | 0.02 mg/L | 97.1 | 70.0 | 130 | ---- |
| | | Barium, total | 7440-39-3 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Beryllium, total | 7440-41-7 | E420 | 0.0382 mg/L | 0.04 mg/L | 95.5 | 70.0 | 130 | ---- |
| | | Bismuth, total | 7440-69-9 | E420 | 0.00899 mg/L | 0.01 mg/L | 89.9 | 70.0 | 130 | ---- |
| | | Boron, total | 7440-42-8 | E420 | 0.094 mg/L | 0.1 mg/L | 94.2 | 70.0 | 130 | ---- |
| | | Cadmium, total | 7440-43-9 | E420 | 0.00384 mg/L | 0.004 mg/L | 96.1 | 70.0 | 130 | ---- |
| | | Calcium, total | 7440-70-2 | E420 | ND mg/L | 4 mg/L | ND | 70.0 | 130 | ---- |
| | | Cesium, total | 7440-46-2 | E420 | 0.00966 mg/L | 0.01 mg/L | 96.6 | 70.0 | 130 | ---- |
| | | Chromium, total | 7440-47-3 | E420 | ND mg/L | 0.04 mg/L | ND | 70.0 | 130 | ---- |
| | | Cobalt, total | 7440-48-4 | E420 | 0.0184 mg/L | 0.02 mg/L | 92.1 | 70.0 | 130 | ---- |
| | | Copper, total | 7440-50-8 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Iron, total | 7439-89-6 | E420 | 1.81 mg/L | 2 mg/L | 90.7 | 70.0 | 130 | ---- |
| | | Lead, total | 7439-92-1 | E420 | 0.0184 mg/L | 0.02 mg/L | 92.0 | 70.0 | 130 | ---- |
| | | Lithium, total | 7439-93-2 | E420 | 0.0928 mg/L | 0.1 mg/L | 92.8 | 70.0 | 130 | ---- |
| | | Magnesium, total | 7439-95-4 | E420 | 0.928 mg/L | 1 mg/L | 92.8 | 70.0 | 130 | ---- |
| | | Manganese, total | 7439-96-5 | E420 | 0.0180 mg/L | 0.02 mg/L | 90.3 | 70.0 | 130 | ---- |
| | | Molybdenum, total | 7439-98-7 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Nickel, total | 7440-02-0 | E420 | 0.0357 mg/L | 0.04 mg/L | 89.3 | 70.0 | 130 | ---- |
| | | Phosphorus, total | 7723-14-0 | E420 | 9.86 mg/L | 10 mg/L | 98.6 | 70.0 | 130 | ---- |
| | | Potassium, total | 7440-09-7 | E420 | ND mg/L | 4 mg/L | ND | 70.0 | 130 | ---- |
| | | Rubidium, total | 7440-17-7 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Selenium, total | 7782-49-2 | E420 | 0.0395 mg/L | 0.04 mg/L | 98.8 | 70.0 | 130 | ---- |
| | | Silicon, total | 7440-21-3 | E420 | 9.14 mg/L | 10 mg/L | 91.4 | 70.0 | 130 | ---- |
| | | Silver, total | 7440-22-4 | E420 | 0.00373 mg/L | 0.004 mg/L | 93.3 | 70.0 | 130 | ---- |
| | | Sodium, total | 7440-23-5 | E420 | ND mg/L | 2 mg/L | ND | 70.0 | 130 | ---- |
| | | Strontium, total | 7440-24-6 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Sulfur, total | 7704-34-9 | E420 | 18.9 mg/L | 20 mg/L | 94.4 | 70.0 | 130 | ---- |
| | | Tellurium, total | 13494-80-9 | E420 | 0.0405 mg/L | 0.04 mg/L | 101 | 70.0 | 130 | ---- |
| | | Thallium, total | 7440-28-0 | E420 | 0.00369 mg/L | 0.004 mg/L | 92.2 | 70.0 | 130 | ---- |
| | | Thorium, total | 7440-29-1 | E420 | 0.0202 mg/L | 0.02 mg/L | 101 | 70.0 | 130 | ---- |
| | | Tin, total | 7440-31-5 | E420 | 0.0192 mg/L | 0.02 mg/L | 95.8 | 70.0 | 130 | ---- |
| | | Titanium, total | 7440-32-6 | E420 | 0.0366 mg/L | 0.04 mg/L | 91.4 | 70.0 | 130 | ---- |
| | | Tungsten, total | 7440-33-7 | E420 | 0.0189 mg/L | 0.02 mg/L | 94.4 | 70.0 | 130 | ---- |
