

APPENDIX H 2025 AQUATIC EFFECTS MANAGEMENT PLAN REPORT



REPORT

B2Gold Back River Project – 2025 Aquatic Effects Management Plan Report

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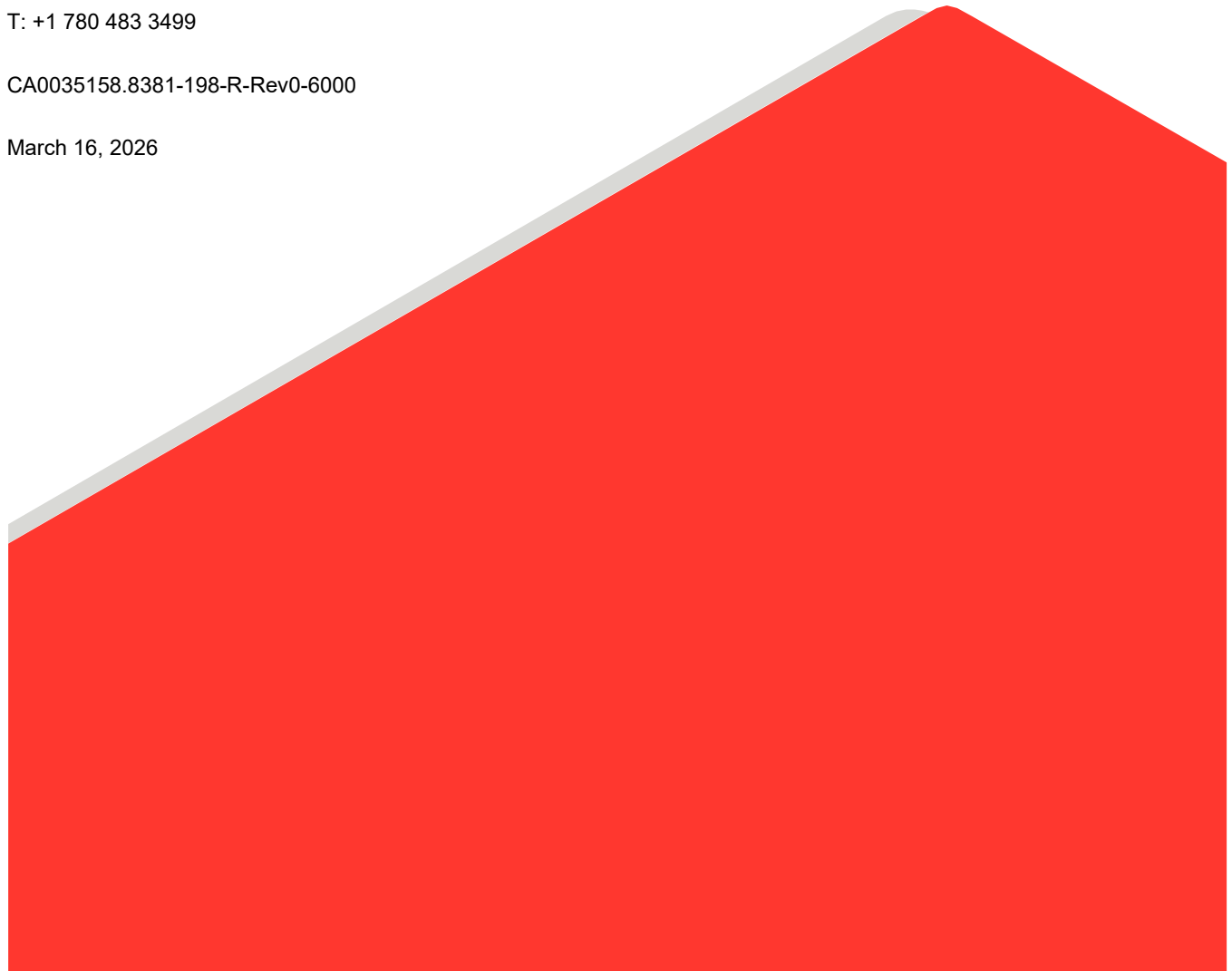
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Lake water quality sampling for this AEMP was conducted by Adam Feldberg, Ulyana Fuchylo, Michael Kovacs, and Joe Marquardson of WSP Canada Inc. (WSP) and Mairi McEwen and Skylar Kraus of KBL Environmental. The water quality investigation for the West Bay of Goose Lake was conducted by Danielle Toth and Gabe Mahamad of WSP. The field crews were supported while on site by B2Gold Back River Corp. (B2Gold Nunavut) environmental staff. Beatriz Cupe-Flores of WSP provided in-office support before, during and after the field programs.

Data analysis and reporting was conducted by Jennifer Arens, Beatriz Cupe-Flores, Ulyana Fuchylo, and Nelson Zabel of WSP, with senior technical review and oversight by Elaine Irving and Kerrie Serben of WSP.

Executive Summary

The Back River Project (the Project) is a gold project formerly owned by Sabina Gold & Silver Corp., now owned by B2Gold Back River Corp. (B2Gold Nunavut). B2Gold Nunavut is required by its Type A Water Licence to implement an Aquatic Effects Management Plan (AEMP). Monitoring under the AEMP was initiated with the commencement of dewatering of raw non-contact water from Llama and Umwelt lakes to Goose Lake in 2025. B2Gold Nunavut retained WSP Canada Inc. (WSP) to conduct the 2025 AEMP.

In 2025, four water quality sampling programs were conducted for the Project: one during under-ice conditions (April) and three in open-water conditions (July, August, and September). Water samples and field measurements were collected from two areas in Goose Lake (West Bay and Central Basin) and one area in Reference B Lake. The dewatering discharge to Goose Lake West Bay occurred from mid-July to late-August. The Operations Phase of the mine began in June 2025, with first ore introduced to the Goose Mine processing facility on June 24, 2025.

The analysis of the water quality monitoring followed the AEMP design plan. Monitoring results were summarized in tables and plots, including vertical profiles of field parameters and time series plots for AEMP parameters. Data analysis was conducted separately for under-ice and open-water conditions. Median parameter concentrations were compared to AEMP benchmarks and normal ranges. Parameters of interest (POIs) were identified as parameters with median values that exceed the upper bound of the normal range and further evaluated using a Before-After Control-Impact (BACI) statistical analysis to determine if concentrations have increased over time in the exposure area (i.e., Goose Lake; Impact area in the BACI analysis) compared to the before period and the reference area (i.e., Reference B Lake; Control area in the BACI analysis). The exceptions were total phosphorus, total nitrogen, and chlorophyll a, which were retained as POIs regardless of median concentrations to further evaluate nutrients in Goose Lake. Parameters of interest with a significant BACI effect were evaluated further to determine whether the observed change in water quality was consistent with predictions made regarding effects on water quality, as most recently presented in the Hydrodynamic and Water Quality Modelling of Goose Lake report. Finally, POIs were evaluated in the AEMP Response Framework to identify if Low Action Levels were exceeded for aquatic life and drinking water quality.

The 2025 AEMP results indicate that water quality in Goose Lake has changed compared to baseline years and the reference area. The results indicate that a change in water quality was observed in both areas of Goose Lake; however, the effect was generally more pronounced in West Bay compared to Central Basin. These results are consistent with those reported in 2024, where concentrations of many parameters in 2024 were observed to have increased in Goose Lake West Bay compared to those measured during baseline years.

Except for nitrite and cobalt concentrations, which were above their respective benchmarks, the 2025 results were consistent with predictions for most parameters that concentrations would remain below benchmarks during the Construction Phase. Concentrations in 2025 were, however, greater than predicted, where median and maximum concentrations of most parameters of interest exceeded the 95th percentile concentration predicted during the Construction Phase in West Bay and Central Basin samples in 2025.

No Low Action Levels were exceeded for drinking water quality. The Low Action Level for aquatic life was exceeded for four parameters: nitrate, nitrite, and total and dissolved cobalt because median concentrations exceeded the normal range, there was a significant BACI effects, and median concentrations approached or exceeded the benchmark. Nitrate and nitrite exceeded the Low Action Level only in April during under-ice conditions, whereas cobalt exceeded the Low Action Level in all months. Nitrate and cobalt only exceeded the Low Action Level in West Bay, whereas nitrite exceeded the Low Action Level in both areas of Goose Lake. In April, the median nitrate concentration of 2.4 mg-N/L in West Bay was 82% of the benchmark of 2.93 mg-N/L, whereas the median nitrite concentration of 0.068 mg-N/L in West Bay and 0.13 mg-N/L in Central Basin exceeded the benchmark of 0.06 mg-N/L by 1.1 times and 2.2 times, respectively. Median cobalt concentrations in West Bay were 1.1 times the hardness-dependent AEMP benchmark in April, and between 1.2 and 1.9 times in the open-water months.

Further evaluation was conducted to determine the potential ecological significance of the Low Action Level exceedances. Most parameters have median under-ice and open-water concentrations that are below AEMP benchmarks, indicating no effects to aquatic life at those measured concentrations. As noted above, median concentrations of nitrite and cobalt exceeded their AEMP benchmarks; however, measured concentrations are below chronic toxicity thresholds. Thus, it is unlikely that the measured concentrations of nitrite and cobalt have the potential to cause adverse effects to aquatic life in Goose Lake. Biological monitoring is planned in 2026 per the AEMP design plan, which will support the evaluation of effect to aquatic life based on the observed changes in water quality.

An investigation was initiated in June 2025 in response to the observed changes in Goose Lake water quality that were reported in the 2024 annual report (WSP 2025b). The results of the water quality investigation were analyzed as part of this AEMP report to identify factors from the Project that may have contributed to the increase in nitrate, nitrite, and total and dissolved cobalt concentrations in Goose Lake. This investigation used parameter concentrations as an indicator of potential sources. The results suggest that the inflow from Llama and Umwelt Lakes and the inflow from Echo Lake contributed large concentrations of nitrate and cobalt parameters after September 2023. Other sources or processes at play are also likely, especially for nitrite. Contact water, seepage and/or runoff flowing into these streams appear to be the likely source of increased parameter concentrations in Goose Lake in 2024 and 2025. Recommended mitigation options are to improve water management, dust control at site, and increase monitoring in 2026. These actions have the objective of mitigating future inputs into Goose Lake with the potential to reverse the changes to water quality identified in Goose Lake in 2024 and 2025.

Recommendations for the water quality component of the AEMP for future years are to continue AEMP sampling per the AEMP study design, with the addition of sampling West Bay over the next three years, regardless of dewatering activities, to continue to monitor for changes in water quality; to initiate water quality sampling of Propeller Lake in 2026; and to adopt the newly developed chlorophyll a benchmark.

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APPENDICES

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2025 Water Quality Investigative Sampling

ACRONYMS AND ABBREVIATIONS

Term	Definition
AEMP	Aquatic Effects Management Plan
AIC	Akaike's Information Criterion
B2Gold Nunavut	B2Gold Back River Corp.
BA	Before-After
BACI	Before-After Control-Impact
BC	British Columbia
BV	Bureau Veritas
CI	Control-Impact
CCME	Canadian Council of Ministers of the Environment
DL	detection limit
FEIS	Final Environmental Impact Statement
FEQG	Federal Environmental Quality Guideline
GF/C	glass microfiber type C
IC _x	The inhibition concentration for x% adverse effect relative to the laboratory control; the concentration of sample estimated to cause x% reduction in growth or reproduction of the test organism
LC ₅₀	Median lethal concentration; concentration of sample estimated to be lethal to 50% of the test organisms
NOEC	No observed effects concentration; the concentration in a toxicity test that was not statistically different from the laboratory control
Project	Back River Project
POI	parameter of interest

UNITS

Unit Abbreviation	Unit name
%v/v	percent sample in the test solution on a volume to volume basis
°C	degree Celsius
cm	centimetre
m	metre
mg/L	milligram per litre
mg-N/L	milligram nitrogen per litre
mg-P/L	milligram phosphorus per litre
NTU	nephelometric turbidity unit
µg/L	microgram per litre
µS/cm	microsiemens per centimetre

1 INTRODUCTION

The Back River Project (Project) is a gold project formerly owned by Sabina Gold & Silver Corp, now owned by B2Gold Back River Corp. (B2Gold Nunavut). The Project is located within the West Kitikmeot region of southwestern Nunavut. It is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories.

B2Gold Nunavut retained WSP Canada Inc. (WSP) to conduct the 2025 Aquatic Effects Management Plan (AEMP). The implementation of the AEMP is a requirement of the Type A Water Licence 2AM-BRP1831 (Part 1, Condition 1). The AEMP study design (B2Gold Nunavut 2025) was designed to meet sampling prescribed in Schedule 1, Table 1 and Table 2 related to the AEMP. The overall purpose of the AEMP is to monitor the aquatic environment for Project-related effects, to assess and update predictions, and to provide the basis for informed management decisions to minimize, mitigate, and/or manage potential adverse effects on the environment.

Per the AEMP study design (B2Gold Nunavut 2025), field programs in 2025 consisted of field measurements and water quality sample collection from Goose Lake and Reference B Lake in under-ice and open-water conditions. This annual report describes the methods and results of the 2025 AEMP.

2 SITE ACTIVITIES

Site activities in 2025 included continuation of construction activities and operations of the Goose Mine property facilities (mill, shops and associated infrastructure), mining out Echo Pit and using it for tailings storage, stripping and beginning of operations of Umwelt Pit, advancing Vault Underground decline, and dewatering activities of Llama and Umwelt lakes. The dewatering discharge to Goose Lake West Bay occurred from mid-July to late-August. The Operations Phase of the mine began in June 2025, with first ore introduced to the Goose Mine processing facility on June 24, 2025.

3 OBJECTIVES

This AEMP report covers the end of the Construction Phase and the beginning of the Operations Phase for the Back River Project (now Goose Mine), which included dewatering activities. Water quality was monitored per the AEMP study design, which prescribed conducting water quality sampling in two Goose Lake areas, West Bay and Central Basin, and Reference B Lake in April and August, with additional sampling in July and September due to dewatering activities.

The AEMP objectives, as they pertain to the water quality component, were to:

- Characterize and interpret water quality in the aquatic receiving environment for the purpose of identifying Project-related effects.
- Verify predictions made in the Final Environmental Impact Statement (FEIS) and other submissions to the Nunavut Water Board regarding effects on water quality, as applicable.
- Support and inform the Action Level assessment as part of the Response Framework.
- Recommend any necessary and appropriate changes to the water quality component of the AEMP for future years.

4 METHODS

The collection of water quality samples followed the methods described in the updated AEMP study design for the Project (B2Gold Nunavut 2025).

4.1 Sampling Locations and Programs

The under-ice water quality program was conducted in April 2025 and consisted of the collection of water quality samples and depth profiles of field parameters in two AEMP lakes (i.e., Goose Lake [the exposure area], and Reference B Lake [reference area]). Sampling locations consisted of two areas within Goose Lake (i.e., West Bay and Central Basin) and one area in Reference B Lake (Table 4-1 and Figure 4-1). Samples were collected at 1 m below the ice surface. To support the hydrodynamic water quality model, additional water samples were collected at multiple depths within the water column (i.e., top, middle, and bottom) at four Goose Lake areas (West Bay, Central Basin, Southeast Basin, and Tail). The results for these samples are provided in Appendix D for future reference, but they are not otherwise discussed herein as they are not part of the AEMP.

The open-water sampling programs were conducted monthly from July to September 2025 and consisted of the collection of water quality samples and depth profiles of field measurements at two areas within Goose Lake (i.e., West Bay and Central Basin) and one area in Reference B Lake. Samples were collected at 1 m below the ice surface.

¹ B2Gold committed to do biological monitoring as part of the AEMP in the year after the initiation of dewatering (i.e., sampling of biological components will occur in 2026).

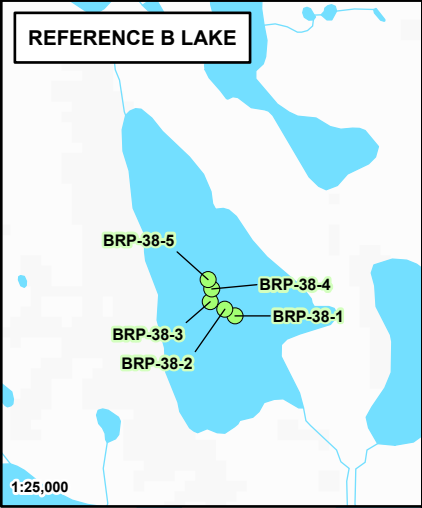
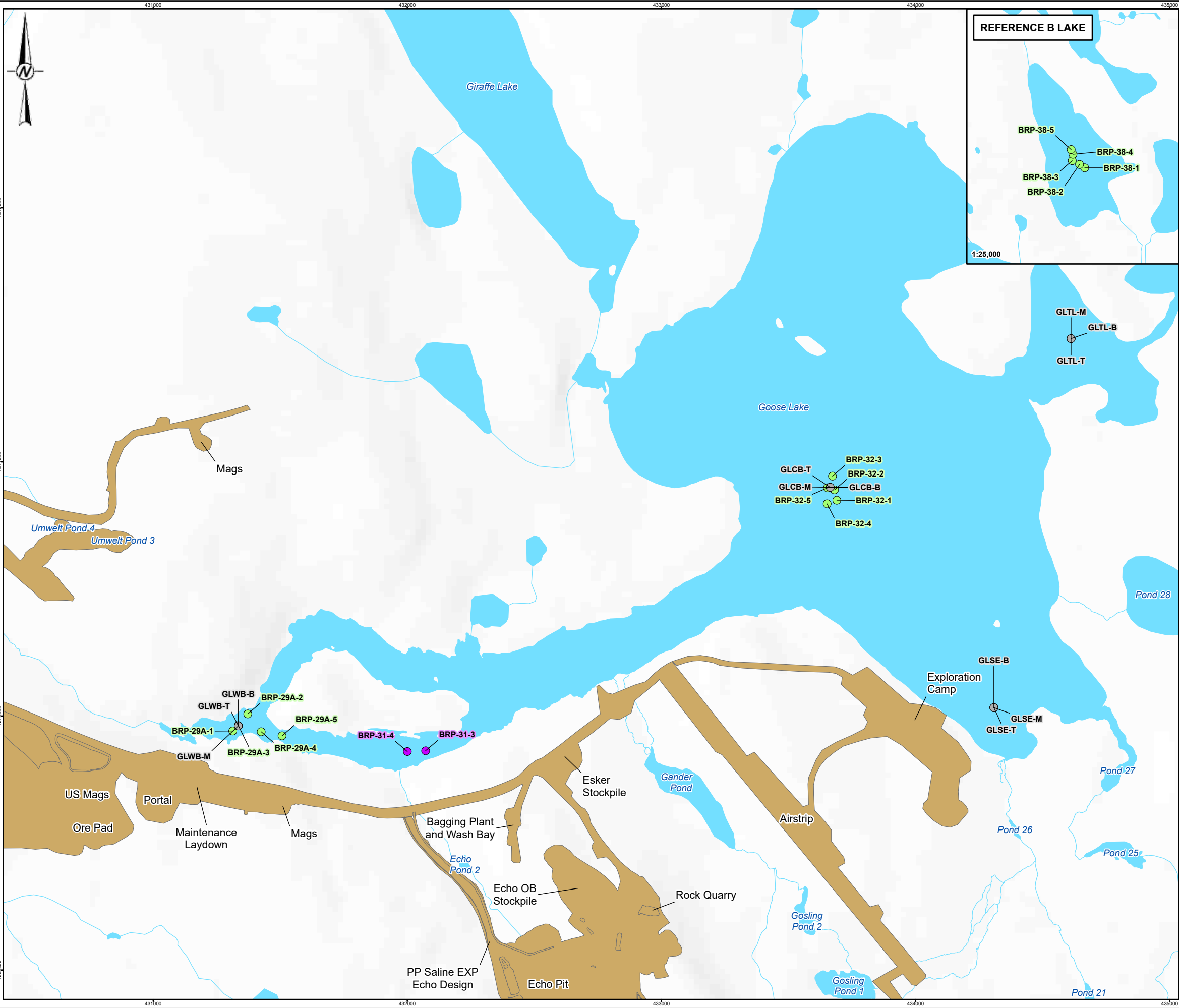
Table 4-1: Goose Lake Water Quality Sampling Locations, 2025

Lake Area	Program	Sample ID	UTM Coordinates ^(a)		Water Samples and Depth Profiles
			Easting (m)	Northing (m)	
Goose Lake West Bay (GLWB)	AEMP	BRP-29A-1	431313	7269941	April / July / August / September
		BRP-29A-2	431372	7270008	April / July / August / September
		BRP-29A-3	431335	7269962	April / July / August / September
		BRP-29A-4	431425	7269938	April / July / August / September
		BRP-29A-5	431507	7269922	April / July / August / September
		BRP-31-3 ^(b)	432072	7269863	July / August / September
		BRP-31-4 ^(b)	432000	7269860	July / August / September
Goose Lake Central Basin (GLCB)	AEMP	BRP-32-1	433690	7270849	April / July / August / September
		BRP-32-2	433681	7270890	April / July / August / September
		BRP-32-3	433673	7270944	April / July / August / September
		BRP-32-4	433652	7270835	April / July / August / September
		BRP-32-5	433653	7270898	April / July / August / September
Reference B Lake (REFB)	AEMP	BRP-38-1	442060	7258569	April / July / August / September
		BRP-38-2	442026	7258591	April / July / August / September
		BRP-38-3	441978	7258616	April / July / August / September
		BRP-38-4	441983	7258658	April / July / August / September
		BRP-38-5	441971	7258689	April / July / August / September
Goose Lake	Hydrodynamic Water Quality Model Support	GLCB-B	433664	7270900	April
		GLCB-M			April
		GLCB-T			April
		GLSE-B	434308	7270033	April
		GLSE-M			April
		GLSE-T			April
		GLTL-B	434612	7271485	April
		GLTL-M			April
		GLTL-T			April
		GLWB-B	431335	7269961	April
		GLWB-M			April
		GLWB-T			April

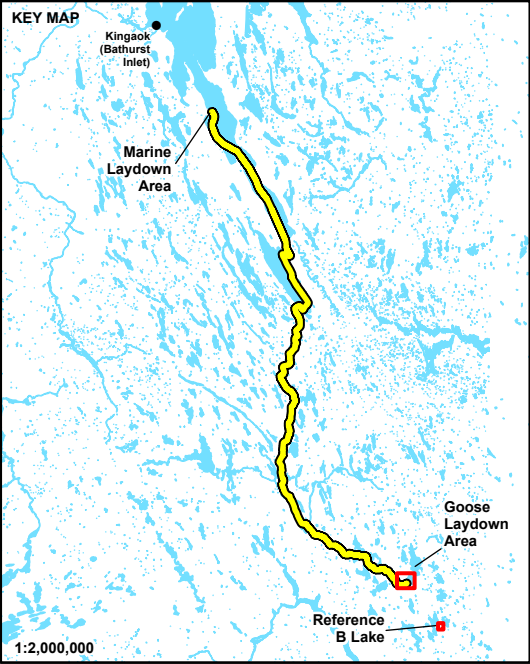
(a) Target coordinates. UTM coordinates are for Zone 13N, NAD 83. Field coordinates are presented in Appendix D (Tables D-1 to D-3).