| | | Uranium, total | 7440-61-1 | E420 | 0.00395 mg/L | 0.004 mg/L | 98.7 | 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: 905243) - continued | | | | | | | | | | |
| VA23A8376-001 | Anonymous | Vanadium, total | 7440-62-2 | E420 | 0.0937 mg/L | 0.1 mg/L | 93.7 | 70.0 | 130 | ---- |
| | | Zinc, total | 7440-66-6 | E420 | 0.358 mg/L | 0.4 mg/L | 89.4 | 70.0 | 130 | ---- |
| | | Zirconium, total | 7440-67-7 | E420 | 0.0393 mg/L | 0.04 mg/L | 98.2 | 70.0 | 130 | ---- |
| Total Metals (QCLot: 906035) | | | | | | | | | | |
| VA23A8508-001 | Anonymous | Mercury, total | 7439-97-6 | E508 | 0.000102 mg/L | 0.0001 mg/L | 102 | 70.0 | 130 | ---- |
| Total Metals (QCLot: 907117) | | | | | | | | | | |
| VA23A8309-001 | Anonymous | Mercury, total | 7439-97-6 | E508 | 0.0000992 mg/L | 0.0001 mg/L | 99.2 | 70.0 | 130 | ---- |
| Dissolved Metals (QCLot: 905369) | | | | | | | | | | |
| VA23A8470-001 | Anonymous | Aluminum, dissolved | 7429-90-5 | E421 | 0.193 mg/L | 0.2 mg/L | 96.3 | 70.0 | 130 | ---- |
| | | Antimony, dissolved | 7440-36-0 | E421 | 0.0192 mg/L | 0.02 mg/L | 96.1 | 70.0 | 130 | ---- |
| | | Arsenic, dissolved | 7440-38-2 | E421 | 0.0201 mg/L | 0.02 mg/L | 100 | 70.0 | 130 | ---- |
| | | Barium, dissolved | 7440-39-3 | E421 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Beryllium, dissolved | 7440-41-7 | E421 | 0.0428 mg/L | 0.04 mg/L | 107 | 70.0 | 130 | ---- |
| | | Bismuth, dissolved | 7440-69-9 | E421 | 0.00830 mg/L | 0.01 mg/L | 83.0 | 70.0 | 130 | ---- |
| | | Boron, dissolved | 7440-42-8 | E421 | 0.103 mg/L | 0.1 mg/L | 103 | 70.0 | 130 | ---- |
| | | Cadmium, dissolved | 7440-43-9 | E421 | 0.00398 mg/L | 0.004 mg/L | 99.5 | 70.0 | 130 | ---- |
| | | Calcium, dissolved | 7440-70-2 | E421 | ND mg/L | 4 mg/L | ND | 70.0 | 130 | ---- |
| | | Cesium, dissolved | 7440-46-2 | E421 | 0.00965 mg/L | 0.01 mg/L | 96.5 | 70.0 | 130 | ---- |
| | | Chromium, dissolved | 7440-47-3 | E421 | 0.0384 mg/L | 0.04 mg/L | 95.9 | 70.0 | 130 | ---- |
| | | Cobalt, dissolved | 7440-48-4 | E421 | 0.0190 mg/L | 0.02 mg/L | 95.2 | 70.0 | 130 | ---- |
| | | Copper, dissolved | 7440-50-8 | E421 | 0.0192 mg/L | 0.02 mg/L | 96.1 | 70.0 | 130 | ---- |
| | | Iron, dissolved | 7439-89-6 | E421 | 1.82 mg/L | 2 mg/L | 90.8 | 70.0 | 130 | ---- |
| | | Lead, dissolved | 7439-92-1 | E421 | 0.0187 mg/L | 0.02 mg/L | 93.3 | 70.0 | 130 | ---- |
| | | Lithium, dissolved | 7439-93-2 | E421 | 0.101 mg/L | 0.1 mg/L | 101 | 70.0 | 130 | ---- |
| | | Magnesium, dissolved | 7439-95-4 | E421 | ND mg/L | 1 mg/L | ND | 70.0 | 130 | ---- |
| | | Manganese, dissolved | 7439-96-5 | E421 | 0.0188 mg/L | 0.02 mg/L | 94.0 | 70.0 | 130 | ---- |
| | | Molybdenum, dissolved | 7439-98-7 | E421 | 0.0197 mg/L | 0.02 mg/L | 98.4 | 70.0 | 130 | ---- |
| | | Nickel, dissolved | 7440-02-0 | E421 | 0.0380 mg/L | 0.04 mg/L | 95.0 | 70.0 | 130 | ---- |
| | | Phosphorus, dissolved | 7723-14-0 | E421 | 9.72 mg/L | 10 mg/L | 97.2 | 70.0 | 130 | ---- |
| | | Potassium, dissolved | 7440-09-7 | E421 | 3.94 mg/L | 4 mg/L | 98.4 | 70.0 | 130 | ---- |
| | | Rubidium, dissolved | 7440-17-7 | E421 | 0.0192 mg/L | 0.02 mg/L | 96.2 | 70.0 | 130 | ---- |
| | | Selenium, dissolved | 7782-49-2 | E421 | 0.0406 mg/L | 0.04 mg/L | 102 | 70.0 | 130 | ---- |
| | | Silicon, dissolved | 7440-21-3 | E421 | 9.12 mg/L | 10 mg/L | 91.2 | 70.0 | 130 | ---- |
| | | Silver, dissolved | 7440-22-4 | E421 | 0.00382 mg/L | 0.004 mg/L | 95.5 | 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: 905369) - continued | | | | | | | | | | |
| VA23A8470-001 | Anonymous | Sodium, dissolved | 7440-23-5 | E421 | 1.94 mg/L | 2 mg/L | 96.9 | 70.0 | 130 | ---- |
| | | Strontium, dissolved | 7440-24-6 | E421 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Sulfur, dissolved | 7704-34-9 | E421 | 19.0 mg/L | 20 mg/L | 94.9 | 70.0 | 130 | ---- |
| | | Tellurium, dissolved | 13494-80-9 | E421 | 0.0420 mg/L | 0.04 mg/L | 105 | 70.0 | 130 | ---- |
| | | Thallium, dissolved | 7440-28-0 | E421 | 0.00372 mg/L | 0.004 mg/L | 93.0 | 70.0 | 130 | ---- |
| | | Thorium, dissolved | 7440-29-1 | E421 | 0.0198 mg/L | 0.02 mg/L | 98.8 | 70.0 | 130 | ---- |
| | | Tin, dissolved | 7440-31-5 | E421 | 0.0191 mg/L | 0.02 mg/L | 95.4 | 70.0 | 130 | ---- |
| | | Titanium, dissolved | 7440-32-6 | E421 | 0.0378 mg/L | 0.04 mg/L | 94.6 | 70.0 | 130 | ---- |
| | | Tungsten, dissolved | 7440-33-7 | E421 | 0.0184 mg/L | 0.02 mg/L | 92.2 | 70.0 | 130 | ---- |
| | | Uranium, dissolved | 7440-61-1 | E421 | 0.00373 mg/L | 0.004 mg/L | 93.2 | 70.0 | 130 | ---- |
| | | Vanadium, dissolved | 7440-62-2 | E421 | 0.0961 mg/L | 0.1 mg/L | 96.1 | 70.0 | 130 | ---- |
| | | Zinc, dissolved | 7440-66-6 | E421 | 0.381 mg/L | 0.4 mg/L | 95.2 | 70.0 | 130 | ---- |
| | | Zirconium, dissolved | 7440-67-7 | E421 | 0.0396 mg/L | 0.04 mg/L | 99.0 | 70.0 | 130 | ---- |
| Dissolved Metals (QCLot: 907080) | | | | | | | | | | |
| VA23A8605-002 | Anonymous | Mercury, dissolved | 7439-97-6 | E509 | 0.000100 mg/L | 0.0001 mg/L | 100 | 70.0 | 130 | ---- |
| Volatile Organic Compounds (QCLot: 907699) | | | | | | | | | | |
| VA23A7722-001 | Anonymous | Benzene | 71-43-2 | E611A | 97.9 µg/L | 100 µg/L | 97.9 | 60.0 | 140 | ---- |
| | | Ethylbenzene | 100-41-4 | E611A | 101 µg/L | 100 µg/L | 101 | 60.0 | 140 | ---- |
| | | Methyl-tert-butyl ether [MTBE] | 1634-04-4 | E611A | 104 µg/L | 100 µg/L | 104 | 60.0 | 140 | ---- |
| | | Styrene | 100-42-5 | E611A | 102 µg/L | 100 µg/L | 102 | 60.0 | 140 | ---- |
| | | Toluene | 108-88-3 | E611A | 98.6 µg/L | 100 µg/L | 98.6 | 60.0 | 140 | ---- |
| | | Xylene, m+p- | 179601-23-1 | E611A | 202 µg/L | 200 µg/L | 101 | 60.0 | 140 | ---- |
| | | Xylene, o- | 95-47-6 | E611A | 102 µg/L | 100 µg/L | 102 | 60.0 | 140 | ---- |
| Hydrocarbons (QCLot: 907700) | | | | | | | | | | |
| VA23A8268-002 | Anonymous | F1 (C6-C10) | ---- | E581.VH+F1 | 5310 µg/L | 6310 µg/L | 84.2 | 60.0 | 140 | ---- |