(b) Samples were collected at BRP-31-3 and BRP-31-4 in July, August, and September for investigative purposes. Data are reported in Appendix D, Table D-4 and discussed in Appendix F.

UTM = universal transverse Mercator; T = top, M = middle, B = bottom; AEMP = Aquatic Effects Management Plan.



- LEGEND**
- AEMP SURFACE WATER QUALITY STATIONS
 - WATER QUALITY STATIONS FOR INVESTIGATION PURPOSES
 - WATER QUALITY STATIONS TO SUPPORT THE HYDRODYNAMIC WATER QUALITY MODEL
 - WATERCOURSE
 - WINTER ICE ROAD
 - JUNE 2024 AS-BUILT FOOTPRINT
 - WATERBODY



REFERENCE(S)
PROJECT DATA OBTAINED FROM CLIENT. INUIT OWNED LANDS DATA OBTAINED FROM NTI, © NUNAVUT TUNNGAVIK INC. HYDROGRAPHY DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
PROJECTED COORDINATE SYSTEM: NAD 1983 UTM ZONE 13N

CLIENT
B2GOLD BACK RIVER CORP.

PROJECT
B2GOLD BACK RIVER PROJECT

TITLE
SURFACE WATER QUALITY SAMPLING STATIONS, 2025

CLIENT		YYYY-MM-DD	2026-03-05
		DESIGNED	BCF
		PREPARED	SP
CONSULTANT		REVIEWED	JA
		APPROVED	KS

PROJECT NO. **CA0054386.2807** REV. **0** FIGURE **4-1**

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4.2 Field Methods

Depth Profiles

Depth profile measurements were made at each location before collecting water samples. These measurements consisted of specific conductivity, pH, water temperature, and dissolved oxygen (DO; concentration and percent saturation) measured every 0.5 m. Measurements were taken on the way down, moving slowly to allow the sensors to stabilize prior recording the measurements. During the under-ice season program, depth profiles started 0.3 m below the bottom of the ice layer following approximately 10 minutes of equilibration after ice augering. During open-water conditions, depth profiles started 0.5 m below the water surface.

Sample Collection

One discrete water quality sample was collected at each lake sampling station for the AEMP program. Samples were collected at 1 m below the water or ice surface. For samples to support the hydrodynamic water quality model, three water samples were collected at each lake sampling station: near the top (30 cm below the water or ice surface), mid-depth, and bottom (30 cm above the sediment). Samples were collected as grabs using a Teflon Kemmerer sampler. The sampler was rinsed with lake water, lowered to the required depth, triggered by the messenger to collect a sample, retrieved to the surface, and used to fill the laboratory sample bottles and for measuring turbidity. After filling the sample bottles, three turbidity measurements were made on the remaining water, and the average was recorded.

During the under-ice program, an ice auger was used to drill the sampling hole, and snow and loose ice were cleared from the hole using a stainless-steel slotted spoon prior sampling. Snow cover depth, ice thickness, and effective water depth were recorded at each station. Effective water depth (water depth under the ice layer) was measured using a sounding line lowered in a slow and controlled manner to minimize disturbance of the water column or mobilizing of fine sediment from the lake bottom into the water column prior to profiling and sampling. Ice thickness was measured at each station from the bottom of the ice to the top (excluding the snowpack) using a measuring stick or tape. During open-water conditions, field measurements and lake samples were collected from a boat. Total water depth, Secchi depth, sample depth, and field depth profiles were recorded at each sampling station.

During open-water conditions, samples for chlorophyll *a* analysis were collected in triplicate using dark/amber bottles and filtered at the camp at the end of the day. Chlorophyll *a* samples were kept away from sunlight and at low temperature. Each triplicate chlorophyll *a* sample consisted of a minimum of 0.5 L and a maximum of 1.0 L of water.

Sample Processing and Storage

Water samples were processed per laboratory instructions, which included laboratory filtering and preservation of ultra low-level metals and mercury analyses to eliminate potential field contamination of samples during these steps. Processed samples were kept in a designated refrigerator before shipping; ice packs were added to the coolers to keep the samples cool without freezing during shipping. Samples were shipped by air to Bureau Veritas (BV) in Yellowknife, Northwest Territories, as soon as practical after sample collection and processing, taking into consideration the parameter-specific holding times recommended by the laboratory.

Water collected for chlorophyll *a* analysis was filtered using an electric pump and 0.45 µm cellulose membrane filters (in July, August, and September) and 1.2 µm glass microfiber type C (GF/C) filters (in September). Filters were then placed in black tubes provided by the laboratory or wrapped in foil, labelled with the sample ID, date and time. Filters for chlorophyll *a* analysis were kept frozen until the end of the program and delivered to BV in July and August, and to ALS Yellowknife in September for analysis. Due to different analytical techniques and associated method detection limits, chlorophyll *a* analysis was transitioned from BV back to ALS in September to allow comparison to historical results, which were analyzed by ALS (see Appendix A, Section A4.2).

4.3 Laboratory Methods

Sample bottles were provided by BV (Yellowknife), an analytical laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. Water quality samples were analyzed for the following AEMP parameters²:

- conventional parameters (i.e., specific conductivity, turbidity, hardness, laboratory pH, total suspended solids, total dissolved solids [measured and calculated], and total alkalinity).
- major ions (i.e., calcium, chloride, fluoride, magnesium, potassium, sodium, and sulphate).
- nutrients (i.e., nitrite, nitrate, total ammonia, un-ionized ammonia³, total nitrogen, total Kjeldahl nitrogen, orthophosphate, total dissolved phosphorus, total phosphorus, total organic carbon, dissolved organic carbon, and reactive silica).
- Ultra low-level total and dissolved metals (i.e., aluminum, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, uranium, vanadium, and zinc).
- cyanides (total cyanide, free cyanide, and weak acid dissociable cyanide).
- radium-226 (open-water only).
- chlorophyll a (open-water only).

4.4 Quality Assurance and Quality Control

Quality assurance encompasses management and technical practices designed to generate scientifically credible data, and quality control is a specific aspect of the quality assurance process that incorporates internal techniques used to measure and assess data quality. The procedures, assessment criteria, and results are presented in Appendix A. Quality control samples were collected following the procedures described in the AEMP study design (B2Gold Nunavut 2025).

Quality assurance and quality control procedures were applied to field sampling, laboratory analysis, data entry, data analysis, and report preparation. Specific work instructions were provided to field personnel, and a pre-field meeting was held to review the instructions for the field data collection, and to familiarize field personnel with the expectations of the sampling plan. Field equipment was calibrated throughout the field program following the manufacturers' specifications and samples were collected by appropriately trained and experienced personnel. Detailed field notes were recorded in waterproof field books and/or on pre-printed waterproof field datasheets. Datasheets and sample labels were checked at the end of each field day for completeness and accuracy, and were scanned to create electronic copies at the completion of the field program. Samples were labelled, filtered, preserved, and shipped according to standard protocols. Chain of custody forms were used to track shipment and receipt of samples. Upon entry of the field data into the electronic database, the data were checked against field datasheets by a reviewer to verify the accuracy of data entry and to check for transcription errors. Target detection limits are provided in Appendix D, Table D-1 of the AEMP study design (B2Gold Nunavut 2025) and detection limits achieved are provided in Appendix A, Tables A-1 and A-2.

² Parameters analyzed for the AEMP are prescribed in the AEMP study design (G2Gold Nunavut 2025), which has been designed to align with the analytical requirements listed in Schedule I, Table 1 of the Type A Water Licence 2AM-BRP1831.

³ The laboratory calculated un-ionized ammonia concentrations using total ammonia concentrations and field-measured pH and temperature.

Quality control samples collected during the 2025 water sampling programs consisted of four travel blanks, four field blanks, three equipment blanks, and four duplicate samples. This represented 19% of the total number of water samples collected (i.e., samples AEMP, investigative, and hydrodynamic water quality samples; Table 4-1).

4.5 Plume Delineation

To provide a description of how the dewatering discharge mixed with water in the receiving environment (i.e., West Bay of Goose Lake), a plume delineation study was conducted in August 2025 to assess the mixing and dispersion of water from dewatering Llama Lake and Umwelt Lake. Field measurements of specific conductivity, DO, pH, and temperature were taken at multiple locations and three depths (1 m below water surface, at mid-depth, and 1 m above lake bottom) in the West Bay of Goose Lake (i.e., near Goose Lake inflow from Llama Lake) area along radiating transects from the outlet of Llama Lake into Goose Lake (i.e., area near BRP-29A). Measurements were collected approximately every 20 m along each transect in West Bay, with an additional six locations in the channel north of the island, and five locations in the channel that leads into the Central Basin east of the island.

Dewatering water chemistry and toxicity data were provided by B2Gold Nunavut environmental staff to support the plume delineation analysis. Specific conductivity was used as an indicator of the presence of the dewatering discharge in the lake because of differences in the specific conductivity measured in dewatering discharge water and that in Goose Lake West Bay. Specific conductivity in dewatering discharge water on August 15, 2025 (two daily measurements), when the plume delineation study was carried out, was 87 $\mu\text{S}/\text{cm}$ in Llama Lake (station BRP-02), 115 to 116 $\mu\text{S}/\text{cm}$ in Umwelt Lake (station BRP-06), and 92 $\mu\text{S}/\text{cm}$ at Goose Lake Discharge (i.e., dewatering discharge at the point of release; BRP-01). Field specific conductivity in samples collected from West Bay of Goose Lake on 12 August 2025 ranged from 148 to 150 $\mu\text{S}/\text{cm}$ (Appendix D, Table D-1). Characterization of the plume was completed by assessing the spatial delineation of the plume, both vertical and horizontal.

4.6 Data Analysis

Identifying Project-related Effects

Water quality results⁴ were summarized in tables and plots, including vertical profiles of field parameters and time series plots for AEMP parameters. Data analyses were performed separately for samples collected in under-ice and open-water conditions. Descriptive statistics (i.e., mean, median, minimum, maximum, standard deviation, and standard error values) were calculated for each parameter and sampling event.

Median parameter concentrations were compared to AEMP benchmarks and normal ranges⁵ presented in B2Gold Nunavut (2025). The AEMP benchmarks are provided in Table 4-2. Normal ranges for total dissolved solids and chlorophyll *a* were revised using updated historical data (i.e., total dissolved solids results were recalculated using the APHA 2005 equation⁶ and chlorophyll *a* results were used after conversion of concentrations to 1.2 μm GF/C filters [details in Appendix C]).

⁴ Water chemistry data from Runoff and Compliance monitoring were provided by B2Gold Nunavut environmental staff and were used to supplement the AEMP data in the results interpretation, where appropriate.

⁵ Baseline data used to calculate normal ranges were results from surface water samples collected in Goose Lake up to August 2023. Data collected as of September 2023 were not considered baseline because of the increase in concentrations during construction as reported in WSP (2025b).

⁶ Equation to calculate total dissolved solids per APHA (2005) = $(0.6 \times \text{total alkalinity as } \text{CaCO}_3) + \text{Na}^+ + \text{Mg}^{2+} + \text{K}^+ + \text{Ca}^{2+} + \text{SO}_4^{2-} + \text{Cl}^- + \text{NO}_3^- + \text{F}^- + \text{SiO}_3^{2-}$, where Na^+ = sodium cation; Mg^{2+} = magnesium cation; K^+ = ion; Ca^{2+} = calcium cation; CaCO_3 = calcium carbonate; SO_4^{2-} = sulphate anion; Cl^- = chloride anion; NO_3^- = nitrate anion (multiply nitrate as nitrogen by 4.427); F^- = fluoride anion; and SiO_3^{2-} = silicate anion (multiply reactive silica as SiO_2 , by 1.266).

Parameters with median values that exceed the upper bound of the normal range were identified as parameters of interest (POIs) and further evaluated in the statistical analysis; normal ranges and thus POIs were specific to under-ice and open-water conditions. The exceptions were total phosphorus, total nitrogen, and chlorophyll *a*, which were retained as POIs regardless of median concentrations to further evaluate nutrients in Goose Lake. Parameters were not considered POIs if median concentrations were above the upper bound of the normal range in Reference B Lake, as this suggests regionally elevated concentrations compared to baseline⁷. However, if median concentrations were above the upper bound of the normal range in both lakes, but median concentrations were greater in Goose Lake samples compared to Reference B Lake, parameters were retained as POIs.

A median value greater than the upper bound of the normal range in either area of Goose Lake in July, August, or September was used as the criterion for inclusion as a POI in open-water conditions. However, because of the raised detection limits (DLs) in August and September (discussed in Appendix A, Section A4.2), some parameters had median concentrations below the DL, which was greater than the upper bound of the normal range in Goose Lake areas and Reference B Lake. This situation occurred for total molybdenum, total and dissolved silver, and total and dissolved vanadium. In these instances, the July data were used to assess whether these parameters were POIs.

A Before-After Control-Impact (BACI) statistical analysis was conducted on POIs to determine if concentrations have increased over time in the exposure area (i.e., Goose Lake; Impact area in the BACI analysis) compared to the before period and the reference area (i.e., Reference B Lake; Control area in the BACI analysis). Statistical tests were considered significant at a *P*-value less than 0.1. Statistical results were supported by visual evaluation of time series plots. The results of the BACI analysis feed directly into the Action Level Assessment described in Section 5.5.

The BACI analysis was completed using parametric censored regression models. Concentrations reported as below DL are considered censored, specifically left-censored (i.e., while the exact concentration is not known, it can be assumed that it is bounded between zero and the DL). These values can provide important information when evaluating changes in water chemistry over time, and censored regression models can incorporate that information more effectively than other methods. When no values are reported as below DL, censored regression models functionally reduce to generalized linear models, a more common class of linear models.

Several censored regression models were evaluated using various residual distributions. In addition to often being left-censored, environmental chemistry data are also frequently skewed (typically right-skewed) and thus do not meet typical linear model assumptions of Gaussian (i.e., normal) distributed errors (Helsel 2012), and do not fit the typical linear model framework. Therefore, five distributions were evaluated for suitability of regression models, including those that are more robust to skewed data or outlying values: the Gaussian, *t*, log-normal, log-logistic, Weibull, and Gumbel distributions were used to fit censored regression models (Therneau and Grambsch 2000).

Regression models were akin to two-way ANOVA models, using fixed effects for the Before-After (BA) and Control-Impact (CI) comparisons, as well as their interaction term (BA:CI; Schwartz 2018). BACI effects were calculated using Equation 1, using marginal means (Lenth 2024) derived using censored regression models:

$$BACI = \mu_{CA} - \mu_{CB} - (\mu_{IA} - \mu_{IB}) \quad [\text{Equation 1}]$$

⁷The baseline period was considered as 2011 to August 2023. Data collected as of September 2023 were not considered baseline because of the increase in concentrations during construction reported in WSP (2025b).

where:

$BACI$ is the BACI effect,

μ_{CA} is the marginal mean parameter value for the Control area during the After period,

μ_{CB} is the marginal mean parameter value for the Control area during the Before period,

μ_{IA} is the marginal mean parameter value for the Impact area during the After period, and

μ_{IB} is the marginal mean parameter value for the Impact area during the Before period.

Model selection was completed using the small sample size-corrected Akaike's Information Criterion (AICc; Burnham and Anderson 2002). AICc values for each model were used to compute $\Delta AICc$, the difference between a given AICc and the lowest AICc, for each water quality parameter. The final model was chosen using $\Delta AICc$ values following model selection guidance (i.e., $\Delta AICc = 0$; Burnham and Anderson 2002). Model assumptions were evaluated using graphical methods, using residual distributions and quantile-quantile plots (Lawless 2002; Collett 2015).

Where model assumptions were not met using censored regression models or where data had a high frequency of values below DL (i.e., >80% below DL), a semi-parametric regression model was used. Water quality data were first transformed using a rank u-score method, as this transformation method can accommodate multiple DLs while maintaining the relative positions between concentrations reported above and below DL (Helsel 2012). The u-score was calculated using Equation 2, as the sum of the sign-differences between one measured parameter value and all other values:

$$u_i = \sum_{i \neq j} \text{sign}(c_i - c_j) \quad [\text{Equation 2}]$$

where:

u_i is the u-score for a given parameter value in sample i ,

c_i is the measured parameter value in sample i ,

c_j is the measured parameter value in a different sample j (where $i \neq j$), and

sign indicates the *signum* operator, which returns 1 if $c_i > c_k$, -1 if $c_i < c_j$, or 0 if $c_i = c_j$. Where parameter values were reported below DL and it could not be determined whether c_i was greater than c_k (e.g., $c_i = 7, c_k = <10$), then $\text{sign}(c_i - c_k)$ returned 0 (Helsel 2012).

For a set of u-scores for a given parameter, the median value would have a u-score of 0, while values above the median would have positive u-scores and values below the median would have negative u-scores. U-scores were rank-transformed prior to analysis. Rank u-scores were analyzed similarly to censored regression models, using fixed effects of BA and CI as well as their interaction term.

All statistical methods were implemented using R version 4.4.1 (R Core Group 2025) using base packages as well as the “AICcmodavg” (Mazerolle 2023), and “survival” (Therneau 2024) packages. Data manipulation was completed using base packages as well as “dplyr” (Wickham et al. 2023), “openxlsx” (Schauberger and Walker 2024), “plyr” (Wickham 2011), and “tidyr” (Wickham et al. 2024) packages. Visualization was completed using the “ggplot2” package (Wickham 2016).

Table 4-2: Water Quality Benchmark used in the Aquatic Effects Management Plan, 2025

Parameter	Units	AEMP Benchmark ^(a)	Source
Conventional Parameters			
pH	-	6.5 – 9.0	CCME 1999
Total dissolved solids	mg/L	500	Alaska DEC 2012
Total suspended solids	mg/L	8 ^(b)	CCME 1999
Ions and Other			
Chloride	mg/L	120	CCME 1999
Fluoride	mg/L	0.12	CCME 1999
Sulphate	mg/L	128 – 309 ^(c)	BC MWLRS 2025a
Total cyanide	mg/L	0.0050	CCME 1999
Nutrients			
Nitrate, as N	mg-N/L	2.93	CCME 1999
Nitrite, as N	mg-N/L	0.060	CCME 1999
Total ammonia	mg-N/L	1.3 – 149 ^(d)	CCME 1999
Total phosphorus	mg-P/L	0.01	CCME 1999
Total Metals			
Aluminum	µg/L	170 – 620 ^(e)	GOC 2024
Arsenic	µg/L	10	Golder 2017
Barium	µg/L	1,000	BC MWLRS 2025b
Cadmium	µg/L	0.040 – 0.15 ^(f)	CCME 1999
Chromium	µg/L	5.0	GOC 2024
Cobalt	µg/L	0.78 – 0.99 ^(g)	GOC 2024
Copper	µg/L	4.2	Sabina 2015
Iron	µg/L	360 – 520 ^(h)	GOC 2024
Lead	µg/L	4.7 – 10 ⁽ⁱ⁾	GOC 2024
Mercury	µg/L	0.026	CCME 1999
Molybdenum	µg/L	73	CCME 1999
Nickel	µg/L	25 – 91 ^(j)	CCME 1999
Selenium	µg/L	1.0	CCME 1999
Silver	µg/L	0.25	CCME 1999
Strontium	µg/L	2,500	GOC 2024
Thallium	µg/L	0.80	CCME 1999
Uranium	µg/L	15	CCME 1999
Vanadium	µg/L	120	GOC 2024
Dissolved Metals			
Manganese	µg/L	240 – 530 ^(k)	CCME 1999
Zinc	µg/L	6.2 – 76 ^(l)	CCME 1999
Radionuclides			
Radium-226	Bq/L	0.11	SK ENV 2025

Note: If measured values are outside ranges for parameters used to calculate guidelines, then the lower or upper limit of the range will be used instead.

(a) AEMP benchmarks per B2Gold Nunavut (2025).

(b) The 90th percentile of baseline total suspended solids concentration of <3 mg/L was used to calculate the AEMP benchmark, based on 5 mg/L above background concentrations.

(c) Hardness dependent guideline: 128 mg/L at hardness ≤30 mg/L as CaCO₃; 218 mg/L at hardness 31 to 75 mg/L as CaCO₃; 309 mg/L at hardness 76 to 180 mg/L as CaCO₃; 429 mg/L at hardness ≥181 mg/L as CaCO₃.

(d) pH and temperature dependent guideline calculated using the equation: $0.019/(1/(10^{(0.0901821+2729.92/(Temperature+273.15)-pH)+1})) \times 0.8224$.

(e) pH, DOC, and hardness dependent guideline calculated using the equation: $e^{((0.645 \times \ln(DOC))+(2.255 \times \ln(hardness))+(1.995 \times pH)+(-0.284 \times (\ln(hardness) \times pH)) - 9.898)}$ and is valid within the ranges of pH 6 to 8.7, DOC 0.08 to 12.3 mg/L, and hardness 10 to 430 mg/L as CaCO₃.

(f) Hardness dependent guideline: 0.04 µg/L at hardness >0 to <17 mg/L as CaCO₃; calculated using the equation $10^{(0.83(\log(hardness))-2.46)}$ at hardness ≥17 to ≤280 mg/L as CaCO₃; 0.37 µg/L at hardness >280 mg/L as CaCO₃.

(g) Hardness dependent guideline is calculated using the equation: $e^{(0.414[\ln(hardness)]-1.887)}$ and is valid within the calibration range of hardness of 52 to 396 mg/L as CaCO₃.

(h) pH and DOC dependent guideline calculated using Environment and Climate Change Canada total iron federal environmental quality guideline calculator (ECCC 2024). The guideline is valid within the ranges of pH 6 to 8.5 and DOC 0.3 to 10.9 mg/L.

(i) DOC and hardness dependent guideline calculated using the equation: $e^{(0.514[\ln(DOC)]+0.214[\ln(Hardness)]+ 0.4354)}$ and is valid within the ranges of DOC 0.5 to 31.5 mg/L and hardness 4.7 to 511 mg/L as CaCO₃.

(j) Hardness dependent guideline: 25 µg/L at hardness 0 to ≤60 mg/L as CaCO₃; calculated using the equation $e^{(0.76[\ln(hardness)]+1.06)}$ at hardness >60 to ≤180 mg/L as CaCO₃; 150 µg/L at hardness >180 mg/L as CaCO₃.

(k) pH and hardness dependent guideline calculated using Canadian Council of Ministers of the Environment dissolved manganese calculator (CCME 2019). The guideline is valid within the calibration ranges of pH 5.8 to 8.4 and hardness 25 and 670 mg/L as CaCO₃.

(l) pH, DOC, and hardness dependent guideline is calculated using the equation: $e^{((0.947 \times \ln(hardness))- (0.815 \times pH)+(0.398 \times \ln(DOC))+4.625)}$ and is valid within the ranges of pH 6.5 to 8.13, hardness 23.4 to 399 mg/L, and DOC 0.3 to 22.9 mg/L as CaCO₃.

AEMP = aquatic effects management plan; mg-N/L = milligrams as nitrogen per litre; mg-P/L = milligrams as phosphorus per litre; DOC = dissolved organic carbon; CaCO₃ = calcium carbonate.

Comparison to Water Quality Predictions

Parameters of interest with a significant BACI effect were evaluated further to determine whether the observed change in water quality was consistent with predictions made regarding effects on water quality. The most recent predictions for water quality were presented in the Hydrodynamic and Water Quality Modelling of Goose Lake report (WSP Golder 2022b). Predictions were summarized and 2025 results were compared to predicted concentrations tabulated in the report. Specifically:

- Median and maximum parameter concentrations in 2025 from Goose Lake West Bay samples across all sampling events were compared to the predicted 95th percentile daily concentration at the edge of the mixing zone for PN04 in Goose Lake for the Construction and Operations Phases.
- Median and maximum parameter concentrations in 2025 from Goose Lake Central Basin samples across all sampling events were compared to the predicted 95th percentile daily concentration in Goose Lake Central Basin for the Construction and Operations Phases.

Action Level Assessment

Action Levels are defined in the AEMP study design (B2Gold Nunavut 2025) and represent increasing levels of change towards Significance Thresholds. Significance Thresholds specific to water quality are that water is not suitable to support an aquatic ecosystem with a functional benthic invertebrate community and healthy fish, and that water is not suitable as a drinking source for people. Proposed Low Action levels for water quality, as they pertain to the Significance Thresholds and the toxicological impairment and nutrient enrichment hypotheses, are provided in Table 4-3.

To assess whether the aquatic life Low Action Level was exceeded for a parameter, results from the comparison to the upper bound of the normal range and BACI analysis were used to assess whether the first criterion was met. To assess whether the second criterion for the aquatic life Low Action Level was met, 80% of benchmark values were calculated and were compared to monthly median concentrations in each area. Benchmarks based on sample-specific exposure and toxicity modifying factors (e.g., hardness-dependent benchmarks) were calculated using site- and month-specific median concentrations for each dependent variable.

To assess whether the human consumption Low Action Level was exceeded, concentrations from Goose Lake were compared to Health Canada’s human health drinking water quality guidelines, specifically, maximum acceptable concentration (Health Canada 2025).

Table 4-3: Proposed Water Quality Low Action Levels for the Toxicological Impairment and Nutrient Enrichment Hypotheses

Parameter	Units
Aquatic Life ^(a)	Human Consumption ^(b)
Statistically significant BACI effect on concentration in the exposure area, with the median concentration above the normal range	Statistically significant BACI effect on concentration in the exposure area, with the median concentration above the normal range
AND	AND
Median concentration above 80% of the AEMP benchmark	Drinking water parameters in exposure area above Health Canada’s human health drinking water quality guideline (maximum acceptable concentration)

(a) Applies to parameters of interest, which will include total phosphorus, total nitrogen, and chlorophyll a.

(b) Applies to the toxicological impairment hypothesis but not the nutrient enrichment hypothesis.

5 RESULTS

Quality assurances and quality control results are presented in Appendix A. Vertical profiles of field parameters (i.e., data and figures), and profiles from the plume delineation are presented in Appendix B. The conversion of chlorophyll *a* data obtained with 0.45 µm cellulose membrane filters to be comparable to those obtained with 1.2 µm GF/C filters is discussed in Appendix C. Water quality results, including the comparison to AEMP benchmarks, and statistical analysis results are provided in Appendix D. Time series plots for AEMP parameters are provided in Appendix E. Methods and results of additional sampling carried out in 2025 for investigative purposes are provided in Appendix F.

5.1 Quality Assurance and Quality Control

The quality control results indicate that the 2025 water quality data are acceptable, and the results reported are considered reliable for use in this AEMP report to meet study objectives (Appendix A). During the August and September programs, the laboratory provided non-leached vials that were unsuitable for ultra-low level metal analysis. As a result, the laboratory raised the DLs for most metals. Consequences of these raised detection limits are that some parameters (e.g., molybdenum, vanadium) were reported to be below the detection limit in August and September in all samples. In these cases, data from July were used to evaluate parameters of interest. Further details of the data quality review are provided in Appendix A.

5.2 Plume Delineation

Dewatering occurred from mid-July to late-August 2025. As prescribed in the Water Licence, weekly water quality samples were collected at BRP-01 (i.e., the dewatering discharge at the point of release) on July 13, 20, and 28 and August 3 and 10, 2025). Dewatering discharge met Water Licence discharge limits:

- total suspended solids ranged from <1 to 5.4 mg/L (maximum allowable average concentration of 15 mg/L and 30 mg/L in grab samples)
- turbidity ranged from 0.11 to 3.4 NTU (maximum allowable average concentration of 30 mg/L and 15 mg/L in grab samples)
- total aluminum ranged from 0.013 to 0.13 mg/L (maximum allowable average concentration of 1.5 mg/L and 3.0 mg/L in grab samples)
- field pH ranged from 6.5 to 7.0 (permitted range between 6.0 and 9.5)

There was no acute toxicity to rainbow trout (*Oncorhynchus mykiss*) and *Daphnia magna* in dewatering discharge from July 20, August 10, and September 2, 2025. Dewatering discharge was also tested for chronic toxicity to *Pimephales promelas* (fathead minnow), *Ceriodaphnia dubia* (water flea), *Lemna minor* (duckweed), and *Raphidocelis subcapitata* (green algae) in dewatering discharge from August 19, 2025. There was no effect on survival and reproduction of *C. dubia*, or growth of *R. subcapitata*. Growth of *L. minor* was slightly reduced relative to the laboratory control, but the effect size was less than 25% (i.e., the 25% inhibition concentration (IC25) was greater than the highest test concentration). Survival and biomass of fathead minnows was significantly reduced, with a 50% lethal concentration (LC50) of 41%v/v and an IC25 of 6.7%v/v. Further information on dewatering discharge chemistry and toxicity results will be provided in the annual report.

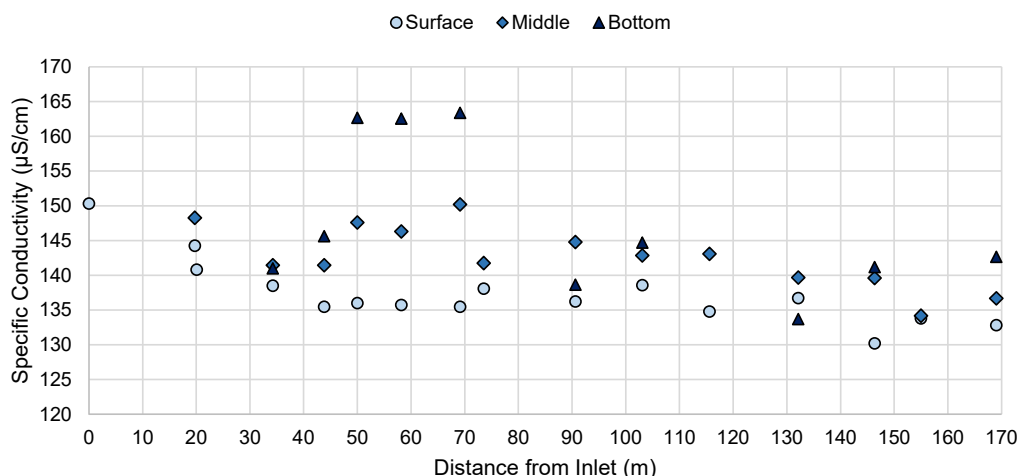
Specific conductivity was used as the main indicator of plume presence in Goose Lake because dewatering discharge water was lower in conductivity than what had been measured in Goose Lake West Bay prior to any dewatering discharge to Goose Lake. Overall, specific conductivity on August 15, 2025, was greater in West Bay compared to the Central Basin; it ranged from 130 to 163 $\mu\text{S}/\text{cm}$ in West Bay and was below 90 $\mu\text{S}/\text{cm}$ in the Central Basin (76 to 86 $\mu\text{S}/\text{cm}$; Appendix B, Table B-15).

Within West Bay, specific conductivity at the surface declined within the first 40 m (from 150 to 135 $\mu\text{S}/\text{cm}$, and then remained mostly stable thereafter, fluctuating between 130 and 140 $\mu\text{S}/\text{cm}$ (Figure 5-1A). Where deeper measurements were possible, specific conductivity within West Bay was slightly more variable, ranging from 134 to 163 $\mu\text{S}/\text{cm}$. Specific conductivities declined steadily with distance from the inlet along the channel north of the island, then dropped to below 90 $\mu\text{S}/\text{cm}$ within about 300 m of the Main Basin (Figure 5-1B).

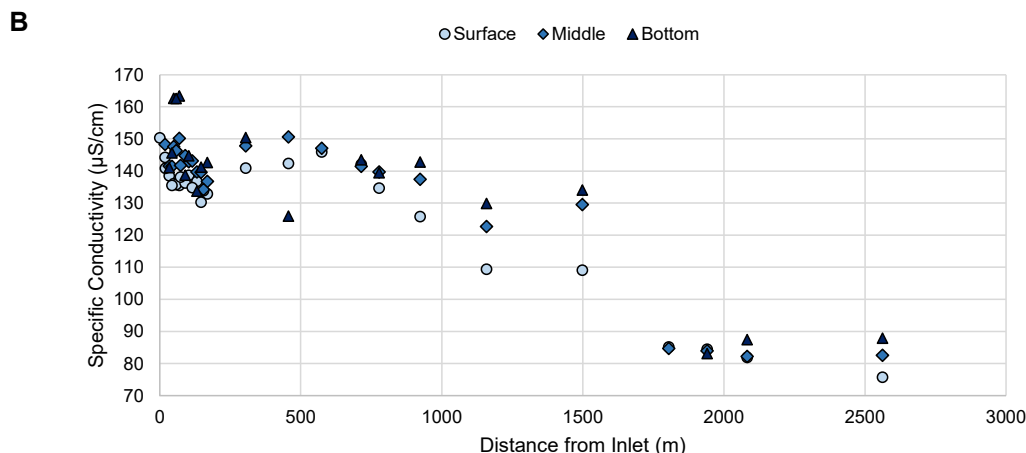
Because the specific conductivity in dewatering discharge on August 15 was 92 $\mu\text{S}/\text{cm}$ compared to 149 $\mu\text{S}/\text{cm}$ in West Bay three days prior, locating the plume in West Bay should have resulted in lower specific conductivity near the inlet, with an increasing trend with distance from the inlet into Goose Lake. Because specific conductivity decreased with distance from the inlet, the results indicate that a plume from dewatering discharge was not detected in West Bay.

Rather than detecting a plume from dewatering discharge, the plume was a result of the mixing of Goose Lake water with high specific conductivity stream flowing into West Bay (i.e., Goose Lake inflow from Llama and Umwelt Lakes), where BRP-18⁸ is located. This was unrelated to dewatering activities because elevated specific conductivity was measured at BRP-18 and in West Bay prior to any dewatering discharge. The potential cause(s) of the elevated specific conductivity in West Bay prior to dewatering discharge is discussed in Section 5.5.3. On June 21, field specific conductivity at BRP-18 was 125 $\mu\text{S}/\text{cm}$ (WSP 2025a) and was greater than 130 $\mu\text{S}/\text{cm}$ in West Bay on July 8 (Appendix B, Table B-4). This plume was most concentrated within the first 40 m from the inlet and was generally diffused throughout the West Bay of Goose Lake thereafter. Changes to water quality in West Bay are discussed further in Appendix F.

A



⁸ BRP-18 is located in the stream that flows from Llama and Umwelt Lakes into the West Bay of Goose Lake. The station is located approximately 250 m upstream (i.e., west) of the inlet into West Bay, and approximately 750 m downstream of the haul road.



Note: The inlet refers to the first profile (i.e., measurement taken as close to the inlet as possible).

Figure 5-1: Specific Conductivity Measurements with Distance from the Inlet to Goose Lake within West Bay (A) and to the Central Basin (B) of Goose Lake.

5.3 Water Quality in Goose Lake

Summary statistics for each station and sampling event are provided in Appendix D, Tables D-1 to D-3.

5.3.1 Under-Ice

Depth profiles identified vertical variability in some field-measured parameters (i.e., temperature and DO) during the under-ice season, while other parameters differed among lakes but not with depth (i.e., specific conductivity and pH; Appendix B). As expected for under-ice conditions, water temperature increased with depth under the ice layer; temperatures were near 0°C at the surface and increased to between 1°C and 4°C at the bottom of each lake near the lake-bed. Dissolved oxygen decreased with depth in all areas, with the lowest bottom DO at Reference B Lake stations, which ranged from 2.2 to 8.1 mg/L; bottom DO was greater than 8 mg/L at all Goose Lake stations. Three stations in Reference B Lake had bottom DO concentrations below the lowest acceptable dissolved oxygen concentration of 6.5 mg/L for early life stages in cold water biota (Appendix B, Table B-3; CCME 1999). Specific conductivity was higher in Goose Lake compared to Reference B Lake, and was highest in the West Bay area, but did not vary with depth. pH was similar within and among lakes, and did not vary with depth.

Field-measurements at the sampling depth were within the baseline range, except for specific conductivity in the Goose Lake areas, where measurements were greater than baseline in 2024 and 2025 (see time series plot in Appendix E).

5.3.1.1 Comparison to AEMP Benchmarks

Concentrations of most parameters in April 2025 were below AEMP benchmarks in Goose Lake and Reference B Lake (Appendix D, Tables D1 to D3). Exceedances occurred for nitrite and total cobalt in one or more Goose Lake areas, and in both lakes for field pH.

- Nitrite and total cobalt concentrations in most (i.e., three or four out of five) samples collected from Goose Lake West Bay were above AEMP benchmarks.
- The Goose Lake Central Basin samples all had nitrite concentrations greater than the AEMP benchmark.
- Field pH values were below the benchmark range in most samples collected from Goose Lake and Reference B Lake in April 2025, indicating that the lower pH occurred regionally and was unlikely to be caused by Project-related activities.

5.3.1.2 Comparison to Normal Ranges

Most parameters had median concentrations greater than the upper bound of the normal range in Goose Lake Central Basin and/or West Bay (Table 5-1). While some parameters barely exceeded the upper bound of the normal range (e.g., dissolved aluminum and vanadium), others were orders of magnitude greater than the upper bound of the normal range (e.g., nitrate, nitrite).

Parameters of interest in under-ice conditions were:

- conventional parameters: total dissolved solids, calcium, chloride, magnesium, potassium, sulphate, and reactive silica
- nutrients: nitrate, nitrite, total ammonia, total nitrogen, and total phosphorus
- metals: total and dissolved aluminum, arsenic (total only), barium, cadmium, cobalt, copper (total only), manganese (dissolved only), mercury (dissolved only), molybdenum, nickel, selenium, strontium, thallium, vanadium (dissolved only), and zinc.

Some parameters (e.g., total manganese, dissolved lead) were not considered POIs because median concentrations, although above the upper bound of the normal range in Goose Lake, were similar or greater in Reference B samples and suggest regionally elevated concentrations.

Table 5-1: Under-Ice Median Concentrations Compared to the Upper Bound of the Under-Ice Normal Range to Identify Under-Ice Parameters of Interest, 2025

Parameter	Units	Under-ice Upper Bound of the Normal Range	2025 Under-Ice (April) Median ^(a)			Parameter of Interest?
			West Bay (BRP-29A)	Central Basin (BRP-32)	Reference B Lake (BRP-38)	
Total dissolved solids ^(b)	mg/L	64	123	85	39	Yes
Total suspended solids	mg/L	6 ^(c)	1	1	1	-
Calcium	mg/L	7.2	20	13	5.6	Yes
Chloride	mg/L	10	24	14	0.63	Yes
Cyanide	mg/L	0.01 ^(c)	0.0005	0.0005	0.0005	-
Fluoride	mg/L	0.04 ^(c)	0.03	0.03	0.02	-
Magnesium	mg/L	3.95	9.8	7.4	4.0	Yes ^(d)
Potassium	mg/L	0.956	1.7	1.2	0.78	Yes
Sodium	mg/L	6.0	2.9	2.2	1.2	-
Sulphate	mg/L	16	46	33	12	Yes
Reactive silica	mg/L	3.0	3.6	2.8	1.3	Yes
Nitrate	mg-N/L	0.185	2.4	1.3	0.025	Yes
Nitrite	mg-N/L	0.002 ^(c)	0.068	0.130	0.001	Yes
Total ammonia	mg-N/L	0.035	0.33	0.16	0.16	Yes ^(d)
Total nitrogen	mg-N/L	0.423	3.0	1.8	0.56	Yes ^(e)
Total phosphorus	mg-P/L	0.005	0.001	0.001	0.001	Yes ^(e)
Total aluminum	µg/L	30	38	22	6.5	Yes
Total arsenic	µg/L	0.358	0.419	0.362	0.314	Yes
Total barium	µg/L	16	34	22	10	Yes
Total cadmium	µg/L	0.022	0.052	0.017	0.003	Yes
Total chromium	µg/L	0.26	0.20	0.15	0.13	-
Total cobalt	µg/L	0.603	1.1	0.27	0.31	Yes
Total copper	µg/L	3.3	3.3	2.4	1.1	Yes
Total iron	µg/L	40	27	16	63	-
Total lead	µg/L	0.19	0.11	0.36	0.99	-
Total manganese	µg/L	11	24	8.3	46	-
Total mercury	µg/L	0.0041	0.0012	0.0009	0.0021	-
Total molybdenum	µg/L	0.020	0.027	0.027	0.009	Yes
Total nickel	µg/L	10	20	12	2.5	Yes
Total selenium	µg/L	0.05 ^(c)	0.09	0.06	0.04	Yes
Total silver	µg/L	0.004 ^(c)	0.002	0.002	0.002	-
Total strontium	µg/L	40	104	61	17	Yes
Total thallium	µg/L	0.003	0.0055	0.0031	0.0014	Yes
Total uranium	µg/L	0.016	0.015	0.012	0.0052	-
Total vanadium	µg/L	0.08	0.06	0.05	0.03	-
Total zinc	µg/L	4.1	9.2	3.4	2.1	Yes
Dissolved aluminum	µg/L	29	29	18	1.8	Yes
Dissolved arsenic	µg/L	0.49	0.40	0.34	0.29	-
Dissolved barium	µg/L	14	33	22	9.6	Yes
Dissolved cadmium	µg/L	0.019	0.052	0.017	0.003	Yes
Dissolved chromium	µg/L	0.20	0.17	0.14	0.07	-
Dissolved cobalt	µg/L	0.628	0.957	0.227	0.037	Yes
Dissolved copper	µg/L	3.3	3.1	2.3	1.0	-
Dissolved iron	µg/L	23	10	8.1	28	-
Dissolved lead	µg/L	0.053	0.063	0.222	0.171	-
Dissolved manganese	µg/L	8.9	22	7.1	0.73	Yes
Dissolved mercury	µg/L	0.0024	0.0029	0.0023	0.0017	Yes
Dissolved molybdenum	µg/L	0.02 ^(c)	0.02	0.03	0.006	Yes
Dissolved nickel	µg/L	11	20	12	2.4	Yes
Dissolved selenium	µg/L	0.05 ^(c)	0.09	0.06	0.03	Yes
Dissolved silver	µg/L	0.004 ^(c)	0.002	0.002	0.002	-
Dissolved strontium	µg/L	40	102	61	17	Yes
Dissolved thallium	µg/L	0.0024	0.0055	0.0034	0.0013	Yes
Dissolved uranium	µg/L	0.016	0.013	0.010	0.004	-
Dissolved vanadium	µg/L	0.047	0.048	0.047	0.019	Yes
Dissolved zinc	µg/L	4.1	9.8	3.8	1.1	Yes

Note: Comparisons to normal range were made prior to rounding. **Grey and bolded** results are median concentrations greater than the normal range upper bound. Parameters with median concentrations greater than the normal range upper bound in the reference area were not considered parameters of interest. Chlorophyll a and radium-226 samples were not collected in under-ice conditions.