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 -

Page 1 of 3

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| | | | | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|--|-------|--|-------|--|--|--|
| Report To Contact and company name below will appear on the final report | | Report Format / Distribution | | Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) | | | | | | | | | | | |
| Company: Stantec Consulting | | Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) | | Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply | | | | | | | | | | | |
| Contact: Paige Glenen | | Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | PRIORITY (Business Days) 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/> | | EMERGENCY 1 Business day [E1 - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/> | | | | | | | | | |
| Phone: (902) 468-7777 | | Compre Results to Criteria on Report - provide details below if box checked | | | | | | | | | | | | | |
| Company address below will appear on the final report | | Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX | | Date and Time Required for all E&P TATs: | | | | | | | | | | | |
| Street: 102-40 Highfield Park Dr. | | Email 1 or Fax: paige.glenen@stantec.com | | For tests that can not be performed according to the service level selected, you will be contacted. | | | | | | | | | | | |
| City/Province: Dartmouth, Nova Scotia | | Email 2: mary.murdoch@stantec.com | | Analysis Request | | | | | | | | | | | |
| Postal Code: B3A 0A3 | | Email 3: sam.caldwell@stantec.com | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | | | | | | | | | | |
| Invoice To | | Invoice Distribution | | | | | | | | | | | | | |
| Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input checked="" type="checkbox"/> MAIL <input type="checkbox"/> FAX | | | | | | | | | | | | | |
| Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | Email 1 or Fax: AccountsPayable@stantec.com | | | | | | | | | | | | | |
| Company: Stantec Consulting | | Email 2: paige.glenen@stantec.com | | | | | | | | | | | | | |
| Contact: Accounts Payable | | | | | | | | | | | | | | | |
| Project Information | | Oil and Gas Required Fields (client use) | | | | | | | | | | | | | |
| ALS Account # / Quote #: VA22-STAC100-001 | | AFE/Cost Center: PO# | | | | | | | | | | | | | |
| Job #: 121417593 | | Major/Minor Code: Routing Code: | | | | | | | | | | | | | |
| PO / AFE: | | Requisitioner: | | | | | | | | | | | | | |
| LSD: | | Location: | | | | | | | | | | | | | |
| ALS Lab Work Order # (lab use only): | | ALS Contact: | | Sampler: MW/NO | | | | | | | | | | | |
| 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 | | | | | | | | | | | |
| | BRP-46S-WQ | 15-Apr-23 | 15:15 | H2O | | | | | | | | | | | |
| | BRP-46D-WQ | 15-Apr-23 | 15:45 | H2O | | | | | | | | | | | |
| | BRP-48S-WQ | 15-Apr-23 | 12:20 | H2O | | | | | | | | | | | |
| | BRP-48D-WQ | 15-Apr-23 | 12:45 | H2O | | | | | | | | | | | |
| | BRP-51S-WQ | 16-Apr-23 | 8:00 | H2O | | | | | | | | | | | |
| | REF04S-WQ | 16-Apr-23 | 10:30 | H2O | | | | | | | | | | | |
| | REF04D-WQ | 16-Apr-23 | 11:00 | H2O | | | | | | | | | | | |
| | REF05S-WQ | 16-Apr-23 | 12:50 | H2O | | | | | | | | | | | |
| | Field Dup | 15-Apr-23 | 12:25 | H2O | | | | | | | | | | | |
| | FB | 15-Apr-23 | 12:18 | H2O | | | | | | | | | | | |
| | TB | Apr-23 | | H2O | | | | | | | | | | | |
| | BRP-46-01-PP | 15 Apr. 23 | 15:15 | Phytoplankton | | | | | | | | | | | |
| Drinking Water (DW) Samples¹ (client use) | | 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) | | | | | | | | | | | |
| Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | |
| Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | |
| | | | | Cooling Initiated <input type="checkbox"/> | | | | | | | | | | | |
| | | | | INITIAL COOLER TEMPERATURES °C: 2.5 FINAL COOLER TEMPERATURES °C: | | | | | | | | | | | |
| SHIPMENT RELEASE (client use) | | INITIAL SHIPMENT RECEPTION (lab use only) | | FINAL SHIPMENT RECEPTION (lab use only) | | | | | | | | | | | |
| Released by: | | Received by: | | Date: 18/03 | | Time: 16:00 | | Received by: | | Date: | | Time: | | | |

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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.

| | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|--|--------------------|--|----------------------------------------------------------------------------------------|--|-------|--|--|--|--|--|--|--|
| Report To Contact and company name below will appear on the final report | | Report Format / Distribution | | Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) | | | | | | | | | | | | | | | |
| Company: Stantec Consulting | | Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) | | Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply | | | | | | | | | | | | | | | |
| Contact: Paige Glenen | | Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | PRIORITY (Business Days) | | 4 day [P4-20%] <input type="checkbox"/> | | EMERGENCY | | 1 Business day [E1 - 100%] | | | | | | | | | |
| Phone: (902) 468-7777 | | <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked | | | | 3 day [P3-25%] <input type="checkbox"/> | | | | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] | | | | | | | | | |
| Company address below will appear on the final report | | Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX | | Date and Time Required for all E&P TATs: | | | | | | | | | | | | | | | |
| Street: 102-40 Highfield Park Dr. | | Email 1 or Fax paige.glenen@stantec.com | | For tests that can not be performed according to the service level selected, you will be contacted. | | | | | | | | | | | | | | | |
| City/Province: Dartmouth, Nova Scotia | | Email 2 mary.murdoch@stantec.com | | Analysis Request | | | | | | | | | | | | | | | |
| Postal Code: B3A 0A3 | | Email 3 sam.caldwell@stantec.com | | Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | | | | | | | | | | | | | | | |
| Invoice To | | Invoice Distribution | | | | | | | | | | | | | | | | | |
| Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input checked="" type="checkbox"/> MAIL <input type="checkbox"/> FAX | | | | | | | | | | | | | | | | | |
| Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | Email 1 or Fax AccountsPayable@stantec.com | | | | | | | | | | | | | | | | | |
| Company: Stantec Consulting | | Email 2 paige.glenen@stantec.com | | | | | | | | | | | | | | | | | |
| Contact: Accounts Payable | | | | | | | | | | | | | | | | | | | |
| Project Information | | Oil and Gas Required Fields (client use) | | | | | | | | | | | | | | | | | |
| ALS Account # / Quote #: VA22-STAC100-001 | | AFE/Cost Center: PO# | | | | | | | | | | | | | | | | | |
| Job #: 121417593 | | Major/Minor Code: Routing Code: | | | | | | | | | | | | | | | | | |
| PO / AFE: | | Requisitioner: | | | | | | | | | | | | | | | | | |
| LSD: | | Location: | | | | | | | | | | | | | | | | | |
| ALS Lab Work Order # (lab use only): | | ALS Contact: | | Sampler: MW/NO | | | | | | | | | | | | | | | |
| ALS Sample # (lab use only) | | Sample Identification and/or Coordinates (This description will appear on the report) | | Date (dd-mm-yy) | | Time (hh:mm) | | Sample Type | | | | | | | | | | | |
| BRP-46-02-PP | | 15 APR. 23 | | 15:15 | | Phytoplankton | | | | | | | | | | | | | |
| BRP-46-03-PP | | 15 APR. 23 | | 15:15 | | 11 | | | | | | | | | | | | | |
| BRP-48-01-PP | | 15 APR. 23 | | 12:20 | | 11 | | | | | | | | | | | | | |
| BRP-48-02-PP | | 15 APR. 23 | | 12:30 | | 11 | | | | | | | | | | | | | |
| BRP-48-03-PP | | 15 APR. 23 | | 12:20 | | 11 | | | | | | | | | | | | | |
| BRP-51-01-PP | | 16 APR. 23 | | 8:00 | | 11 | | | | | | | | | | | | | |
| BRP-51-02-PP | | 16 APR. 23 | | 8:00 | | 11 | | | | | | | | | | | | | |
| BRP-51-03-PP | | 16 APR. 23 | | 8:00 | | 11 | | | | | | | | | | | | | |
| REF05-01-PP | | 16 APR. 23 | | 12:50 | | 11 | | | | | | | | | | | | | |
| REF05-02-PP | | 16 APR. 23 | | 12:50 | | 11 | | | | | | | | | | | | | |
| REF05-03-PP | | 16 APR. 23 | | 12:50 | | 11 | | | | | | | | | | | | | |
| REF04-01-PP | | 16 APR. 23 | | 10:30 | | 11 | | | | | | | | | | | | | |
| Drinking Water (DW) Samples¹ (client use) | | 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) | | | | | | | | | | | | | | | |
| Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | |
| | | | | Cooling Initiated <input type="checkbox"/> | | | | | | | | | | | | | | | |
| | | | | 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: | | Received by: | | Date: | | Time: | | Received by: | | Date: | | Time: | | | | | | | |

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| | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 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 | | Report Format / Distribution Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: paige.glenen@stantec.com Email 2: mary.murdoch@stantec.com Email 3: sam.caldwell@stantec.com | | Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply Emergency [E] 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/> 1 Business day [E1 - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/> (Laboratory opening fees may apply) | |
| Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Company: Stantec Consulting Contact: Accounts Payable | | Invoice Distribution Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input checked="" type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: AccountsPayable@stantec.com Email 2: paige.glenen@stantec.com | | Date and Time Required for all E&P TATs: For tests that can not be performed according to the service level selected, you will be contacted. | |
| Project Information ALS Account # / Quote #: VA22-STAC100-001 Job #: 121417593 PO / AFE: LSD: | | Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location: | | Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below | |
| ALS Lab Work Order # (lab use only): ALS Sample # (lab use only) | | Sample Identification and/or Coordinates (This description will appear on the report) Date (dd-mm-yy) Time (hh:mm) Sample Type | | all analyses for every sample 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 and a Total Sulphide Salinity in Seawater Chlorophyll A | |
| REF04-02-PP REF04-03-PP | | 16 Apr 23 10:30 Phytoplankton | | 16 Apr 23 14:30 11 | |
| Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> 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 <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/> INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C | |
| SHIPMENT RELEASE (client use) Released by: Time: | | INITIAL SHIPMENT RECEPTION (lab use only) Received by: Date: | | FINAL SHIPMENT RECEPTION (lab use only) Received by: Date: | |

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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.