(a) Results below the detection limit were used at the detection limit when calculating the median

(b) Total dissolved solid concentrations were calculated per APHA (2005) as the sum of (0.6 x total alkalinity as CaCO₃), sodium cation, magnesium cation, potassium cation, calcium cation, sulphate anion, chloride anion, nitrate anion (multiply nitrate as nitrogen by 4.427), fluoride anion, silicate anion (multiply reactive silica as SiO₂, by 1.266)

(c) Normal range derived using twice the detection limit rather than the 90th percentile value of the baseline data.

(d) Included as a parameter of interest despite median concentrations exceeded the upper bound of the normal range in Reference B Lake because the median concentrations were greater in one or both Goose Lake areas compared to that in Reference B Lake.

(e) Total nitrogen and phosphorus were carried forward as parameters of interest regardless of whether concentrations exceeded the normal range.

mg-N/L = milligrams nitrogen per litre; mg-P/L = milligrams phosphorus per litre; – = not identified as a parameter of interest.

5.3.1.3 Analysis of Parameters of Interest

Most POIs had a statistically significant BACI effect, where under-ice 2025 concentrations in Goose Lake West Bay and Central Basin changed differently from those in Reference B Lake (Table 5-2). Examples of BACI plots are presented for nitrate and total nickel in Figure 5-2. Additional results for the BACI analysis are presented in Appendix D, Table D-6 and plots presenting BACI results for all parameters are attached to Appendix D.

Two POIs, total copper and dissolved mercury, did not have a significant BACI effect (i.e., concentrations in 2025 in exposure areas did not differ from baseline in a way that was different from how concentrations changed in the reference area) in either area of the Goose Lake. All significant BACI effects identified a greater change in the exposure area compared to the Control area (i.e., a negative BACI difference in Table 5-2).

Significant BACI effects were identified for both areas of Goose Lake, except for total arsenic, total cobalt, and dissolved vanadium, where a significant BACI effect was only identified in West Bay (Table 5-2, Figure 5-3). For POIs with significant BACI effects in both areas of Goose Lake, the magnitude of the effect (i.e., percent effect) was generally more pronounced in West Bay compared to Central Basin. These results Figure 5-3 indicate that water quality has changed in both areas of Goose Lake in 2025 compared to baseline years, with the most significant shift occurring in West Bay.

As noted in the 2024 Annual Report (WSP 2025b), several water quality parameters (i.e., nitrate, ammonia, sulphate, chloride, calcium, magnesium, total dissolved solids, and total and dissolved aluminum, arsenic, barium, cadmium, cobalt, manganese, nickel, selenium, sulphur, strontium, uranium, and zinc) measured in West Bay increased in September 2023 and/or in 2024 compared to previous years. Parameters identified in the last annual report as having increased compared to previous years were also identified in April 2025 as POIs with a significant BACI effect, except for uranium, which was not considered a POI in 2025 because concentrations in April were within the under-ice normal range. These results indicate that the increase in concentrations noted in 2024 compared to baseline persisted in 2025, with differences identified in Goose Lake West Bay and Central Basin.

Comparing concentrations in 2025 to those measured in 2024, many parameters increased in one or both exposure areas in Goose Lake. However, the increase also occurred in samples collected from Reference B Lake (e.g., magnesium, total thallium, total copper; see temporal plots presented in Appendix E). These results indicate that at least part of the increase in concentrations from 2024 and 2025 was observed regionally (i.e., regional changes) and/or may be related to the change in analytical laboratory⁹ rather than being related to Project-related activities. For most POIs, concentrations in 2025 were more comparable to those measured in 2024 than to those during baseline years. These results suggest that water quality has not considerably changed between 2024 and 2025, but rather parameter concentrations were observed to change to a greater degree in September 2023 and in 2024 compared to baseline years.

⁹ Water samples were analyzed at ALS up to September 2024, and at BV in 2025 (Golder 2019; WSP Golder 2022b; WSP 2023, 2024a, 2025b).

Table 5-2: Before-After Control-Impact Analysis Results for Under-Ice Parameters of Interest, 2025

Parameter	West Bay (BRP-29A)			Central Basin (BRP-32)			POI with significant change ^(c)
	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	
Total dissolved solids ^(d)	<0.001	-76	-810	<0.001	-40	-450	Yes
Calcium	<0.001	-12	-744	<0.001	-6.6	-406	Yes
Chloride	<0.001	-16	3,729	<0.001	-11	2,904	Yes
Magnesium	<0.001	-6	-651	<0.001	-3	-381	Yes
Potassium	<0.001	-0.89	-496	<0.001	-0.50	-277	Yes
Sulphate	<0.001	-28	-738	<0.001	-17	-569	Yes
Reactive silica	<0.001	-0.96	572	<0.001	-1.9	1,691	Yes
Nitrate	<0.001	-2.2	-16,553	<0.001	-1.3	-7,600	Yes
Nitrite	<0.001	nc	nc	<0.001	nc	nc	Yes
Total ammonia	<0.001	-0.233	-369	<0.001	-0.071	-113	Yes
Total nitrogen	<0.001^(e)	-2.4 ^(d)	-1,203 ^(d)	<0.001	nc	nc	Yes
Total phosphorus	0.017	nc	nc	0.008	nc	nc	Yes
Total aluminum	0.018	-9.4	-278	0.001	-8.1	-223	Yes
Total arsenic	0.056	-0.097	-260	0.386	-0.026	nc	Yes
Total barium	<0.001	-20	-945	<0.001	-10	-504	Yes
Total cadmium	<0.001	-0.036	-4,124	<0.001	-0.0092	-1,038	Yes
Total cobalt	<0.001	-0.53	-281	0.308	0.016	nc	Yes
Total copper	0.579	-0.61	nc	0.811	-0.14	nc	No
Total molybdenum	0.009	nc	nc	<0.001	nc	nc	Yes
Total nickel	<0.001	-11	-3,746	<0.001	-5.3	-1,195	Yes
Total selenium	<0.001	-0.053	-2,088	<0.001	-0.018	-590	Yes
Total strontium	<0.001	-68	-2,551	<0.001	-34	-1,140	Yes
Total thallium	<0.001	-0.0034	21,914	<0.001	-0.00062	1,892	Yes
Total zinc	<0.001	-4.5	-312	0.018	-0.75	-52	Yes
Dissolved aluminum	<0.001	-2.9	558	0.016	-7.6	7,827	Yes
Dissolved barium	<0.001	-20	-1,034	<0.001	-11	-624	Yes
Dissolved cadmium	0.028	nc	nc	<0.001	nc	nc	Yes
Dissolved cobalt	<0.001	-0.60	2,688	<0.001	-0.17	2,914	Yes
Dissolved manganese	<0.001	-21	636	<0.001	-8.8	258	Yes
Dissolved mercury	0.884	-0.00053	nc	0.707	-0.00025	nc	No
Dissolved molybdenum	<0.001	nc	nc	<0.001	nc	nc	Yes
Dissolved nickel	<0.001	-11	-3,775	<0.001	-5.4	-1,411	Yes
Dissolved selenium	<0.001	-0.050	2,143	<0.001	-0.026	1,117	Yes
Dissolved strontium	<0.001	-69	-2,314	<0.001	-35	-1,108	Yes
Dissolved thallium	<0.001	-0.0035	5,862	<0.001	nc	nc	Yes
Dissolved vanadium	<0.001	-0.015	1,260	0.127	-0.014	nc	Yes
Dissolved zinc	<0.001	-6.8	2,686	<0.001	-2.3	837	Yes

Notes: Statistically significant BACI results are **bolded and highlighted in grey**. Results were considered significant at $P < 0.1$. BACI difference and percent effect were not calculated when the semi-parametric method was used as effects would be based on the rank-scale. Percent effect was not calculated when there was no statistically significant BACI effect.

(a) The BACI difference was calculated as (Control After – Control Before) – (Impact After – Impact Before). A negative BACI difference indicates the change in concentration was greater in the Impact area (i.e., exposure area) than in the Control area.

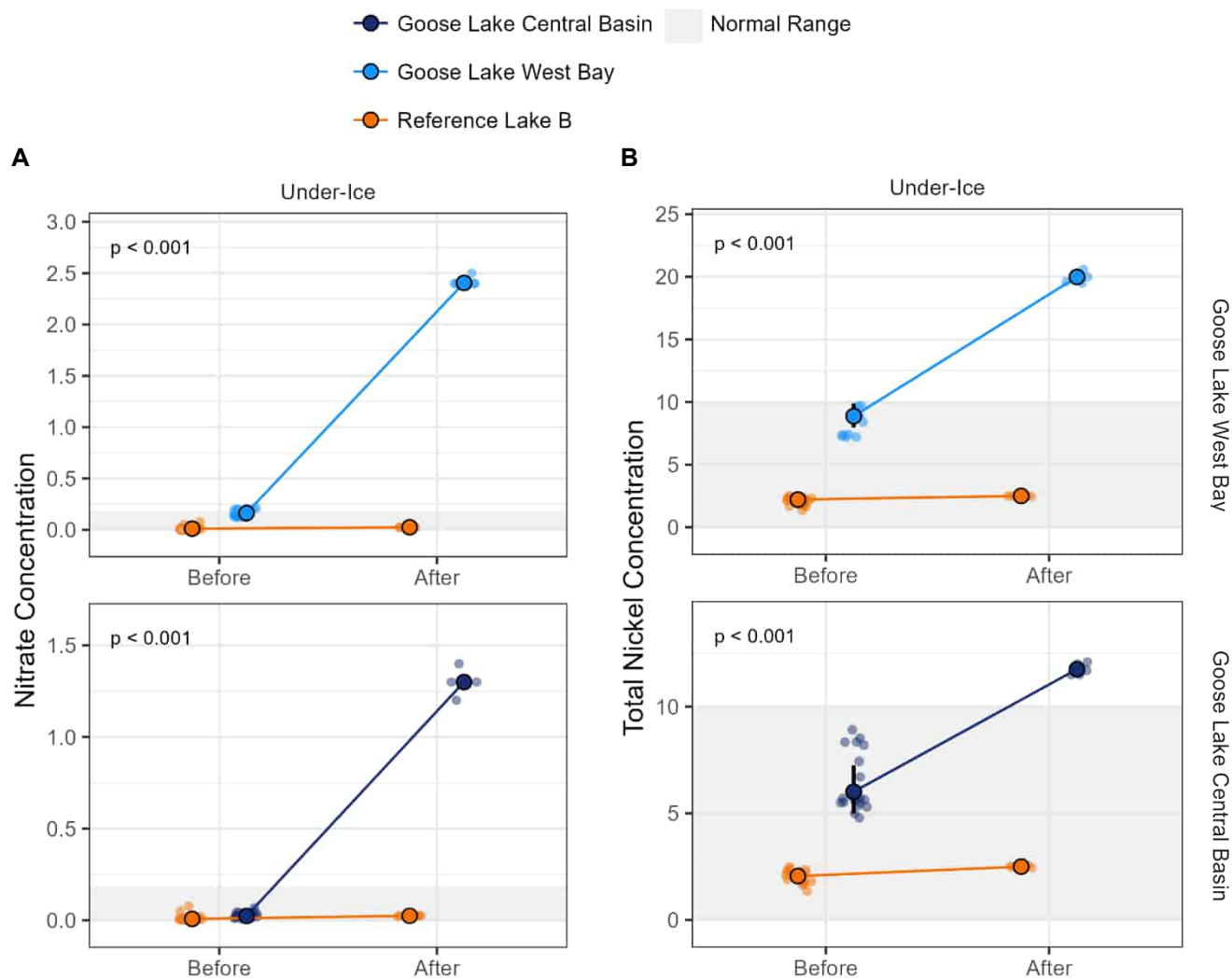
(b) The percent effect was calculated as the BACI difference divided by (Control After – Control Before) and multiplied by 100. It represents the change in the Before and After periods in the Impact area (i.e., exposure area) compared to the change in the Before and After periods in the Control area.

(c) Refers to a significant BACI result in at least one area of Goose Lake.

(d) Total dissolved solids calculated by WSP per APHA (2005).

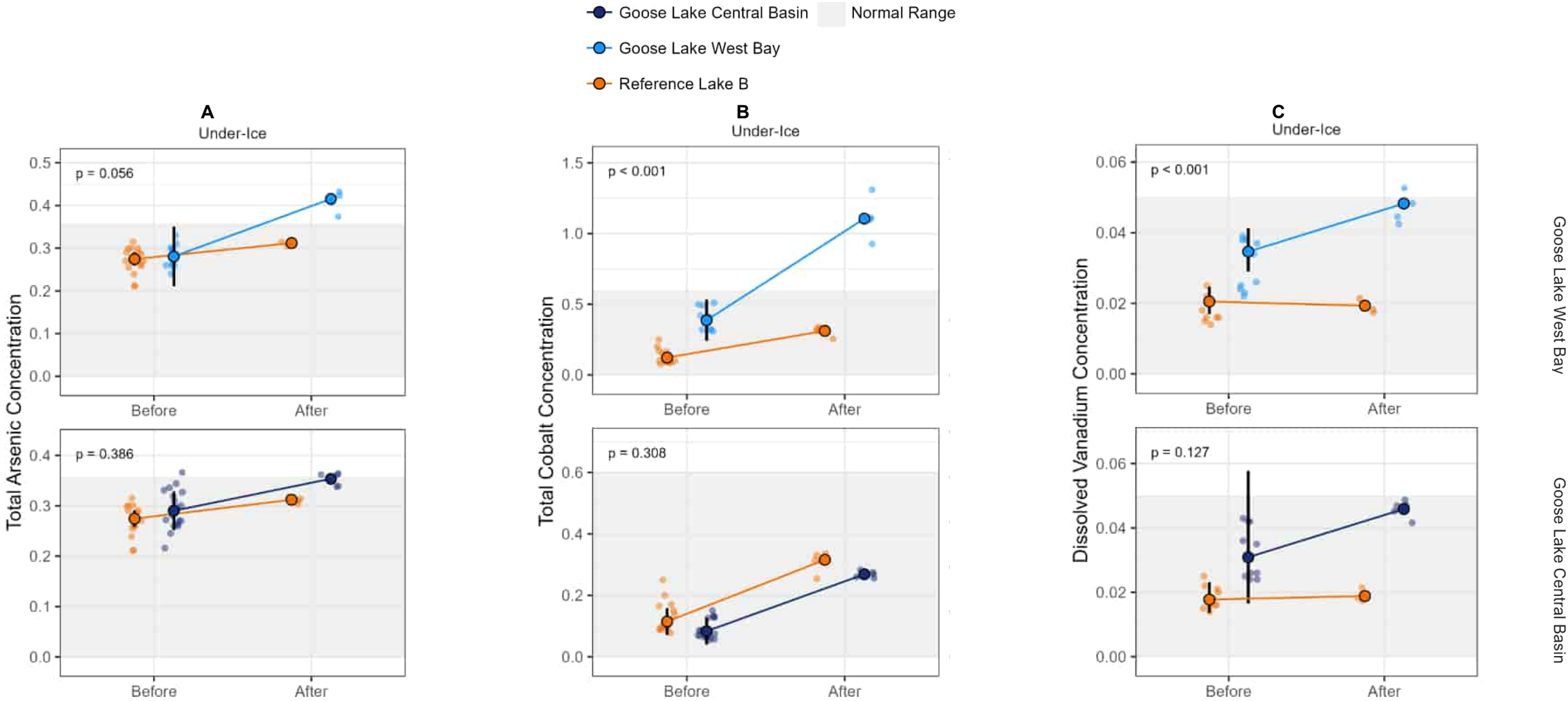
(e) Analysis for West Bay was carried out on calculated total nitrogen.

BACI = Before-After Control-Impact; P-value = probability value; nc = not calculated; POI = parameter of interest.



Note: Vertical black bars above and below the means represent the 90% confidence interval for the mean.

Figure 5-2: Select Parameters of Interest (Nitrate [A] and Total Nickel [B]) with Significant Before-After Control-Impact Analysis Results in West Bay and Central Basin.



Note: Vertical black bars above and below the means represent the 90% confidence interval for the mean.

Figure 5-3: Select Parameters of Interest (Total Arsenic [A], Total Cobalt [B], and Dissolved Vanadium [C]) with Significant Before-After Control-Impact Analysis Results in West Bay that Did Not Persist to the Central Basin.

5.3.1.4 Under-Ice Summary

Overall, of the 56 AEMP parameters for which normal ranges were developed, 37 were considered POIs for under-ice conditions in 2025 because median concentrations in April exceeded the upper bound of the normal range. Of these 37 POIs, 35 had significant BACI effects, indicating a larger change in concentration in an exposure area compared to the reference area. Most POIs had significant differences that occurred in both areas of Goose Lake. Nitrate had the largest percent effect and the most visible increase when plotted alongside historical data; large increases in concentration were also evident for most ions and ion-related parameters.

Despite the increase identified for most AEMP parameters, concentrations of most parameters in April 2025 were below AEMP benchmarks in Goose Lake. Nitrite and total cobalt concentrations in most West Bay samples and nitrite concentrations in all Central Basin stations were greater than AEMP benchmarks.

5.3.2 Open-Water

Lake vertical profiles suggested generally fully mixed conditions in July, August and September, although some variability was observed for specific conductivity (Appendix B). Temperature decreased slightly with depth in West Bay area in July, but otherwise did not vary with depth in other sampling areas or months. pH and DO were similar within and among lakes, and did not vary with depth in open-water conditions; DO at all stations were near or above 10 mg/L from July to September. Specific conductivity was greater in Goose Lake compared to Reference B Lake, and was highest in the West Bay area during the open-water months. Specific conductivity at some stations in the West Bay area increased with depth in July and September.

Differences in specific conductivity at stations within each Goose Lake areas were noted in July, which appears to be related to the date each profiles measurements were taken and may reflect the variability in specific conductivity in Goose Lake between days. In September, specific conductivity varied with distance from the Goose Lake inlet, when it was greatest at BRP-29A-1 and BRP-29A-3, which were the two closest stations to the inlet. There were no spatial differences in specific conductivity among stations in the Central Basin of Goose Lake. These results indicate that water entering the West Bay of Goose Lake in September was higher in ionic strength (BRP-18 field specific conductivity on September 26 was 473 $\mu\text{S}/\text{cm}$) and influenced the water closest to the inlet the most.

Field-measurements at the sampling depth were within the range measured in baseline conditions, except for specific conductivity in Goose Lake areas, which has been higher than baseline since September 2024 (see time series plot in Appendix E).

5.3.2.1 Comparison to AEMP Benchmarks

Concentrations of most parameters in July, August, and September 2025 were below AEMP benchmarks in Goose Lake and Reference B Lake (Appendix D, Tables D1 to D3). Exceedances occurred for total cobalt¹⁰. Total cobalt concentrations were above the AEMP benchmark in all samples collected from West Bay between July and September; but no sample in Central Basin or Reference B Lake had total cobalt concentrations greater than the AEMP benchmark. These results indicate that while cobalt concentrations in West Bay Area were measured at concentrations above the benchmark, exceedances were limited to the West Bay area of Goose Lake.

¹⁰ Note that although laboratory pH values were also below the AEMP benchmark, samples were analyzed outside the recommended hold time and therefore determination of exceedances relied on field pH results instead. Laboratory pH results above the AEMP benchmark were thus not considered exceedances.

5.3.2.2 *Comparison to Normal Ranges*

Most parameters had median concentrations greater than the upper bound of the normal range in Goose Lake Central Basin and/or West Bay (Table 5-3). While some parameters barely exceeded the upper bound of the normal range (e.g., reactive silica), others were orders of magnitude greater than the upper bound of the normal range (e.g., nitrate and total ammonia).

Most parameters with median concentrations greater than the upper bound of the normal range, did so in all three months. Exceptions were dissolved aluminum, mercury, and selenium, which were greater than the upper bound of the normal range in July and August, but not in September, and reactive silica and total and dissolved chromium, which only exceeded the upper bound of the normal range in July. Total and dissolved molybdenum, silver, and vanadium relied only on July results to assess whether they were POIs because of the raised DL in August and September.

Parameters of interest in open-water conditions were:

- conventional parameters: total dissolved solids, calcium, chloride, magnesium, potassium, sodium, sulphate, and reactive silica
- nutrients: nitrate, nitrite, total ammonia, total nitrogen, total phosphorus, and chlorophyll *a*
- metals: total and dissolved aluminum, arsenic, barium, cadmium, chromium, cobalt, copper, manganese, mercury, molybdenum (total only), nickel, selenium, strontium, thallium, uranium, vanadium (total only), and zinc.