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Chlorophyll Sample Record Sheet

Client Name:

Stantec Project Number:

Water Body & Territory:

Collectors Names:

Preservative Used:

Filter Type and Pore Size Used: _____

Project Name:

Project Manager:

SABINA Water Maritima

Paige Glenen

Filtration Conducted by:

No / MW

Magnesium Carbonate

0.45 μm

[illegible]

Appendix E Phytoplankton Biomass

Table E1 Phytoplankton Biomass

| Sample ID | date sampled | Volume filtered (mL) | Chlorophyll a (ug/sample) | Chlorophyll a (ug/L) |
|--------------|--------------|----------------------|---------------------------|----------------------|
| BRP-51-01-PP | 16-Apr-23 | 1220 | 0.208 | 0.170 |
| BRP-51-02-PP | 16-Apr-23 | 1189 | 0.180 | 0.151 |
| BRP-51-03-PP | 16-Apr-23 | 1228 | 0.190 | 0.154 |
| BRP-48-01-PP | 15-Apr-23 | 1311 | 0.136 | 0.104 |
| BRP-48-02-PP | 15-Apr-23 | 1183 | 0.165 | 0.140 |
| BRP-48-03-PP | 15-Apr-23 | 1260 | 0.175 | 0.139 |
| BRP-46-01-PP | 15-Apr-23 | 1269 | 0.213 | 0.168 |
| BRP-46-02-PP | 15-Apr-23 | 1281 | 0.182 | 0.142 |
| BRP-46-03-PP | 15-Apr-23 | 1354 | 0.241 | 0.178 |
| REF05-01-PP | 16-Apr-23 | 1271 | 0.284 | 0.224 |
| REF05-02-PP | 16-Apr-23 | 1245 | 0.275 | 0.222 |
| REF05-03-PP | 16-Apr-23 | 1270 | 0.286 | 0.225 |
| REF04-01-PP | 16-Apr-23 | 1272 | 0.324 | 0.255 |
| REF04-02-PP | 16-Apr-23 | 1250 | 0.390 | 0.312 |
| REF04-03-PP | 16-Apr-23 | 1278 | 0.360 | 0.281 |

Appendix F Quality Assurance/Quality Control

Table F1 - Water Quality Analytical Results and Relevant CCME Guidelines



| Location | | | Field blank | trip Blank | Field Replicate | Parent sample | Relative Percent Difference (RPD)(%) |
|----------------------------------------------------|------------------------|----------|-------------------|-------------------|-------------------|-------------------|--------------------------------------|
| Station | | | | | BRP-48 | BRP-48 | |
| Client Sample ID | | | FB | TB | Field DUP | BRP-48S-WQ | |
| Date Sampled | | | 4/15/2023 | | 4/15/2023 | 4/15/2023 | |
| Time Sampled | | | 12:18 | | 12:25 | 12:20 | |
| ALS Sample ID | | | YL2300303-010 | YL2300303-011 | YL2300303-009 | YL2300303-003 | |
| 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 | 41400 | 41700 | 0.18% |
| Hardness (as CaCO ₃), dissolved | 0.6 | mg/L | <0.60 | <0.60 | 4870 | 4890 | 0.10% |
| Hardness (as CaCO ₃), from total Ca/Mg | 0.6 | mg/L | <0.60 | <0.60 | 4810 | 5000 | 0.97% |
| pH | 0.1 | pH units | 5.54 | 5.51 | 7.79 | 7.77 | 0.06% |
| Solids, total dissolved (TDS) | 10 | mg/L | <10 | <10 | 27900.00 | 29300 | 1.22% |
| Solids, total suspended (TSS) | 3 | mg/L | <3.0 | <3.0 | <3.0 | 3.8 | - |
| Turbidity | 0.1 | NTU | <0.10 | <0.10 | 0.24 | 0.19 | - |
| Salinity | 1 | psu | <1.0 | <1.0 | 27.0 | 25.8 | 1.14% |
| Anions and Nutrients (Matrix: Water) | | | | | | | |
| Ammonia, total (as N) | 0.005 | mg/L | <0.0050 | <0.0050 | 0.0062 | 0.0079 | - |
| Bromide | 0.05 | mg/L | <0.050 | <0.050 | 48.3 | 47.1 | 0.63% |
| Chloride | 0.5 | mg/L | <0.50 | <0.50 | 14300 | 13900 | 0.71% |
| 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 | 0.0306 | 0.0322 | 1.27% |
| Phosphorous, total | 0.002 | mg/L | <0.0020 | <0.0020 | 0.0389 | 0.0401 | 0.76% |
| Silicate (as SiO2) | 0.5 | mg/L | <0.50 | <0.50 | 1.17 | 1.16 | - |
| Sulfate (as SO ₄) | 0.3 | mg/L | <0.30 | <0.30 | 1990 | 1900 | 1.16% |