Table 5-3: Open-Water Monthly Median Concentrations Compared to the Upper Bound of the Open-Water Normal Range to Identify Open-Water Parameters of Interest, 2025

Parameter	Units	Open-water Upper Bound of the Normal Range	July Median			August Median			September Median			Parameter of Interest? ^(a)
			West Bay (BRP-29A)	Central Basin (BRP-32)	Reference B Lake (BRP-38)	West Bay (BRP-29A)	Central Basin (BRP-32)	Reference B Lake BRP-38)	West Bay (BRP-29A)	Central Basin (BRP-32)	Reference B Lake (BRP-38)	
Total dissolved solids ^(b)	mg/L	28	66	40	16	83	41	16	81	44	17	Yes
Total suspended solids	mg/L	6 ^(c)	1.0	1.0	1.7	1.0	1.0	1.0	1.3	1.0	1.2	-
Calcium	mg/L	4.4	9.8	5.8	2.3	13	6.2	2.3	14	6.7	2.4	Yes
Chloride	mg/L	5.8	11	5.4	0.50	18	5.4	0.50	18	6.1	0.64	Yes
Cyanide	mg/L	0.01 ^(c)	0.0022	0.00050	0.00063	0.0011	0.00050	0.00050	0.00076	0.00050	0.00067	-
Fluoride	mg/L	0.04 ^(c)	0.027	0.025	0.022	0.014	0.014	0.022	0.023	0.022	0.020	-
Magnesium	mg/L	2.63	4.5	3.3	1.9	6.2	3.6	1.9	6.1	3.8	2.0	Yes
Potassium	mg/L	0.501	1.3	0.63	0.33	1.4	0.66	0.35	1.4	0.76	0.36	Yes
Sodium	mg/L	0.97	1.9	1.1	0.61	2.2	1.2	0.62	2.3	1.4	0.69	Yes
Sulphate	mg/L	9.4	25	17	4.9	30	18	4.8	29	19	5.0	Yes
Reactive silica	mg/L	1	1.2	0.99	0.38	0.85	0.27	0.19	0.63	0.065	0.22	Yes
Nitrate	mg-N/L	0.119	1.9	0.54	0.0030	1.9	0.50	0.0030	1.5	0.52	0.0031	Yes
Nitrite	mg-N/L	0.002 ^(c)	0.0067	0.0018	0.0010	0.0046	0.0011	0.0010	0.0038	0.0018	0.0010	Yes
Total ammonia	mg-N/L	0.02	0.25	0.029	0.0080	0.29	0.014	0.0050	0.16	0.010	0.0050	Yes
Total nitrogen	mg-N/L	0.424	2.3	0.87	0.26	2.5	0.80	0.26	2.1	0.81	0.26	Yes ^(e)
Total phosphorus	mg-P/L	0.007	0.0010	0.0010	0.0020	0.0013	0.0025	0.0010	0.0015	0.0019	0.0020	Yes ^(e)
Chlorophyll a	µg/L	1.18 ^(d)	1.3	1.4	2.0	1.4	2.6	1.2	1.7	2.7	2.2	Yes ^(e)
Total aluminum	µg/L	21	45	27	9.4	33	17	5.5	22	10	3.4	Yes
Total arsenic	µg/L	0.273	0.39	0.26	0.17	0.33	0.27	0.17	0.34	0.28	0.18	Yes
Total barium	µg/L	8.2	17	11	4.1	20	10	3.4	19	10	3.3	Yes
Total cadmium	µg/L	0.0095	0.025	0.0076	0.0030	0.033	0.0060	0.0050	0.023	0.0059	0.0050	Yes
Total chromium	µg/L	0.15	0.21	0.15	0.080	0.13	0.12	0.10	0.10	0.10	0.10	Yes
Total cobalt	µg/L	0.412	0.97	0.26	0.064	1.6	0.21	0.082	1.2	0.20	0.040	Yes
Total copper	µg/L	1.7	2.9	1.9	0.73	2.8	2.0	0.71	2.4	1.8	0.67	Yes
Total iron	µg/L	56	34	35	84	26	25	77	31	21	55	-
Total lead	µg/L	0.091	0.014	0.0092	0.0063	0.0088	0.0050	0.0050	0.0076	0.0050	0.0050	-
Total manganese	µg/L	5.5	14	4.6	2.8	24	3.3	4.2	17	3.0	1.6	Yes
Total mercury	µg/L	0.0011	0.0020	0.0015	0.00099	0.0016	0.0013	0.00083	0.0013	0.00063	0.00045	Yes
Total molybdenum	µg/L	0.02 ^(c)	0.032	0.017	0.0050	0.050	0.050	0.050	0.050	0.050	0.050	Yes
Total nickel	µg/L	4.09	8.8	6.3	1.2	11	5.7	0.93	9.5	5.3	0.88	Yes
Total selenium	µg/L	0.05 ^(c)	0.054	0.024	0.010	0.084	0.040	0.040	0.059	0.040	0.040	Yes
Total silver	µg/L	0.004 ^(c)	0.0036	0.0035	0.0020	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-
Total strontium	µg/L	25.9	50	26	7.3	74	28	7.8	73	32	7.8	Yes
Total thallium	µg/L	0.002 ^(c)	0.0055	0.0030	0.0014	0.0062	0.0028	0.0020	0.0057	0.0024	0.0020	Yes
Total uranium	µg/L	0.006	0.016	0.012	0.0054	0.012	0.010	0.0035	0.011	0.0087	0.0028	Yes
Total vanadium	µg/L	0.06	0.070	0.068	0.032	0.20	0.20	0.20	0.20	0.20	0.20	Yes
Total zinc	µg/L	2.1	2.6	1.1	0.20	2.9	0.60	0.10	2.4	0.53	0.14	Yes
Dissolved aluminum	µg/L	13.3	33	18	4.1	23	11	2.0	12	6.6	1.6	Yes
Dissolved arsenic	µg/L	0.26	0.36	0.24	0.15	0.33	0.24	0.16	0.32	0.27	0.16	Yes
Dissolved barium	µg/L	8.64	17	10	3.8	19	9.8	3.3	18	9.9	3.0	Yes
Dissolved cadmium	µg/L	0.011	0.020	0.0055	0.0030	0.031	0.0050	0.0050	0.025	0.0050	0.0050	Yes
Dissolved chromium	µg/L	0.1	0.16	0.11	0.033	0.10	0.10	0.10	0.10	0.10	0.10	Yes
Dissolved cobalt	µg/L	0.341	0.91	0.14	0.014	1.6	0.11	0.015	1.0	0.10	0.017	Yes
Dissolved copper	µg/L	1.54	2.6	1.7	0.61	2.6	1.8	0.62	2.2	1.6	0.61	Yes
Dissolved iron	µg/L	21.3	6.7	7.7	17	7.4	7.1	19	4.6	3.9	24	-
Dissolved lead	µg/L	0.024	0.0044	0.0030	0.0030	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-
Dissolved manganese	µg/L	4.79	14	2.6	0.21	24	1.3	0.065	15	0.94	0.20	Yes
Dissolved mercury	µg/L	0.001 ^(c)	0.0013	0.00089	0.00044	0.0015	0.0013	0.00052	0.00065	0.00046	0.00032	Yes
Dissolved molybdenum	µg/L	0.25	0.031	0.018	0.0050	0.050	0.050	0.050	0.050	0.050	0.050	-
Dissolved nickel	µg/L	4.05	8.8	6.1	1.0	10	5.4	0.86	9.3	5.1	0.86	Yes
Dissolved selenium	µg/L	0.05 ^(c)	0.069	0.027	0.020	0.075	0.040	0.040	0.045	0.040	0.040	Yes
Dissolved silver	µg/L	0.004 ^(c)	0.0020	0.0020	0.0020	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-
Dissolved strontium	µg/L	25	50	26	7.2	73	27	7.6	70	32	7.4	Yes
Dissolved thallium	µg/L	0.002	0.0055	0.0028	0.0013	0.0067	0.0025	0.0020	0.0050	0.0025	0.0020	Yes
Dissolved uranium	µg/L	0.006	0.014	0.0098	0.0031	0.0097	0.0080	0.0026	0.0081	0.0069	0.0021	Yes
Dissolved vanadium	µg/L	0.06	0.032	0.032	0.0085	0.20	0.20	0.20	0.20	0.20	0.20	-
Dissolved zinc	µg/L	1.9	2.4	1.0	0.065	2.9	0.48	0.10	2.5	0.46	0.10	Yes
Radium-226 ^(f)	Bq/L	0.045	-	-	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-

Note: Comparisons to normal range were made prior to rounding. **Grey and bolded** results are median concentrations greater than the normal range upper bound. Parameters with similar median concentrations greater than the normal range upper bound in the reference area were not considered parameters of interest.

(a) Parameters were considered parameters of interest if at least one median concentrations in Goose Lake among the three sampling events were greater than the upper bound of the normal range. July data were used to assess parameters of interest for the AEMP for parameters that were reported below the raised DL in all areas in August and September (see Appendix A).

(b) Total dissolved solid concentrations were calculated per APHA (2005) as the sum of (0.6 x total alkalinity as CaCO₃), sodium cation, magnesium cation, potassium cation, calcium cation, sulphate anion, chloride anion, nitrate anion (multiply nitrate as nitrogen by 4.427), fluoride anion, silicate anion (multiply reactive silica as SiO₂, by 1.266).

(c) Normal range derived using twice the detection limit rather than the 90th percentile value of the baseline data.

(d) The normal ranges for chlorophyll a presented in B2Gold Nunavut (2025) was calculated using the mean chlorophyll a concentration converted for a 1.2 µm glass microfiber type C filter. Median chlorophyll a concentrations for each area were calculated across all replicates.

(e) Total nitrogen and phosphorus, and chlorophyll a were carried forward as parameters of interest regardless of whether concentrations exceeded the normal range.

(f) Radium samples were not taken in July because radium bottles were used to collect chlorophyll a water instead (see Appendix A).

mg-N/L = milligrams nitrogen per litre; mg-P/L = milligrams phosphorus per litre; – = no data or not identified as a parameter of interest.

5.3.2.3 Analysis of Parameters of Interest

All POIs, with the exception of total phosphorus, had a statistically significant BACI effect in open-water conditions, where concentrations in Goose Lake West Bay and/or Central Basin changed differently from those in Reference B Lake in at least one sampling event (Table 5-4). Examples of BACI plots are presented for nitrate and dissolved cobalt in Figure 5-4. Additional results for the BACI analysis are presented in Appendix D, Table D-6 and plots presenting BACI results from August¹¹ for all parameters are attached to Appendix D. The following observations were made from these results:

- Almost all significant BACI effects identified a greater change in the exposure area compared to the reference area (i.e., a negative BACI difference in Table 5-4).
- Most POIs had significant BACI effects for both areas of Goose Lake in all months, although some POIs had significant BACI effects only in July (e.g., total molybdenum, dissolved chromium) and some POIs had significant BACI effects only in the West Bay area of Goose Lake (e.g., total and dissolved selenium in August and September).
- The magnitude of the effect (i.e., percent effect) was generally more pronounced in West Bay compared to Central Basin.

These results indicate that water quality has changed in both areas of Goose Lake in 2025 compared to baseline years, with the most significant shift occurring in West Bay.

As noted in the 2024 Annual Report (WSP 2025b), several water quality parameters (i.e., nitrate, ammonia, sulphate, chloride, calcium, magnesium, total dissolved solids, and total and dissolved aluminum, arsenic, barium, cadmium, cobalt, manganese, nickel, selenium, sulphur, strontium, uranium, and zinc) measured in West Bay increased in September 2023 and/or in 2024 compared to previous years. Parameters identified in the last annual report as having increased compared to previous years were also identified in at least one open-water sampling event in 2025 as POIs with a significant BACI effect. These results indicate that the increase in concentrations noted in 2024 compared to baseline persisted in 2025, with differences identified in Goose Lake West Bay and Central Basin.

Concentrations of most parameters in Goose Lake (i.e., West Bay and Central Basin) in 2025 were similar to those measured in 2024 (Appendix E and Appendix F). Some parameters increased slightly in 2025 compared to 2024 (e.g., sulphate and nickel), but for most POIs, concentrations in 2025 were more comparable to those measured in 2024 than to those during baseline years. These results suggest that water quality has not considerably changed between 2024 and 2025, but rather parameter concentrations were observed to change to a greater degree in September 2023 and 2024 compared to baseline years. Further discussion of the cause of the changes in water quality are provided in Section 5.5.3 and Appendix F.

¹¹ BACI plots for August are shown for succinctness, since the AEMP study design prescribes sampling in August, with July and September sampling only occurring when dewatering.

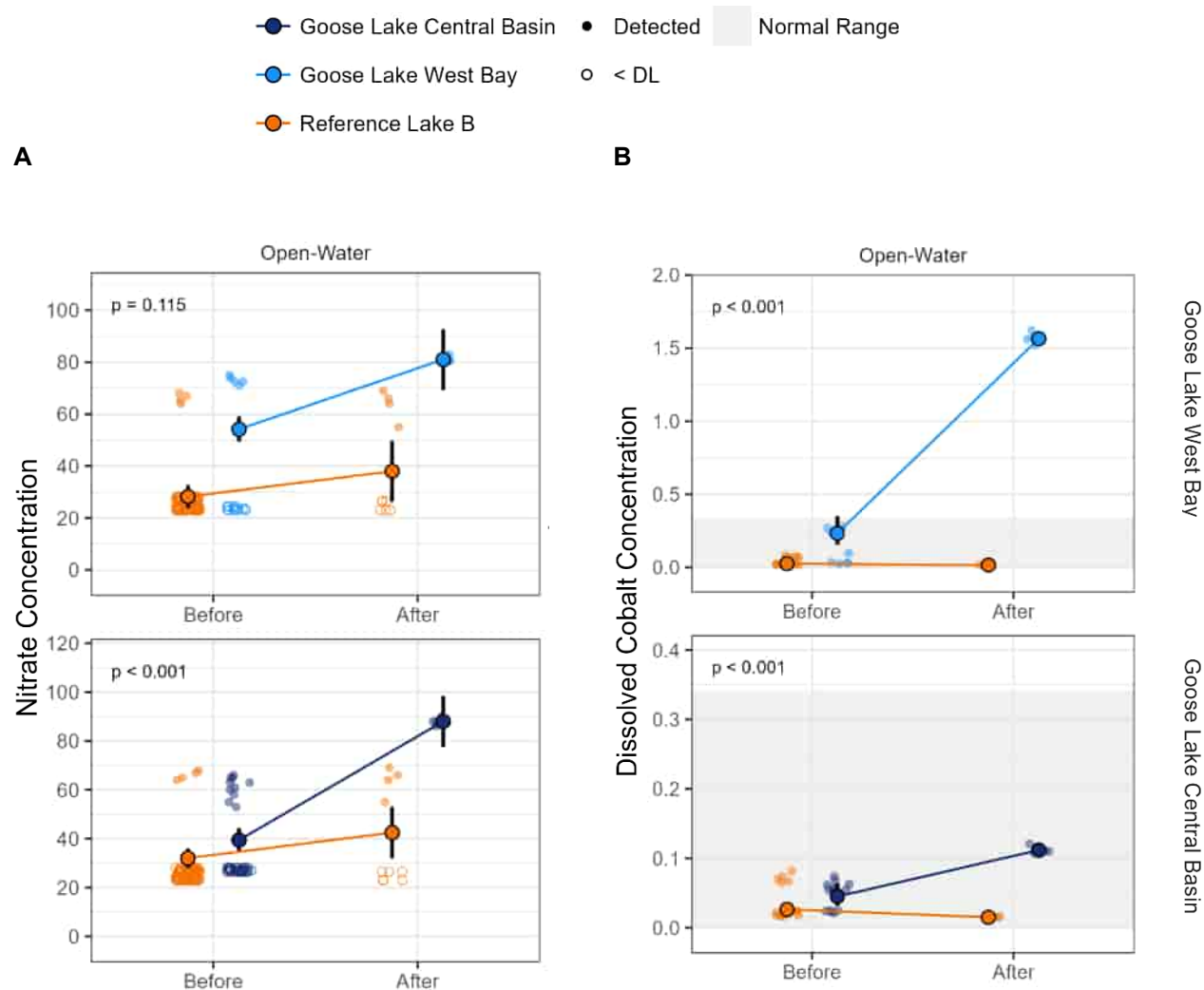
Table 5-4: Before-After Control-Impact Analysis Results for Open-Water Parameters of Interest, 2025

Parameter	July						August						September						POI with significant change ^(c)
	West Bay (BRP-29A)			Central Basin (BRP-32)			West Bay (BRP-29A)			Central Basin (BRP-32)			West Bay (BRP-29A)			Central Basin (BRP-32)			
	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	P-value	BACI Difference ^(a)	Percent Effect ^(b)	
Total dissolved solids ^(d)	<0.001	-40	-1,368	<0.001	-20	-886	<0.001	-58	-2,227	<0.001	-20	-1,091	<0.001	-54	-1,430	<0.001	-23	-738	Yes
Calcium	<0.001	-5.1	-754	<0.001	-2.4	-344	<0.001	-8.7	-1,319	<0.001	-2.8	-419	<0.001	-8.9	-1,074	<0.001	-3.2	-382	Yes
Chloride	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	0.502	nc	nc	0.986	nc	nc	Yes
Magnesium	<0.001	-2.0	-402	<0.001	-1.2	-248	<0.001	-3.6	-702	<0.001	-1.6	-297	<0.001	-3.4	-564	<0.001	-1.6	-272	Yes
Potassium	<0.001	-0.85	-4,731	<0.001	-0.26	-1,410	<0.001	-0.94	-2,824	<0.001	-0.27	-815	<0.001	-0.91	-1,915	<0.001	-0.35	-744	Yes
Sodium	<0.001	-1.1	-13,696	<0.001	-0.42	-4,583	<0.001	-1.4	-5,838	<0.001	-0.48	-1,920	<0.001	-1.4	-1,584	<0.001	-0.60	-676	Yes
Sulphate	<0.001	-16	-1,280	<0.001	-9.5	-1,329	<0.001	-20	-1,812	<0.001	-11	-1,708	<0.001	-19	-1,412	<0.001	-11	-1,299	Yes
Reactive silica	<0.001	-0.71	269	<0.001	-0.92	332	<0.001	-0.51	110	<0.001	-0.41	82	<0.001	-0.26	61	<0.001	-0.21	46	Yes
Nitrate	0.001	nc	nc	<0.001	nc	nc	0.115	nc	nc	<0.001	nc	nc	0.016	nc	nc	<0.001	nc	nc	Yes
Nitrite	<0.001	nc	nc	<0.001	nc	nc	0.002	nc	nc	<0.001	nc	nc	0.002	nc	nc	<0.001	nc	nc	Yes
Total ammonia	0.722	nc	nc	0.059	nc	nc	0.003	nc	nc	<0.001	nc	nc	0.109	nc	nc	0.009	nc	nc	Yes
Total nitrogen	<0.001	-2.0	-9,386	<0.001	-0.64	-2,993	<0.001	-2.3	-19,102	<0.001	-0.59	-5,107	<0.001	-1.9	-6,946	<0.001	-0.58	-2,389	Yes
Total phosphorus	0.375	nc	nc	0.960	nc	nc	0.970	nc	nc	0.820	nc	nc	0.724	nc	nc	0.933	nc	nc	No
Chlorophyll a	<0.001	0.70	70	<0.001	0.68	70	<0.001	-0.100	-46	<0.001	-1.2	-815	<0.001	0.45	40	0.004	-0.47	-41	Yes
Total aluminum	<0.001	-24	-432	<0.001	-13	-244	<0.001	-15	-1,144	<0.001	-4.7	-357	<0.001	-6.5	1,302	0.011	-0.32	55	Yes
Total arsenic	<0.001	-0.13	4,487	<0.001	-0.052	1,415	<0.001	-0.085	5,872	<0.001	-0.056	2,473	<0.001	-0.082	-1,079	<0.001	-0.056	-862	Yes
Total barium	<0.001	-7.9	-704	<0.001	-4.0	-360	<0.001	-11	-2,573	<0.001	-4.4	-997	<0.001	-11	-3,334	<0.001	-4.7	-1,371	Yes
Total cadmium	0.040	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	0.234	nc	nc	Yes
Total chromium	0.369	nc	nc	0.441	nc	nc	0.582	nc	nc	0.381	nc	nc	0.092	nc	nc	0.162	nc	nc	Yes
Total cobalt	<0.001	-0.60	-2,450	<0.001	-0.13	-533	<0.001	-1.2	-2,826	0.213	-0.063	nc	<0.001	-0.93	-18,000	<0.001	-0.090	-1,988	Yes
Total copper	<0.001	-1.1	-643	<0.001	-0.45	-271	<0.001	-1.0	-743	<0.001	-0.51	-366	<0.001	-0.70	-576	<0.001	-0.36	-296	Yes
Total manganese	<0.001	-8.5	-677	<0.001	-0.86	-73	<0.001	-18	-680	<0.001	2.0	76	<0.001	-14	-11,761	<0.001	-0.40	-2,468	Yes
Total mercury	0.001	nc	nc	<0.001	nc	nc	0.057	nc	nc	<0.001	nc	nc	0.172	nc	nc	0.104	nc	nc	Yes
Total molybdenum	<0.001	nc	nc	<0.001	nc	nc	0.151	nc	nc	0.763	nc	nc	0.151	nc	nc	0.763	nc	nc	Yes
Total nickel	<0.001	-4.3	-947	<0.001	-3.0	-648	<0.001	-6.2	-2,974	<0.001	-2.7	-1,275	<0.001	-5.7	-3,499	<0.001	-2.2	-1,343	Yes
Total selenium	<0.001	nc	nc	0.030	nc	nc	<0.001	nc	nc	0.403	nc	nc	0.001	nc	nc	0.199	nc	nc	Yes
Total strontium	<0.001	-28	-2,027	<0.001	-11	-810	<0.001	-51	-2,771	<0.001	-13	-694	<0.001	-52	-2,775	<0.001	-17	-901	Yes
Total thallium	0.526	nc	nc	0.010	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	Yes
Total uranium	0.310	nc	nc	0.060	nc	nc	0.006	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	Yes
Total vanadium	0.591	nc	nc	0.675	nc	nc	0.033	nc	nc	0.294	nc	nc	0.033	nc	nc	0.294	nc	nc	Yes
Total zinc	<0.001	-1.8	440	<0.001	-0.79	156	<0.001	-2.2	434	<0.001	-0.37	61	<0.001	-1.8	415	<0.001	-0.23	56	Yes
Dissolved aluminum	<0.001	-21	-1,046	0.002	-8.6	-428	<0.001	-13	10,585	<0.001	-4.5	3,649	<0.001	-3.6	795	0.030	0.12	-25	Yes
Dissolved arsenic	<0.001	-0.12	791	<0.001	-0.043	280	<0.001	-0.079	-13,478	<0.001	-0.035	-4,545	<0.001	-0.074	-5,059	<0.001	-0.059	-3,429	Yes
Dissolved barium	<0.001	-8.0	-844	<0.001	-4.0	-420	<0.001	-11	-2,578	<0.001	-4.1	-935	<0.001	-10	-5,712	<0.001	-4.4	-2,406	Yes
Dissolved cadmium	0.033	nc	nc	0.001	nc	nc	0.018	nc	nc	0.820	nc	nc	0.025	nc	nc	0.347	nc	nc	Yes
Dissolved chromium	0.005	nc	nc	0.004	nc	nc	0.298	nc	nc	0.346	nc	nc	0.310	nc	nc	0.163	nc	nc	Yes
Dissolved cobalt	<0.001	-0.66	5,629	<0.001	-0.094	704	<0.001	-1.3	13,645	<0.001	-0.078	684	<0.001	-0.93	11,333	<0.001	-0.066	673	Yes
Dissolved copper	<0.001	-1.1	-1,257	<0.001	-0.37	-444	<0.001	-1.1	-1,042	<0.001	-0.45	-445	<0.001	-0.63	-678	<0.001	-0.29	-310	Yes
Dissolved manganese	<0.001	-9.0	2,302	<0.001	-1.9	472	<0.001	-20	3,765	<0.001	-0.78	141	<0.001	-15	3,523	<0.001	-0.24	55	Yes
Dissolved mercury	0.059	nc	nc	0.100	nc	nc	0.560	nc	nc	0.781	nc	nc	0.418	nc	nc	0.287	nc	nc	Yes
Dissolved nickel	<0.001	-4.2	-1,211	<0.001	-2.9	-827	<0.001	-6.1	-3,216	<0.001	-2.4	-1,257	<0.001	-5.5	-2,909	<0.001	-2.0	-1,064	Yes
Dissolved selenium	<0.001	nc	nc	<0.001	nc	nc	0.009	nc	nc	0.152	nc	nc	0.091	nc	nc	0.294	nc	nc	Yes
Dissolved strontium	<0.001	-28	-2,041	<0.001	-11	-808	<0.001	-50	-2,852	<0.001	-12	-672	<0.001	-50	-3,238	<0.001	-17	-1,104	Yes
Dissolved thallium	0.083	nc	nc	<0.001	nc	nc	<0.001	nc	nc	0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	Yes
Dissolved uranium	0.016	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	Yes
Dissolved zinc	<0.001	nc	nc	<0.001	nc	nc	<0.001	nc	nc	0.004	nc	nc	<0.001	nc	nc	0.006	nc	nc	Yes

Notes: Statistically significant BACI results are **bolded and highlighted in grey**. Results were considered significant at *P*<0.1. BACI difference and percent effect were not calculated when the semi-parametric method was used as effects would be based on the rank-scale. Percent effect was not calculated when there was no statistically significant BACI effect.

- (a) The BACI difference was calculated as (Control After – Control Before) – (Impact After – Impact Before). A negative BACI difference indicates the change in concentration was greater in the Impact area (i.e., exposure area) than in the Control area.
- (b) The percent effect was calculated as the BACI difference divided by (Control After – Control Before) and multiplied by 100. It represents the change in the Before and After periods in the Impact area (i.e., exposure area) compared to the change in the Before and After periods in the Control area.
- (c) Refers to a significant BACI result in at least one sampling event in at least one area of Goose Lake.
- (d) Total dissolved solids calculated by WSP per APHA (2005).

BACI = Before-After Control-Impact; *P*-value = probability value; nc = not calculated; POI = parameter of interest.



Note: Vertical black bars above and below the means represent the 90% confidence interval for the mean.

Figure 5-4: Select Parameters of Interest (Nitrate [A] and Dissolved Cobalt [B]) with Significant Before-After Control-Impact Analysis Results in West Bay and Central Basin.

5.3.2.4 Open-Water Summary

Overall, of the 58 AEMP parameters for which normal ranges were developed, 46 were considered POIs in open-water conditions because median concentrations in July, August, or September exceeded the upper bound of the normal range. All POIs, except total phosphorus, had significant BACI effects, indicating a larger change in concentration in an exposure area compared to the reference area in at least one sampling event. Most POIs had significant differences that occurred in both areas of Goose Lake. The effect was generally more pronounced in West Bay compared to Central Basin. These results indicate that water quality has changed in both areas of Goose Lake in 2025 compared to baseline years, with the most significant shift occurring in West Bay. Cobalt had among the largest percent effect and a visible increase when plotted alongside historical data; large increases in concentration were also evident for most ions and ion-related parameters.

Despite the increase identified for most AEMP parameters, concentrations of most parameters in open-water conditions in 2025 were below AEMP benchmarks in Goose Lake. Total cobalt concentrations were above the AEMP benchmark in all samples collected from West Bay between July and September. No sample in Goose Lake Central Basin or Reference B Lake had total cobalt concentrations greater than the AEMP benchmark.

5.4 Comparison to Water Quality Predictions

Predictions for Goose Lake West Bay were based on those made for PN04, which were that 95th percentile concentrations would remain below benchmarks, except for phosphorus, which were predicted to be slightly above the water quality benchmark at the edge of PN04 mixing zone in the ice cover season during the Closure Phase.

For most parameters, the 2025 results were consistent with predictions that concentrations would remain below benchmark during the Construction and Operations Phases. However, results were inconsistent with predictions for nitrite, whose concentrations exceeded the benchmark in West Bay and Central Basin of Goose Lake in April 2025. In April, nitrate concentrations in West Bay ranged from 2.4 to 2.5 mg-N/L, which approached, but remained below, the 2.9 mg-N/L benchmark for nitrate. Although no predictions were provided for cobalt, concentrations exceeded the benchmark in West Bay throughout most of 2025. Nitrite, nitrate, and cobalt are further discussed in Section 5.5.

In addition to verifying benchmark exceedances, concentrations were also compared to predicted values. Median and maximum concentrations of most POIs in 2025 exceeded the 95th percentile concentration predicted in West Bay and Central Basin samples (Tables 5-5 and 5-6). Largest differences between predicted and measured concentrations were observed for nitrate and nitrite, where median concentrations in 2025 were almost 300 and 60 times those predicted, respectively.

Table 5-5: Comparison of 2025 Median and Maximum Concentrations in Goose Lake West Bay to the 95th Percentile Predicted Concentrations at the Edge of the PN04 Mixing Zone

Parameter	Unit	Construction Predicted 95 th Percentile	Operations Predicted 95 th Percentile	2025 Highest Median Concentration in West Bay	2025 Maximum Concentration in West Bay
Total dissolved solids	mg/L	28	29	123	128
Calcium	mg/L	4.5	2.9	20	20
Chloride	mg/L	4.7	1.3	24	26
Fluoride	mg/L	0.024	0.026	0.027	0.031
Magnesium	mg/L	2.5	1.7	9.8	10
Nitrate, as N	mg-N/L	0.0083	0.0084	2.4	2.5
Nitrite, as N	mg-N/L	0.0012	0.0013	0.068	0.12
Phosphorus	mg-P/L	0.0024	0.0019	0.0015	0.0075
Total ammonia	mg-N/L	0.0062	0.0064	0.33	0.33
Aluminum	µg/L	38	54	45^(a)	47^(a)
Arsenic	µg/L	0.88	1.3	0.42	0.43
Cadmium	µg/L	0.012	0.013	0.052	0.057
Chromium	µg/L	0.21	0.22	0.21	0.24
Copper	µg/L	2.0	1.8	3.3	3.4
Iron	µg/L	48	66	34	34
Lead	µg/L	0.059	0.065	0.11	1.5
Manganese	µg/L	4.8	5.5	24	33
Mercury	µg/L	0.0094	0.0098	0.0020	0.0047
Molybdenum	µg/L	0.067	0.071	0.032	0.036
Nickel	µg/L	4.7	4.8	20	21
Selenium	µg/L	0.12	0.13	0.091	0.095
Silver	µg/L	0.012	0.013	0.0036	0.0062
Thallium	µg/L	0.057	0.064	0.0062	0.0072
Uranium	µg/L	0.012	0.013	0.016	0.018
Zinc	µg/L	3.6	4.0	9.2	15

Notes: Parameters that are not parameters of interest or that did not have a significant BACI effect are shown in light grey font. 2025 results that are **bolded** and highlighted in **grey** are results greater than the predicted 95th percentile concentration. Results for metals are those of the total fraction.

(a) Highest median and maximum concentrations greater than predictions were the same for the Construction and Operation Phases, except for aluminum, where the highest median and maximum concentrations were only greater than the 95th percentile concentration predicted during the Construction Phase.

mg-N/L = milligrams nitrogen per litre; mg-P/L = milligrams phosphorus per litre.

Table 5-6: Comparison of 2025 Median and Maximum Concentrations in Goose Lake Central Basin to the 95th Percentile Predicted Concentrations for Goose Lake Central Basin

Parameter	Unit	Construction Predicted 95 th Percentile	Operations Predicted 95 th Percentile	2025 Highest Median Concentration in Central Basin	2025 Maximum Concentration in Central Basin
Total dissolved solids	mg/L	33	35	85	85
Calcium	mg/L	5.2	3.4	13	14
Chloride	mg/L	5.4	1.5	14	14
Fluoride	mg/L	0.028	0.031	0.026	0.028
Magnesium	mg/L	2.9	2.0	7.4	7.4
Nitrate, as N	mg-N/L	0.0094	0.0099	1.3	1.4
Nitrite, as N	mg-N/L	0.0014	0.0015	0.13	0.14
Total ammonia	mg-N/L	0.0073	0.0076	0.16	0.18
Phosphorus	mg-P/L	0.0026	0.0018	0.0025^(a)	0.0049
Aluminum	µg/L	30	34	27	35
Arsenic	µg/L	0.62	0.72	0.36	0.36
Cadmium	µg/L	0.014	0.015	0.017	0.019
Chromium	µg/L	0.23	0.26	0.15	0.20
Copper	µg/L	2.3	2.1	2.4	2.6
Iron	µg/L	47	42	35	50
Lead	µg/L	0.068	0.077	0.36	1.7
Manganese	µg/L	5.1	4.3	8.3	8.3
Mercury	µg/L	0.010	0.012	0.0015	0.0018
Molybdenum	µg/L	0.074	0.084	0.027	0.031
Nickel	µg/L	5.6	5.6	12	12
Selenium	µg/L	0.14	0.15	0.056	0.063
Silver	µg/L	0.013	0.015	0.0035	0.0040
Thallium	µg/L	0.066	0.076	0.0031	0.0039
Uranium	µg/L	0.014	0.015	0.012	0.014
Zinc	µg/L	4.2	4.7	3.4	4.4^(a)

Notes: Parameters that are not parameters of interest or that did not have a significant BACI effect are shown in light grey font. 2025 results that are **bolded** and highlighted in **grey** are results greater than the predicted 95th percentile concentration. Results for metals are those of the total fraction.

(a) Highest median and maximum concentrations greater than predictions were the same for the Construction and Operation Phases, except for phosphorus, where the highest median concentration was only greater than the 95th percentile concentration predicted during the Operation Phase and for zinc, where the maximum concentration was only greater than the 95th percentile concentration predicted during the Construction Phase.

mg-N/L = milligrams nitrogen per litre; mg-P/L = milligrams phosphorus per litre.

5.5 Action Level Assessment

5.5.1 Aquatic Life

Although the majority of parameters showed increases in concentrations beyond baseline conditions and those at the reference lake (i.e., median concentrations at Goose Lake areas were above the upper bound of the normal range and had a significant BACI effect), most parameters did not result in a Low Action Level exceedance (Table 5-7) because their median concentrations did not approach the benchmark (i.e., median concentrations were below 80% of the benchmark; Appendix D, Table D-7).

The Low Action Level for aquatic life was exceeded for four parameters (Table 5-7): nitrate, nitrite, and total and dissolved cobalt because median concentrations exceeded the normal range, there was a significant BACI effects, and median concentrations approached or exceeded the benchmark. Nitrate and nitrite exceeded the Low Action Level only in April during under-ice conditions, whereas cobalt exceeded the Low Action Level in all months. Nitrate and cobalt only exceeded the Low Action Level in West Bay, whereas nitrite exceeded the Low Action Level in both areas of Goose Lake.

Although calcium, magnesium, potassium, sodium, reactive silica, and total nitrogen were POIs with significant BACI effect, comparisons to benchmark were considered to be captured by other parameters. Calcium, magnesium, potassium, sodium, and reactive silica were captured under total dissolved solids. Total nitrogen was mostly captured by nitrate, nitrite, and total ammonia, and because the lake is phosphorus-limited, nutrient enrichment was also captured by comparing total phosphorus to the benchmark; a separate comparison of total nitrogen to a benchmark was not necessary. These POIs with a significant BACI effects but no benchmark were thus not considered Low Action Level exceedances because total dissolved solid, other nitrogen species, and total phosphorus concentrations were already compared to their respective benchmarks. However, the Low Action Level was considered to have been exceeded for chlorophyll *a*, for which no benchmark was developed in B2Gold Nunavut (2025), because comparison to benchmark was not captured by another parameter; a benchmark for chlorophyll *a* was developed as a response action (Section 5.5.3).

The increase in cobalt concentration in West Bay, above benchmark values, is unlikely to be related to the discharge from dewatering activities as concentrations greater than the benchmark were identified in all monitoring programs (i.e., when no dewatering discharge occurred) and because concentrations at BRP-01, the compliance location for dewatering activities, were less than or equal to 0.35 µg/L in samples collected between July 13 and August 10, 2025. The increase in cobalt concentrations was likely related to construction activities influencing the stream that flowed into Goose Lake West Bay (i.e., BRP-18) as total cobalt concentrations at this station between July 3 and August 10, 2025 ranged from 0.52 to 2.25 µg/L.

The results also indicate that there was likely some nutrient enrichment occurring in Goose Lake, reflected by increases in concentrations of nutrients approaching or above AEMP benchmarks. Similar to cobalt concentrations, nutrient concentrations were low in the dewatering discharge (0.0032 to 0.033 mg-N/L of nitrate [as N] and nitrite [as N] concentrations below the detection limit of 0.001 mg-N/L) and greater at BRP-18 (1.6 to 3.7 mg-N/L of nitrate [as N] and <0.001 to 0.011 mg-N/L of nitrite [as N; data provided to WSP by B2Gold]). Although total phosphorus concentrations increased in Goose Lake compared to baseline years and reference, concentrations remained well below the benchmark of 0.010 mg-P/L, which represents the upper limit associated with the oligotrophic trophic status of the lake (CCME 1999). Phosphorus concentrations in West Bay remained within the ultra-oligotrophic trophic status in April, July, and August, and were in the oligotrophic range in September.

The results indicate that Project-related activities have increased nitrite and cobalt concentrations in Goose Lake, to levels above the benchmark (i.e., concentrations protective of aquatic life). Concentrations above the benchmark do not necessarily imply a risk to aquatic life; additional work to assess the ecological relevance of the benchmark exceedance and the applicability of the benchmark may be included as a response action (Section 5.5.3)

Table 5-7: Aquatic Life Low Action Level Assessment, 2025

Parameter of Interest	April		July		August		September		Aquatic Life Low Action Level Exceeded?
	Statistically Significant BACI Effect ^(a) ?	Median Concentration above 80% of the Benchmark?	Statistically Significant BACI Effect ^(a) ?	Median Concentration above 80% of the Benchmark?	Statistically Significant BACI Effect ^(a) ?	Median Concentration above 80% of the Benchmark?	Statistically Significant BACI Effect ^(a) ?	Median Concentration above 80% of the Benchmark?	
Total dissolved solids	Yes	-	Yes	-	Yes	-	Yes	-	-
Calcium	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(b)
Chloride	Yes	-	Yes	-	Yes	-	-	-	-
Magnesium	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(b)
Potassium	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(b)
Sodium	n/a	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(b)
Sulphate	Yes	-	Yes	-	Yes	-	Yes	-	-
Reactive Silica	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(b)
Nitrate	Yes	Yes	Yes	-	Yes	-	Yes	-	Yes
Nitrite	Yes	Yes	Yes	-	Yes	-	Yes	-	Yes
Total ammonia	Yes	-	Yes	-	Yes	-	Yes	-	-
Total nitrogen	Yes ^(c)	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	_(d)
Total phosphorus	Yes	-	-	-	-	-	-	-	-
Chlorophyll <i>a</i>	n/a	n/a	Yes	No benchmark	Yes	No benchmark	Yes	No benchmark	Yes ^(e)
Total aluminum	Yes	-	Yes	-	Yes	-	Yes	-	-
Total arsenic	Yes	-	Yes	-	Yes	-	Yes	-	-
Total barium	Yes	-	Yes	-	Yes	-	Yes	-	-
Total cadmium	Yes	-	Yes	-	Yes	-	Yes	-	-
Total chromium	n/a	-	-	-	-	-	Yes	-	-
Total cobalt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total copper	-	-	Yes	-	Yes	-	Yes	-	-
Total manganese	n/a	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Total mercury	n/a	-	Yes	-	Yes	-	-	-	-
Total molybdenum	Yes	-	Yes	-	-	-	-	-	-
Total nickel	Yes	-	Yes	-	Yes	-	Yes	-	-
Total selenium	Yes	-	Yes	-	Yes	-	Yes	-	-
Total strontium	Yes	-	Yes	-	Yes	-	Yes	-	-
Total thallium	Yes	-	Yes	-	Yes	-	Yes	-	-
Total uranium	n/a	-	Yes	-	Yes	-	Yes	-	-
Total vanadium	n/a	-	-	-	Yes	-	Yes	-	-
Total zinc	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved aluminum	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved arsenic	n/a	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved barium	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved cadmium	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved chromium	n/a	_(f)	Yes	_(f)	-	_(f)	-	_(f)	-
Dissolved cobalt	Yes	Yes ^(f)	Yes	Yes ^(f)	Yes	Yes ^(f)	Yes	Yes ^(f)	Yes
Dissolved copper	n/a	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved manganese	Yes	-	Yes	-	Yes	-	Yes	-	-
Dissolved mercury	-	_(f)	Yes	_(f)	-	_(f)	-	_(f)	-
Dissolved molybdenum	Yes	_(f)	Yes	_(f)	-	_(f)	-	_(f)	-
Dissolved nickel	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved selenium	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved strontium	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved thallium	Yes	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved uranium	n/a	_(f)	Yes	_(f)	Yes	_(f)	Yes	_(f)	-
Dissolved vanadium	Yes	_(f)	n/a	_(f)	n/a	_(f)	n/a	_(f)	-
Dissolved zinc	Yes	-	Yes	-	Yes	-	Yes	-	-
Radium-226	n/a	n/a	n/a	n/a	n/a	-	n/a	-	-

Note: Rows for parameters which exceeded the Low Action Level are highlighted in grey.

(a) Statistically significant BACI effect for parameters of interest (i.e., parameters with median concentration in the exposure area above the normal range).

(b) Comparison to benchmark for this parameter was captured under total dissolved solids. Therefore, the parameters of interest with a significant BACI effects but no benchmark was not considered as a Low Action Level exceedance because total dissolved solid concentrations did not exceed the benchmark criterion.

(c) BACI analysis was carried out on calculated total nitrogen as there were no total nitrogen results in the Before period for West Bay in April.

(d) Comparison to benchmark for this parameter was captured under nitrate, nitrite, total ammonia, and total phosphorus. Because the lake is phosphorus-limited, an increase in nitrogen alone would not indicate risk of an increase in lake primary productivity.

(e) Chlorophyll *a* did not have a benchmark developed and is not captured under another parameter; a benchmark was developed in Section 5.5.3.

(f) Where benchmarks were developed for total metals, exceedance for the dissolved fraction was based on the result of the total fraction. For benchmarks that were developed for the dissolved fraction (i.e., dissolved manganese and zinc), exceedance for the total fraction was based on the result of the dissolved fraction. For example, total zinc in April did not exceed 80% of the benchmark because the dissolved zinc concentrations did not exceed 80% of the benchmark.

BACI = Before-After Control-Impact; – = BACI analysis not statistically significant, median concentration did not exceed 80% of the benchmark, or Low Action Level not exceeded; n/a = not applicable.

5.5.2 Human Consumption

Parameters of interest with statistically significant BACI effect are presented in Section 5.3 (Tables 5-2 and 5-4). Maximum parameter concentrations measured across all Goose Lake stations and sampling events were below Health Canada's human health drinking water quality guideline (i.e., maximum acceptable concentration; Table 5-8). Therefore, the Low Action Level for human consumption was not exceeded in 2025.