| Organic / Inorganic Carbon (Matrix: Water) | | | | | | | |
| Carbon, dissolved organic (DOC) | 0.5 | mg/L | <0.50 | <0.50 | 1.82 | 2.04 | - |
| Carbon, total organic (TOC) | 0.5 | mg/L | <0.50 | <0.50 | 1.58 | 2.1 | - |
| Total Metals (Matrix: Water) | | | | | | | |
| Aluminum, total | 0.003 | mg/L | <0.0030 | <0.0030 | <0.150 | <0.150 | - |
| Antimony, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Arsenic, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Barium, total | 0.0001 | mg/L | <0.00010 | <0.00010 | 0.0115 | 0.0116 | 0.22% |
| Beryllium, total | 0.0001 | mg/L | <0.000100 | <0.000100 | <0.00100 | <0.00100 | - |
| Bismuth, total | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Boron, total | 0.01 | mg/L | <0.010 | <0.010 | 3.21 | 3.44 | 1.73% |
| Cadmium, total | 0.000005 | mg/L | <0.0000050 | <0.0000050 | <0.000250 | <0.000250 | - |
| Calcium, total | 0.05 | mg/L | <0.050 | <0.050 | 312 | 321 | 0.71% |
| Cesium, total | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Chromium, total | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.00500 | <0.00500 | - |
| Cobalt, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Copper, total | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.0250 | <0.0250 | - |
| Iron, total | 0.01 | mg/L | <0.010 | <0.010 | <0.500 | <0.500 | - |
| Lead, total | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Lithium, total | 0.001 | mg/L | <0.0010 | <0.0010 | 0.132 | 0.138 | 1.11% |
| Magnesium, total | 0.005 | mg/L | <0.0050 | <0.0050 | 979 | 1020 | 1.03% |
| Manganese, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Mercury, total | 0.000005 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | - |
| Molybdenum, total | 0.00005 | mg/L | <0.000050 | <0.000050 | 0.00822 | 0.00934 | 3.19% |
| Nickel, total | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.0250 | <0.0250 | - |
| Phosphorous, total | 0.05 | mg/L | <0.050 | <0.050 | <2.50 | <2.50 | - |
| Potassium, total | 0.05 | mg/L | <0.050 | <0.050 | 314 | 315 | 0.08% |
| Rubidium, total | 0.0002 | mg/L | <0.00020 | <0.00020 | 0.0895 | 0.0837 | 1.67% |
| Selenium, total | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Silicon, total | 0.1 | mg/L | <0.10 | <0.10 | <5.00 | <5.00 | - |
| Silver, total | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Sodium, total | 0.05 | mg/L | <0.050 | <0.050 | 7800 | 8120 | 1.01% |
| Strontium, total | 0.0002 | mg/L | <0.00020 | <0.00020 | 5.69 | 5.88 | 0.82% |
| Sulfur, total | 0.5 | mg/L | <0.50 | <0.50 | 718 | 764 | 1.55% |
| Tellurium, total | 0.0002 | mg/L | <0.00020 | <0.00020 | <0.0100 | <0.0100 | - |
| Thallium, total | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Thorium, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Tin, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Titanium, total | 0.0003 | mg/L | <0.00030 | <0.00030 | <0.0150 | <0.0150 | - |
| Tungsten, total | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Uranium, total | 0.00001 | mg/L | <0.000010 | <0.000010 | 0.00260 | 0.00254 | 0.58% |
| Vanadium, total | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.0250 | <0.0250 | - |
| Zinc, total | 0.003 | mg/L | <0.0030 | <0.0030 | <0.150 | <0.150 | - |
| Zirconium, total | 0.0002 | mg/L | <0.00020 | <0.00020 | <0.0100 | <0.0100 | - |