Table 5-8: Maximum Concentrations in Goose Lake Samples in 2025 Compared to Health Canada's Human Health Drinking Water Quality Guideline

Parameter	Unit	Health Canada Drinking Water Quality Guideline (Maximum Acceptable Concentration)	Maximum Concentration in Goose Lake Samples in 2025
Fluoride	mg/L	1.5	0.031
Nitrate, as N	mg-N/L	10	2.5
Nitrite, as N	mg-N/L	1	0.14
Cyanide (free)	µg/L	200	3.3
Aluminum	µg/L	2900	47
Antimony	µg/L	6	0.080
Arsenic	µg/L	10	0.43
Barium	µg/L	2000	37
Boron	µg/L	5000	5.5
Cadmium	µg/L	7	0.057
Chromium	µg/L	50	0.24
Copper	µg/L	2000	3.4
Lead	µg/L	5	1.7
Manganese	µg/L	120	33
Mercury	µg/L	1	0.0047
Selenium	µg/L	50	0.095
Strontium	µg/L	7000	108
Uranium	µg/L	20	0.018
Radium-226	Bq/L	5	<0.005

Note: Maximum concentrations are presented; see Appendix D for concentrations in each sample.

5.5.3 Response Actions

Per the AEMP study design (B2Gold Nunavut 2025), responses to a Low Action Level exceedance may include: confirming the effect, investigating further to identify contributing factors from the Project, examining the ecological significance, confirming that the existing benchmarks are appropriate, comparing to predictions, identifying potential mitigation options, increasing monitoring, revising the Low Action Level if warranted and scientifically defensible, and setting Moderate and High Action Levels. As no Response Plan is required, responses to the Low Action Levels exceeded in 2025 are provided below.

Confirming the Effect

The 2025 AEMP results indicate that water quality in Goose Lake has changed compared to baseline years and the reference area, with effects generally more pronounced in West Bay compared to Central Basin. These results are consistent with those reported in 2024 (WSP 2025b), where concentrations of many parameters in late 2023 and in 2024 increased in Goose Lake West Bay compared to those measured during baseline years. Concentrations in 2025 were more comparable to those measured in 2024 than to those during baseline years. These results suggest that water quality has not considerably changed between 2024 and 2025, but rather parameter concentrations were observed to change to a greater degree in September 2023 and in 2024 compared to baseline years. Effects from changes in water quality to biological variables will be assessed in 2026, per the AEMP design plan.

Investigating Further to Identify Contributing Factors from the Project

Appendix F describes the methods and results of additional sampling carried out in 2025 to better understand the potential causes or sources of the increase in nitrate, nitrite, and total and dissolved cobalt concentrations might be, and the spatial extent where changes are observed. Spatial and temporal plots indicate that streams flowing into West Bay (i.e., the inflow from Llama and Umwelt Lakes and the inflow from Echo Lake) had larger concentrations of most parameters after September 2023 compared to baseline. Contact water, seepage and/or runoff flowing into these streams appear to be the likely source of increased parameter concentrations in Goose Lake in 2024 and 2025. In June 2025, the source of the increase in concentrations in the inflow from Llama and Umwelt lakes appears to be located between the haul road and the lake inlet.

These results do not take into consideration the quantity of water, and thus loading, from each of these streams. While the data present the concentrations of these parameters in the streams, they do not reflect the total amount of these substances being transported into or out of Goose Lake. The actual impact on lake water quality depends not only on concentration, but also on the volume of water flowing from each source. High concentrations in a stream with low flow may contribute less to overall loading than lower concentrations in a stream with greater flow. Without assessing both concentration and flow rate, it is difficult to accurately determine the relative contributions of each stream to changes in the lake. Further analysis may be conducted to determine the relative loading from each stream, should mitigation strategies require such assessment, as streamflow data are available. However, the increase in concentrations of multiple parameters in Goose Lake, and the higher concentrations measured in inflow from Llama and Umwelt Lakes and the inflow from Echo Lake relative to the dewatering discharge, provide supporting evidence for these sources.

Examining the Ecological Significance

Further evaluation is needed to evaluate the potential for effects to aquatic life from these elevated concentrations. Most parameters have median concentrations below AEMP benchmarks, which were selected from generic water quality guidelines for the protection of aquatic life. These water quality guidelines are meant to be protective of all life stages for prolonged periods of time so that there is high confidence of no adverse effects to aquatic life if measured concentrations are below guidelines. Of the parameters that exceeded the Low Action Level, only nitrite and cobalt exceeded AEMP benchmarks and thus the ecological implications of these exceedances are discussed further.

Median concentrations of nitrite exceeded the AEMP benchmark of 0.060 mg-N/L in April in Goose Lake West Bay (0.068 mg-N/L) and Goose Lake Central Basin (0.13 mg-N/L). The nitrite benchmark is based on the Canadian water quality guideline for the protection of freshwater aquatic life (CCME 1999). This guideline was determined to be protective of salmonid fish, which is the most sensitive taxa group, and has not been updated since 1987 (CCREM 1987). More recent evaluation of nitrite toxicity supports chloride as an exposure and toxicity modifying factor, and British Columbia (BC) has a chloride-dependent long-term chronic water quality guideline (BC MWLRS 2025a). All under-ice nitrite concentrations are below BC's chloride-dependent guideline. This suggests that the measured concentrations of nitrite in Goose Lake during under-ice conditions are unlikely to have the potential to cause adverse effects to aquatic life in this lake.

Median concentrations of total cobalt exceeded the hardness-dependent AEMP benchmark in Goose Lake West Bay by 1.1 times during under-ice conditions and between 1.2 and 1.9 times during open-water conditions. The cobalt benchmark is based on the Federal Environmental Quality Guideline (FEQG) derived by Environment and Climate Change Canada (ECCC 2017). However, a review of the FEQG derivation identified uncertainties in selection of toxicity data, including the use of IC10 values that were lower than the corresponding no observed effects concentrations (NOECs) for six species, and, calculating species geometric means from considerably variable results in the same study using *Hyalella azteca*. DIAND (2019) re-evaluated the chronic toxicity data used in the species sensitivity distribution of the FEQG, following Canadian Council of Ministers of the Environment (CCME) guidance for guideline derivation (CCME 2007), and re-calculated the hardness-dependent

equation. Using this revised hardness-dependent equation, the under-ice and open-water median concentrations are below the hardness-dependent benchmarks, except in August, when median concentration is 1.06 times higher (i.e., median concentration was 1.6 µg/L compared to a benchmark of 1.5 µg/L). However, this concentration is below the lowest low effects concentration for the most sensitive species in the chronic toxicity dataset (i.e., a 7-day IC10 of 6.0 µg/L for growth in *Lemna minor*). This suggests that the measured concentrations of cobalt in Goose Lake West Bay are unlikely to have the potential to cause adverse effects to aquatic life in this lake.

Confirming Benchmarks are Appropriate

The existing AEMP benchmarks are based on current federal water quality guidelines for the protection of aquatic life and approved site-specific water quality objectives (SSWQOs; B2Gold Nunavut 2025). As such, they provide a conservative approach to evaluating the potential for changes in water quality to cause adverse effects on aquatic life. This level of conservatism is appropriate for the early years of the AEMP implementation and prior to the first year of biological monitoring (to be conducted in 2026). Derivations of SSWQOs for nitrite and cobalt may be warranted in future AEMPs.

Chlorophyll a was a POI with a statistically significant BACI effect but for which no benchmark was developed in B2Gold Nunavut (2025). Because comparison to benchmark was not captured by another parameter, a benchmark for chlorophyll a is proposed as a response action for use in the AEMP. Similar to the phosphorus benchmark, the proposed chlorophyll a benchmark is based on a concentration that represents the upper limit associated with the oligotrophic trophic status of the lake. Approaching the benchmark may suggest nutrient enrichment in the lake and a change in trophic status of the lake. The upper range of chlorophyll a concentrations in Vollenweider and Kerekes' (1982) open boundary system for the oligotrophic trophic category is a concentration of 4.5 µg/L. This benchmark is used by another northern mine to evaluate nutrient enrichment in an oligotrophic lake (Diavik Diamond Mine; WSP 2024b). To evaluate how changes in chlorophyll a concentration may affect Goose Lake, the proposed AEMP benchmark for chlorophyll a for the Back River Project is 4.5 µg/L. Chlorophyll a concentrations were below this AEMP benchmark, confirming that Goose Lake remained within the oligotrophic trophic status.

Mitigation Options

Given that seepage and general runoff from Site into Goose Lake was identified as possible sources of the changes to water quality in Goose Lake, the following mitigation options are recommended:

- Improve water management and dust control at site. Efforts should be made to improve water management at Site to minimize the potential for contaminated water to report to Goose Lake. Efforts may also focus on reducing/limiting dust created at Site, to minimize dust deposition to Goose Lake.
- Conduct comprehensive monitoring: Operational monitoring should include analyzing select samples for the larger suite of chemical analyses (i.e., beyond regulatory requirements). These additional analytes in operational runoff samples (i.e., sampling of runoff water flowing into Goose Lake or its tributaries during weekly sampling and sampling during high precipitation events) can identify high priority areas where water management improvements would be most beneficial. Additional sampling in 2026 should also include water quality monitoring in the two areas of Propeller Lake in April, July, August, and September, with results presented in the 2026 AEMP report to assess whether there is evidence to suggest that water quality in Propeller Lake differs from baseline as result of inflow from Goose Lake.

These recommended actions have the objective of mitigating future anthropogenic inputs into Goose Lake with the potential to improve Goose Lake water quality. For this reason, the low action levels were not revised, and the moderate and high action levels were not defined, under the assumption that there will be no further increase in concentrations in 2026; if that is not the case, moderate and high action levels may need to be derived.

6 SUMMARY AND RECOMMENDATIONS

The AEMP was initiated in 2025 due to the commencement of dewatering from Llama and Umwelt lakes, per the AEMP study design. Four water quality sampling programs were conducted for the Project: one during under-ice conditions (April) and three in open-water conditions (July, August, and September). Water samples and field measurements were collected from two areas in Goose Lake (West Bay and Central Basin) and one area in Reference B Lake.

The 2025 AEMP results indicate that water quality in Goose Lake has changed to some degree compared to baseline years and the reference area. Many parameters were identified as POIs in under-ice and open-water conditions, and most of these showed statistically significant differences compared to the reference area and baseline conditions. The results indicate that a change in water quality was observed in both areas of Goose Lake; however, the effect was generally more pronounced in West Bay compared to Central Basin. These results are consistent with those reported in 2024 (WSP 2025b), where concentrations of many parameters in 2024 were observed to have increased in Goose Lake West Bay compared to those measured during baseline years.

Except for nitrite and cobalt concentrations, which were above their respective benchmarks, the 2025 results were consistent with predictions for most parameters that concentrations would remain below benchmarks during the Construction and Operations Phases¹². Concentrations in 2025 were, however, inconsistent with concentrations predicted during the Construction and Operations Phases. Median and maximum concentrations of most POIs exceeded the 95th percentile concentration predicted during the Construction and Operations Phases in West Bay and Central Basin samples in 2025.

Despite the increased concentrations for most AEMP parameters in 2025 compared to baseline, only four parameters exceeded the Low Action Level in 2025: nitrate and nitrite in April, and total and dissolved cobalt in all months. Nitrate and cobalt only exceeded the Low Action Level in West Bay, whereas nitrite exceeded the Low Action Level in both areas of Goose Lake. In April, the median nitrate concentration of 2.4 mg N/L in West Bay was 82% of the benchmark of 2.93 mg N/L, whereas the median nitrite concentration of 0.068 mg-N/L in West Bay and 0.13 mg-N/L in Central Basin exceeded the benchmark of 0.06 mg-N/L by 1.1 times and 2.2 times, respectively. Median cobalt concentrations in West Bay were 1.1 times the hardness-dependent AEMP benchmark in April, and between 1.2 and 1.9 times in the open-water months.

Further evaluation was conducted to determine the potential ecological significance of the Low Action Level exceedances. Most parameters have median under-ice and open-water concentrations that are below AEMP benchmarks, indicating no effects to aquatic life at those measured concentrations. As noted above, median concentrations of nitrite and cobalt exceeded their AEMP benchmarks; however, measured concentrations are below chronic toxicity thresholds. Thus, it is unlikely that the measured concentrations of nitrite and cobalt have the potential to cause adverse effects to aquatic life in Goose Lake. Biological monitoring is planned in 2026 per the AEMP design plan, which will support the evaluation of effect to aquatic life based on the observed changes in water quality.

¹² Site activities in 2025 included continuation of construction activities but then the Operations Phase of the mine began in June 2025, with first ore introduced to the Goose Mine processing facility on June 24, 2025.

An investigation was initiated in June 2025 in response to the observed changes in Goose Lake water quality that were reported in the 2024 annual report (WSP 2025b). The results of the water quality investigation were analyzed as part of this AEMP report to identify factors from the Project that may have contributed to the increase in nitrate, nitrite, and total and dissolved cobalt concentrations in Goose Lake. This investigation used parameter concentrations as an indicator of potential sources. The results suggest that the inflow from Llama and Umwelt Lakes and the inflow from Echo Lake contributed large concentrations of nitrate and cobalt parameters after September 2023. Other sources or processes at play are also likely, especially for nitrite. Contact water, seepage and/or runoff flowing into these streams appear to be the likely source of increased parameter concentrations in Goose Lake in 2024 and 2025. Recommended mitigation options are to improve water management, dust control at site, and increase monitoring in 2026. These actions have the objective of mitigating future inputs into Goose Lake with the potential to reverse the changes to water quality identified in Goose Lake in 2024 and 2025.

Recommendations for the water quality component of the AEMP for future years are to continue AEMP sampling per the AEMP study design, with the addition of sampling West Bay over the next three years, regardless of dewatering activities, to continue to monitor for changes in water quality and sampling of Propeller Lake in 2026, and to adopt the newly developed chlorophyll *a* benchmark developed in Section 5.5.3.

Signature Page

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APPENDIX A

**2025 Quality Assurance and
Quality Control Methods and Results**

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A1 INTRODUCTION

This appendix describes the quality assurance (QA) and quality control (QC) procedures implemented during the 2025 water quality programs completed to support the Aquatic Effects Management Plan (AEMP) program for the B2Gold Back River Project (Project). The quality assurance/quality control (QA/QC) procedures followed the methods described in the updated AEMP study design for the Project (B2Gold Nunavut 2025). An evaluation of the QC data and implications for the interpretation of results is also included.

Data integrity is determined by the QA/QC procedures that are applied during all aspects of a sampling program, from sample collection to data analysis and reporting. Quality assurance procedures include training of personnel, data management, and other technical practices designed to confirm that data generated are consistently of appropriate quality. Quality control procedures include steps to measure and evaluate data quality, as well as the corrective actions that are applied when data quality objectives are not achieved.

A2 QUALITY ASSURANCE

Quality assurance procedures implemented during the 2025 water quality sampling programs are classified into three categories: field operations, laboratory analyses, and office operations.

A2.1 Field Operations

Quality assurance procedures for field operations involve field crew training, pre-field meetings, use of standardized methods, and providing clear instructions for collecting and handling field data. Field staff for the field program were trained to be proficient in standardized sampling procedures, data recording, and equipment operation. Field work was completed according to approved specific work instructions (SWI) that were developed for the project based on standardized technical procedures developed by WSP Canada Inc. (WSP). WSP's technical procedures are consistent with field protocols described in relevant scientific literature (e.g., CCME 2011). The SWI for each water sampling program included the exact locations of sampling stations and detailed instructions for field tasks such as sample collection, handling, preservation, labelling, storage, shipping, record keeping, and sample tracking.

A multi-probe meter was used to collect in situ measurements of water temperature, pH, dissolved oxygen (concentration and percent saturation), and specific conductivity throughout the water column at each lake sampling station. Turbidity measurements were taken on a subsample of the water sample, using a turbidity meter (due to variability in turbidity readings, the value recorded is the average of three consecutive readings). The field meters were calibrated by the manufacturer once per year and by the field crew at the beginning of each field program. Calibration of the meters was then verified daily using standard calibration solutions. Calibration checks were also done when readings were outside of expected ranges. Calibration records were documented in the field and saved electronically on the project SharePoint.

Field data were recorded on standardized field data sheets or in a bound field notebook. Chain-of-custody forms included the list of analyses requested, sample identification information, date and time of sample collection, information regarding field filtering and preservation, and names of the sampler. After delivery to the laboratory, a tracking system was used to confirm all samples were sent and received by the laboratory. The crew lead was responsible for tracking samples, to confirm that all required samples were collected, chain-of-custody and analytical request forms were complete and correct, and that labelling and documentation procedures were followed. Field crews checked in with component leads as needed and submitted daily reports to provide updates on completed tasks. Contact information for members of the project team and the analytical laboratory were included in the SWI, along with references to applicable technical procedures.

Quality assurance procedures also included pre-field meetings held with the field crew, component lead, and project manager prior to the start of each field program. Objectives of the field program, health and safety protocols, the role of each crew member, specific details of the SWI, equipment needs, field logistics, and contingency plans were discussed at each meeting.

A2.2 Laboratory Analyses

Water samples collected in 2025 were submitted for analysis to Bureau Veritas Laboratories (BV Labs), a laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. for the analytical suite for this project; therefore, confidence in the reliability of the analytical data produced by the laboratory is considered high. To receive accreditation, a laboratory must pass an evaluation of its internal procedures, analytical methods, and QA/QC processes. Parameters were analyzed by the laboratory using standard methods published by internationally recognized agencies, such as the American Public Health Association (APHA) and the United States Environmental Protection Agency (US EPA).

A2.3 Office Operations

Quality assurance procedures implemented for office-based tasks included the following:

- having trained personnel complete data management, analysis, and reporting tasks
- using standardized data storage, manipulation, and summary tools, as required
- establishing a data management system to support consistency, data review processes, and data storage and retrieval
- reviewing deliverables by senior staff at appropriate milestones

A designated member of the project team was responsible for liaising with the laboratory. Analytical results were uploaded to the EQulS database by the designated member. Data exports from the EQulS database were reviewed to identify errors or gaps and corrected, as needed. Laboratory certificates, field forms, and field notes were stored electronically on the project SharePoint.

A3 QUALITY CONTROL

Similar to QA procedures, QC procedures implemented during the 2025 water quality sampling programs can be classified into three categories: field operations, laboratory analyses, and office operations.

A3.1 Field Operations

Quality control procedures implemented during field operations included the collection of QC samples that are defined as follows:

- **Travel blanks:** Travel blanks were provided by the laboratory and consisted of sealed sample bottles filled with deionized water. They accompanied environmental water samples during all stages of storage and transportation but remained unopened. Travel blanks were used to detect sample contamination that could have resulted from sampling bottles and while traveling to and from site.
- **Field blanks:** These samples were prepared as separate samples in the field using laboratory-provided deionized water to fill a set of sample bottles using similar sampling and handling procedures as the environmental water samples collected from sampling stations. Field blanks were used to detect potential sample contamination during sample collection, handling, shipping, and analysis.

- **Equipment blanks:** These samples were prepared by rinsing the equipment with laboratory-provided deionized water after decontamination and before sample collection. The rinsate is then used to fill a set of samples bottles using similar sampling and handling procedures as the environmental water samples collected from sampling stations. Equipment blanks were used to test for contamination from sampling equipment (i.e., to confirm that the cleaning process was effective, and that the equipment is not introducing contaminants into samples).
- **Duplicate samples:** These samples consisted of paired water samples collected at the same location, using separate grabs, using similar sampling and handling procedures as the parent sample. Duplicate samples were used to verify the precision of field sampling methods and laboratory analyses.

Target QC sample size for the 2025 water sampling programs was 10% of the number of environmental water samples submitted for analysis. Quality control samples were analyzed for the same set of parameters as the environmental water samples.

A3.2 Laboratory Analysis

Internal QC samples were prepared by the analytical laboratory and analyzed along with the field-collected samples to confirm the quality and reliability of the analytical results. Quality control sample types included duplicate samples, spiked samples, and method blanks. The laboratory QC results were reviewed to confirm the quality of the data and to determine if the laboratory identified any questionable results.

A3.3 Office Operations

Quality control operations implemented in the office focussed on evaluating the quality of in situ measurement data and analytical results, confirming completeness of data, and verifying the quality of data through assessment of QC samples and through summary statistics and plots. Field data entered into the project database were compared against the field data sheets and field notebook to confirm their accuracy. Unaltered data files from the laboratory were saved electronically to the project SharePoint and used as a reference to confirm the accuracy of the data entered into the project EQuIS database. Laboratory data were also screened for quality (Section A3.3.1). Backup files were created before each major data analysis operation and calculations were reviewed to confirm the accuracy of the results.

A3.3.1 Laboratory Data Screening

A series of standard data screening steps were completed upon receipt of water chemistry results from the analytical laboratory to identify potential data quality issues:

- verification that all requested parameters and samples were analyzed
- verification that the appropriate detection limits (DLs) were used and data were reported in the appropriate units (based on targeted DLs in study design version 2.0)
- verification of holding time exceedances and follow-up discussions with the laboratory
- data logic checks (e.g., comparison of dissolved to total metals)
- identification of anomalous values
- review of blank samples for evidence of contamination
- review of duplicate sample results for unacceptable variation

- review of laboratory QA/QC results (i.e., sample temperature and integrity of containers upon receipt, holding times, laboratory blanks and recoveries from spiked samples, internal duplicates, review of laboratory qualifiers and notes)
- follow-ups with the laboratory on unexpected values and trends

Prompt completion of the screening steps allowed for potential re-analysis of samples by the laboratory to verify questionable data or generate data for missing parameters. If samples were re-analyzed by the laboratory and the data were still considered questionable, qualifiers for consideration during data summary and analysis steps were added to the dataset.

A3.3.2 Quality Control Data Evaluation

A3.3.2.1 Blank Samples

Analytical results for travel, field, and equipment blanks were reviewed and considered notable if measurable results were more than five times the corresponding detection limits. This criterion is based on the US EPA Practical Quantitation Limit, which accounts for the potential for reduced accuracy when concentrations approach or are below the DL (US EPA 2000). This criterion was not applied to all parameters (i.e., not applied to pH).