Table F1 - Water Quality Analytical Results and Relevant CCME Guidelines

| Location | | | Field blank | trip Blank | Field Replicate | Parent sample | Relative Percent Difference (RPD)(%) |
|-------------------------------------------------------|------------------------|-------|-------------------|-------------------|-------------------|-------------------|--------------------------------------|
| Station | | | | | BRP-48 | BRP-48 | |
| Client Sample ID | | | FB | TB | Field DUP | BRP-48S-WQ | |
| Date Sampled | | | 4/15/2023 | | 4/15/2023 | 4/15/2023 | |
| Time Sampled | | | 12:18 | | 12:25 | 12:20 | |
| ALS Sample ID | | | YL2300303-010 | YL2300303-011 | YL2300303-009 | YL2300303-003 | |
| Analyte | Lowest Detection Limit | Units | Sub-Matrix: Water | Sub-Matrix: Water | Sub-Matrix: Water | Sub-Matrix: Water | |
| Dissolved Metals (Matrix: Water) | | | | | | | |
| Aluminum, dissolved | 0.001 | mg/L | <0.0010 | <0.0010 | <0.0500 | <0.0500 | - |
| Antimony, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Arsenic, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Barium, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | 0.0107 | 0.0113 | 1.36% |
| Beryllium, dissolved | 0.0001 | mg/L | <0.000100 | <0.000100 | <0.00100 | <0.00100 | - |
| Bismuth, dissolved | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Boron, dissolved | 0.01 | mg/L | <0.010 | <0.010 | 3.86 | 3.83 | 0.20% |
| Cadmium, dissolved | 0.000005 | mg/L | <0.0000050 | <0.0000050 | <0.000250 | <0.000250 | - |
| Calcium,dissolved | 0.05 | mg/L | <0.050 | <0.050 | 324 | 321 | 0.23% |
| Cesium, dissolved | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Chromium, dissolved | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.00500 | <0.00500 | - |
| Cobalt, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Copper, dissolved | 0.0002 | mg/L | <0.00020 | <0.00020 | <0.0100 | <0.0100 | - |
| Iron, dissolved | 0.01 | mg/L | <0.010 | <0.010 | <0.500 | <0.500 | - |
| Lead, dissolved | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Lithium, dissolved | 0.001 | mg/L | <0.0010 | <0.0010 | 0.147 | 0.147 | 0.00% |
| Magnesium, dissolved | 0.005 | mg/L | <0.0050 | <0.0050 | 987 | 992 | 0.13% |
| Manganese, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Mercury, dissolved | 0.000005 | mg/L | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | - |
| Molybdenum, dissolved | 0.00005 | mg/L | <0.000050 | <0.000050 | 0.00887 | 0.00824 | 1.84% |
| Nickel, dissolved | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.0250 | <0.0250 | - |
| Phosphorous, dissolved | 0.05 | mg/L | <0.050 | <0.050 | <2.50 | <2.50 | - |
| Potassium, dissolved | 0.05 | mg/L | <0.050 | <0.050 | 313 | 318 | 0.40% |
| Rubidium, dissolved | 0.0002 | mg/L | <0.00020 | <0.00020 | 0.0822 | 0.0784 | 1.18% |
| Selenium, dissolved | 0.00005 | mg/L | <0.000050 | <0.000050 | <0.00250 | <0.00250 | - |
| Silicon, dissolved | 0.05 | mg/L | <0.050 | <0.050 | <2.50 | <2.50 | - |
| Silver, dissolved | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Sodium, dissolved | 0.05 | mg/L | <0.050 | <0.050 | 8050 | 8100 | 0.15% |
| Strontium, dissolved | 0.0002 | mg/L | <0.00020 | <0.00020 | 5.83 | 5.73 | 0.43% |
| Sulfur, dissolved | 0.5 | mg/L | <0.50 | <0.50 | 732 | 742 | 0.34% |
| Tellurium, dissolved | 0.0002 | mg/L | <0.00020 | <0.00020 | <0.0100 | <0.0100 | - |
| Thallium, dissolved | 0.00001 | mg/L | <0.000010 | <0.000010 | <0.000500 | <0.000500 | - |
| Thorium, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Tin, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Titanium, dissolved | 0.0003 | mg/L | <0.00030 | <0.00030 | <0.0150 | <0.0150 | - |
| Tungsten, dissolved | 0.0001 | mg/L | <0.00010 | <0.00010 | <0.00500 | <0.00500 | - |
| Uranium, dissolved | 0.00001 | mg/L | <0.000010 | <0.000010 | 0.00226 | 0.00219 | 0.79% |
| Vanadium, dissolved | 0.0005 | mg/L | <0.00050 | <0.00050 | <0.0250 | <0.0250 | - |
| Zinc, dissolved | 0.001 | mg/L | <0.0010 | <0.0010 | <0.0500 | <0.0500 | - |
| Zirconium, dissolved | 0.0002 | mg/L | <0.00020 | <0.00020 | <0.0100 | <0.0100 | - |
| Volatile Organic Compounds Surrogates (Matrix: Water) | | | | | | | |
| bromofluorobenzene, 4- | 1 | % | 94.4 | 95.00 | 97.1 | 96.3 | 0.21% |
| difluorobenzene, 1,4- | 1 | % | 101 | 100.00 | 102 | 100 | 0.50% |
| 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 | % | 81.8 | 88.90 | 87.1 | 86 | 0.32% |
| dichlorotoluene, 3,4- | 1 | % | 84 | 108.00 | 110 | 105 | 1.16% |

"-" parameter concentrations were below the detectible range

Appendix G Photo Log

| | | | |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|---------------------------|
| Client: | Sabina Gold & Silver Corp. | Project: | 121417593 |
| Site Name: | Back River Project | Site Location: | Kitikmeot, Nunavut |
| Photograph ID: 1 |  | | |
| Photo Location: | | | |
| Direction: | | | |
| Survey Date: 4/15/2023 | | | |
| Comments: sampling shelter and snowmobiles on frozen ocean | | | |
| Photograph ID: 2 |  | | |
| Photo Location: | | | |
| Direction: | | | |
| Survey Date: 4/15/2023 | | | |
| Comments: Chlorophyll a filtration apparatus | | | |

| | | | |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|---------------------------|
| Client: | Sabina Gold & Silver Corp. | Project: | 121417593 |
| Site Name: | Back River Project | Site Location: | Kitikmeot, Nunavut |
| Photograph ID: 3 |  | | |
| Photo Location: | | | |
| Direction: | | | |
| Survey Date: 4/16/2023 | | | |
| Comments: Deploying the Aqua TROLL 600 Multiparameter Sonde into the ocean | | | |
| Photograph ID: 4 |  | | |
| Photo Location: | | | |
| Direction: | | | |
| Survey Date: 4/15/2023 | | | |
| Comments: BRP-48S water quality samples | | | |