In the event that concentrations in the blanks exceeded five times the DL, the results were examined to determine if:

- the concentration in a blank QC sample was higher than the concentrations measured in corresponding environmental surface water samples
- the notable result was limited to a single blank sample or if the result was notable across other QC samples (e.g., travel blank, field blank, and/or equipment blank)
- there was a consistent bias in the results for the parameter across all samples
- if the notable result was severe enough to warrant invalidation of the affected data

A3.3.2.2 Duplicate Samples

Differences between concentrations measured in duplicate samples were evaluated based on the relative percent difference (RPD):

$$RPD = \frac{|C1 - C2|}{\left[\frac{(C1 + C2)}{2}\right]} * 100$$

Where: RPD is relative percent difference

C1 is the concentrations in the parent sample

C2 is the concentration in the duplicate sample

The RPD was calculated if both concentrations in the paired samples were greater than five times the DL. The RPD for a given parameter was considered notable and flagged if it was greater than 25%. The number of flagged parameters was compared to the total number of analyzed parameters to evaluate analytical precision. Results of the duplicate samples were also used to assess within-station variability and field sampling precision. Analytical precision was rated as follows (US EPA 2017):

- *high*, if less than 10% of parameters in duplicate samples were notably different from one another

- *moderate*, if 10 to 30% of parameters in duplicate samples were notably different from one another
- *low*, if more than 30% of parameters in duplicate samples were notably different from one another

A3.3.2.3 Dissolved and Total Concentrations

Dissolved nutrient and metal concentrations were compared to their corresponding total concentrations as a measure of analytical precision. Where results of the total and dissolved concentrations were more than five times the DL and the dissolved concentration exceeded the total concentration by more 25%, the dissolved concentration was considered notable, and the result was reviewed to assess whether the result warranted invalidation of the affected data.

A4 RESULTS

A4.1 Water Quality Field Measurements

In situ field measurements were collected during each field program in 2025 using a calibrated multi-probe water quality meter and a turbidity meter. Calibration records were documented in the project file. No issues with the field meters were encountered during the 2025 water quality programs.

A4.2 Laboratory Report Review

Required parameters were analyzed by the laboratory using standard analytical methods and DLs required by the AEMP design plan (B2Gold Nunavut 2025). Detection limits of water quality results were generally adequate. Total and dissolved iron, and total and dissolved cadmium had DLs greater than the target DLs in all samples collected in 2025, but DLs were below relevant water quality guidelines. Total and dissolved iron had a target DL of 0.5 µg/L but were reported using a DL of 1.0 µg/L; and total and dissolved cadmium had a target DL of 0.0025 µg/L but were reported using a DL of 0.003 µg/L.

During the August and September programs¹, the laboratory supplied non-leached vials for metals analyses. These vials were not appropriate for the ultra-low level metals analyses requested. As a result, the laboratory indicated that the raised DLs would be necessary to match the method; DLs were raised for most parameters in August and September (See Tables A-1 and A-2). The following parameters had DLs greater than the target DLs for August and September samples: magnesium (target DL of 0.005, achieved DL of 0.01 mg/L), potassium (target DL of 0.005, achieved DL of 0.01 mg/L), total and dissolved aluminum (target DL of 0.2, achieved DL of 0.5 µg/L), arsenic (target DL of 0.01, achieved DL of 0.02 µg/L), cadmium (target DL of 0.0025, achieved DL of 0.005 µg/L), chromium (target DL of 0.04, achieved DL of 0.1 µg/L), manganese (target DL of 0.005, achieved DL of 0.05 µg/L), molybdenum (target DL of 0.01, achieved DL of 0.05 µg/L), selenium (target DL of 0.025, achieved DL of 0.04 µg/L), silver (target DL of 0.002, achieved DL of 0.005 µg/L), strontium (target DL of 0.02, achieved DL of 0.05 µg/L), thallium (target DL of 0.001, achieved DL of 0.002 µg/L), uranium (target DL of 0.001, achieved DL of 0.002 µg/L), and vanadium (target DL of 0.01, achieved DL of 0.2 µg/L).

Detection limits for chlorophyll *a* reported by Bureau Veritas (BV) during the July and August sampling programs exceeded the range of historical data due to methodological differences between laboratories (BV DLs ranged from 0.48 to 1.1 µg/L; ALS Environmental [ALS] DL was 0.01 µg/L). To ensure continuity with historical datasets, September samples were submitted to ALS for analysis using the lower detection limit method. Samples for chlorophyll *a* analysis under the AEMP will be submitted to ALS in future programs.

¹ These affected vials were for total and dissolved metals, excluding mercury, of work orders C570633, C570800, C571520, C578064 and C579084.

Radium-226 samples were not collected during the July program due to a labeling issue by the analytical laboratory. The laboratory supplied sampling bottles intended for radium analysis with blank labels placed over pre-labeled chlorophyll-a containers. Consequently, field personnel processed the bottles as chlorophyll-a samples at the end of the sampling day. This issue resulted in no results for radium from Goose Lake samples (i.e., BRP-29A, BRP-31, and BRP-32); however, samples were successfully collected at Reference B Lake (BRP-38).

Copies of the analytical certificates of analysis, which include a statement of methods and summaries of laboratory quality control results, are presented as an attachment to Appendix D. The laboratory QC results did not identify any questionable results that might impact the integrity and validity of the results.

A4.3 Holding Time Exceedances

To maintain sample integrity, water samples for laboratory analyses were submitted as soon as possible after collection. Holding times were exceeded for several parameters in water samples sent to BV Labs due to logistical constraints of shipping samples from a remote area (longer shipping times), or due to the laboratory's not initiating testing promptly following sample receipt. A total of four AEMP parameters had holding time exceedances during the 2025 program: turbidity, orthophosphate, total dissolved solids, total organic carbon, and dissolved organic carbon (Table 4.3-1).

Table 4.3-1: Summary of Holding Time Exceedances in 2025

Parameter	Laboratory Recommended Holding Time	Holding Time Exceedances in Days			Holding Time Exceedances	
		Minimum	Maximum	Average	Number of Samples	Percentage of Samples (%)
Orthophosphate	3 days	1.0	9.0	5.0	85	91
Turbidity	3 days	1.0	5.0	3.0	84	90
Total dissolved solids	7 days	1.0	3.0	2.0	51	55
Total organic carbon	28 days	5.0	6.0	5.5	6	7
Dissolved organic carbon	28 days	6.0	7.0	6.5	6	7

Note: Recommended hold time for laboratory pH is 15 minutes. All samples exceeded the laboratory recommended holding time for pH.

During all field programs for the project, pH and turbidity values were measured in the field (i.e., in situ) using calibrated probes. For these parameters, field measurements were used as the preferred method for water quality assessment for the project because of the short laboratory holding times (i.e., 0 days for pH and 3 days for turbidity).

Analytical results of the remaining parameters that exceeded holding times were reviewed for patterns and deviations from expected values based on historical data. Data associated with holding time exceedances were similar to data analyzed within recommended times.

The following measures are being applied to mitigate holding time exceedances:

- designing the workplan and developing shipping procedures to minimize delays in sample shipment following sample collection
- coordinating with scheduled charter flights and couriers to minimize delays in sample transport prior to delivery to the laboratory
- coordinating with the laboratory to minimize delays in sample analysis upon receipt of samples
- continuing discussions with the laboratory regarding potential sample processing techniques (e.g., filtration, preservation) to extend sample holding times

A4.4 Field Quality Control Results

During the 2025 water quality programs, a total of 15 QC samples were collected (four travel blanks, four field blanks, three equipment blanks, and four duplicate samples) were collected. Quality control samples collected in 2025 represented approximately 19% of the number of environmental water samples submitted for analysis. Quality control samples were analyzed for the same set of parameters as the environmental water samples.

A4.4.1 Travel Blanks

Travel blank results from the 2025 water quality programs are presented in Table A-1. Most results in travel blanks were not detected (i.e., reported below the detection limit). Notable concentrations of the following parameters in travel blanks were reviewed individually:

- total zinc during the August and September programs
- total ammonia during the September program

The total zinc concentration in the August travel blank (0.77 µg/L) exceeded the DL of 0.06 µg/L and was higher than those measured in most August environmental samples at BRP-32 and BRP-38. This suggests that the contamination in the travel blank did not occur in environmental samples. Total zinc concentrations in environmental samples from the August program were within the ranges of previous years (2011-2024) data. A notable zinc result was also observed in the August field blank. The notable zinc concentrations in August blank samples, with concentrations in environmental samples below those in blank samples, suggest that the notable results most likely represent concentrations in the deionized water (i.e., the water used by the laboratory to fill the travel blanks and send to the field crew to fill the field blank sample). These results suggest that these notable concentrations are unlikely to affect the validity of the overall dataset for this parameter.

Similarly, the total zinc concentrations in the September travel blank (0.5 µg/L) exceeded the DL of 0.1 µg/L and was also higher than those observed in several BRP-32 and all BRP-38 samples. In addition, this notable result was only detected in the September travel blank and not in the associated field and equipment blanks, indicating that this was considered an isolated occurrence that was unlikely to affect the validity of the overall dataset for this parameter.

The total ammonia concentration in the September travel blank (0.096 mg-N/L) exceeded the DL of 0.005 mg-N/L; however, this concentration was higher than those measured in September environmental samples at BRP-32 and BRP-38. This suggests the detection was an isolated occurrence and is unlikely to affect the validity of the overall dataset for this parameter.

Overall, notable results in travel blanks accounted for approximately 1% of all results in travel blank samples. The notable concentrations in travel blanks were considered to be related to the water provided by the laboratory or to be isolated occurrences and are unlikely to affect the validity of the overall dataset.

A4.4.2 Field Blanks

Field blank results from the 2025 water quality programs are presented in Table A-1. Most results in field blanks were not detected (i.e., reported below the detection limit). Notable concentrations of the following parameters in field blanks were reviewed individually:

- total mercury during the April program
- total zinc during the August program

The notable result for total mercury was not identified from other blank samples in the same month. Additionally, the concentration of this metal measured in field samples were consistent with historical data collected between 2011 and 2024. This notable result does not indicate a systemic issue with sampling procedures or field methods and may be attributable to localized contamination or handling anomalies, rather than a broader procedural deficiency.

The notable result for zinc in the August field blank is discussed in Section A4.4.1.

Overall, notable results in field blanks accounted for approximately 1% of all field blank results. The notable concentrations in field blanks were considered to be related to the water provided by the laboratory or to be isolated occurrences and are unlikely to affect the validity of the overall dataset.

A4.4.3 Equipment Blanks

Equipment blank results from the 2025 water quality programs are presented in Table A-1. Most results in equipment blanks were not detected (i.e., reported below the detection limit). The notable total mercury concentration in the September equipment blank was reviewed.

The notable result for total mercury was not identified from other blank samples in the same month. Additionally, the concentrations of these metals measured in field samples were consistent with historical data collected between 2011 and 2024. This notable result does not indicate a systemic issue with contamination introduced from the sampling equipment and may be attributable to localized contamination or handling anomalies, rather than a broader procedural deficiency.

Overall, notable results in equipment blanks accounted for less than 1% of all results of equipment blanks. The notable concentration in equipment blank was considered to be an isolated occurrence and is unlikely to affect the validity of the overall dataset.

A4.4.4 Duplicate Samples

Duplicate sample results from the 2025 water quality program are presented in Table A-2. Most parameters had RPDs below 25% for most paired results. Notable results consisted of:

- total iron, lead, mercury, and zinc, and dissolved lead and mercury in the April duplicate (RPDs ranging from 30% to 149%)
- total cadmium and dissolved molybdenum in the July duplicate (RPDs 27% and 26%, respectively)
- dissolved mercury in the September duplicate (RPD of 53%)

Notable results were re-analyzed, and results were confirmed by the laboratory. Lead and mercury had the greatest RPDs, which was likely related to the high variability in parameter concentrations in environmental samples (e.g., total lead and dissolved mercury concentrations at BRP-32-1 and BRP-32-2 had an RPD of 75% and 145%, respectively). The high mercury RPD in the April duplicate was also likely related to dissolved mercury concentrations being greater than the total concentrations, which is discussed in Section A4.5. These notable results do not indicate a systemic issue with precision of field sampling methods or laboratory precision, and may be attributable to environmental variability, localized contamination, or handling anomalies, rather than a broader procedural deficiency. Overall, notable results accounted for 0 to 9.8% the parameters in each duplicate sample. The analytical precision, defined in Section A3.3.2.2, was therefore rated as high for all duplicate samples collected during the 2025 water quality programs.

A4.5 Dissolved to Total Results Comparison

It is reasonable to assume that where total and dissolved parameter concentrations are measured in a water sample, the dissolved fraction should be less than or equal to the corresponding total concentration. However, there are instances when the dissolved concentration of a parameter may be higher than the total concentration. These can be attributed to low concentrations, analytical variation and sensitivity, inconsistency or inadequate sampling, and sample handling processes (e.g., filtering and preserving outside the required timeframe, or filtering-related contamination). In 2025, dissolved metals samples were filtered and preserved at the laboratory to minimize the potential for contamination during these steps.

Comparison of dissolved constituent concentrations to total constituent concentrations indicated that most concentrations met the data quality objectives (i.e., a dissolved concentration no more than 25% greater than the corresponding total concentration). Eighteen results did not meet the data quality objectives, representing approximately 1% of the data used in this report (18 results out of over 1,500 comparisons). Constituents that did not meet the data quality objectives included: total Kjeldahl nitrogen, mercury, zinc, selenium, molybdenum, and thallium (Table A-3). Re-analysis was requested, and results were confirmed by the laboratory. Molybdenum concentrations at BRP-38-5 in July was excluded because it was not consistent with other BRP-38 dissolved molybdenum results from July. Numerous samples in April had dissolved mercury concentrations greater than those in the total fraction. The laboratory confirmed that reworks were automatically undertaken unless the two values are within the duplicate RPD limits, or if values are less than two times the DL due to level of uncertainty in those situations. A flag in the certificate of analysis for a recovery percentage below the acceptable limit was identified, with a footnote that the overall quality control for the analysis met acceptability criteria. Total and dissolved mercury concentrations in April 2025 were within the range previously measured in Goose Lake and Reference B Lake and were thus retained.

A5 CONCLUSIONS

Review of field and laboratory data indicated that field measurements and laboratory data are of acceptable quality. Key findings from the 2025 QA/QC results are as follows:

- Samples were received by the laboratory in good condition and were analyzed for all specified parameters.
- No issues were identified in analytical methods used or most DLs reported by the laboratory. Total and dissolved iron and cadmium had DLs greater than the target DLs in all samples for all programs, but DLs were below AEMP benchmarks. During the August and September programs, the laboratory provided non-leached vials that were unsuitable for ultra-low level metal analysis. As a result, the laboratory raised the DLs for most metals. Consequences of these raised detection limits are that some parameters (e.g., molybdenum, vanadium) were reported to be below the detection limit in August and September in all samples. In these cases, data from July were used to evaluate parameters of interest.
- Holding times recommended by the laboratory were exceeded for some parameters (i.e., orthophosphate, turbidity, total dissolved solids, total organic carbon, and dissolved organic carbon) due to logistical constraints and/or laboratory inability to initiate testing promptly following sample receipt. The holding time exceedances were of a minimum of one day (most parameters) to a maximum of nine days (orthophosphate) duration, and although this should be taken into consideration during interpretation of the results, it is not expected to negatively affect data quality.

- Detected concentrations of total zinc in the August travel blank and field blank samples were five times greater than its respective DL. The concentration of total zinc in these blanks was higher than those measured in most August field samples. Since travel blanks remained sealed throughout sampling and transport, the elevated concentrations of total zinc were most likely due to the quality of the deionized water provided by the laboratory, rather than contamination introduced during field activities. Therefore, it was not considered to influence the field water quality samples.
- Detected concentrations exceeded five times the DL in blank samples from April (i.e., total mercury in the field blank) and September (i.e., total ammonia and total zinc in the travel blank; total mercury in the equipment blank) and were isolated to their respective blank types. These occurrences did not indicate systemic contamination and did not affect interpretation of environmental sample results. Environmental sample concentrations for these parameters were consistent with historical data from 2011 to 2024.
- Duplicate samples had low numbers of notable RPDs, ranging from 0 to 9.8% of parameters in each duplicate sample. The analytical precision was rated as high for all duplicate samples collected during the 2025 water quality programs.
- Dissolved concentrations were notably greater than the corresponding total concentrations for less than 1% of the metals results, with total Kjeldahl nitrogen, mercury, zinc, selenium, molybdenum, and thallium failing to meet this quality criteria more frequently than other parameters. Although numerous mercury results had dissolved concentrations greater than those in the total fraction in April, results were retained because they were within the range previously measured.
- The overall quality of the water quality data was acceptable, and results reported are considered reliable for use in this AEMP report to meet study objectives. As a result of the laboratory providing non-leached vials that were unsuitable for ultra-low level metal analysis in August and September, July data were used to assess parameters of interest for the AEMP for parameters that were reported below the raised DL in all areas.

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TABLES

Table A-1: Travel Blank, Field
Blank, and Equipment Blank
Sample Results, 2025

Table A-2: Field Duplicate
Sample Results, 2025

Table A-3: Summary of Notable
Total and Dissolved
Concentrations, 2025

Table A-1: Travel Blank, Field Blank, and Equipment Blank Sample Results, 2025

Parameter	Unit	Detection Limit	Travel Blank				Field Blank				Equipment Blank		
			15-Apr-25	12-Jul-25	16-Aug-25	11-Sep-25	16-Apr-25	11-Jul-25	13-Aug-25	13-Sep-25	8-Jul-25	14-Aug-25	14-Sep-25
Conventional Parameters													
pH	-	-	5.2	5.5	5.4	5.7	5.2	5.7	5.7	5.3	6.0	5.9	5.5
Specific conductivity	µS/cm	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hardness, as CaCO ₃ (total)	mg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total alkalinity, as CaCO ₃	mg/L	0.50	<0.50	<0.50	0.62	0.68	<0.50	0.84	<0.50	<0.50	0.87	0.84	<0.50
Total dissolved solids (measured)	mg/L	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total suspended solids	mg/L	1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	1.9	<1.0	<1.0	<1.0	<1.0
Turbidity	NTU	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Major Ions													
Calcium	mg/L	0.0020 - 0.010	<0.0020	0.0030	<0.010	<0.010	<0.0020	<0.0020	<0.010	<0.010	0.0027	<0.010	<0.010
Chloride	mg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium	mg/L	0.00050 - 0.010	<0.00050	<0.00050	<0.010	<0.010	<0.00050	<0.00050	<0.010	<0.010	<0.00050	<0.010	<0.010
Potassium	mg/L	0.0050 - 0.010	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.010	<0.010	0.0079	<0.010	<0.010
Sodium	mg/L	0.00050 - 0.010	0.00151	<0.00050	<0.010	<0.010	0.00094	<0.00050	<0.010	<0.010	<0.00050	<0.010	<0.010
Sulphate	mg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide													
Total cyanide	mg/L	0.00050	0.00056	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide (free)	mg/L	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide (WAD)	mg/L	0.00050	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Nutrients													
Nitrate, as N	mg-N/L	0.0030	0.0040	<0.0030	<0.0030	<0.0030	0.0035	0.0038	<0.0030	0.0033	<0.0030	<0.0030	<0.0030
Nitrite, as N	mg-N/L	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total ammonia	mg-N/L	0.0050	0.0056	0.0091	<0.0050	0.0960	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total nitrogen	mg-N/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.040	0.020	<0.020	0.050
Total Kjeldahl nitrogen	mg-N/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.033	0.020	<0.020	0.046
Total phosphorus	mg-P/L	0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved phosphorus	mg-P/L	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Orthophosphate	mg/L	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	<0.0010	<0.0010
Total organic carbon	mg/L	0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.20
Dissolved organic carbon	mg/L	0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.20
Reactive silica	mg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals													
Aluminum	µg/L	0.10 - 0.50	0.43	0.13	<0.50	<0.50	0.23	0.17	<0.50	0.93	0.16	<0.50	<0.50
Arsenic	µg/L	0.0050 - 0.020	<0.0050	0.0065	<0.020	<0.020	<0.0050	<0.0050	<0.020	<0.020	<0.0050	<0.020	<0.020
Barium	µg/L	0.0080 - 0.020	<0.0080	<0.0080	<0.020	<0.020	<0.0080	<0.0080	<0.020	0.064	0.0159	<0.020	<0.020
Cadmium	µg/L	0.0030 - 0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050
Chromium	µg/L	0.020 - 0.10	<0.0200	<0.0200	<0.10	<0.10	<0.0200	<0.0200	<0.10	<0.10	<0.0200	<0.10	<0.10
Cobalt	µg/L	0.0040 - 0.0050	<0.0040	<0.0040	<0.0050	<0.0050	<0.0040	<0.0040	<0.0050	<0.0050	<0.0040	<0.0050	<0.0050
Copper	µg/L	0.020 - 0.050	<0.020	<0.020	<0.050	<0.050	<0.020	0.027	<0.050	<0.050	<0.020	<0.050	0.080
Iron	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0
Lead	µg/L	0.0030 - 0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	0.0051	<0.0050	0.0058	<0.0030	<0.0050	<0.0050
Manganese	µg/L	0.0040 - 0.050	<0.0040	<0.0040	<0.0500	<0.0500	<0.0040	<0.0040	<0.0500	0.0473	0.0047	<0.0500	<0.0500
Mercury	µg/L	0.00010	<0.00010	0.00015	<0.00010	<0.00010	0.00130	<0.00010	<0.00010	0.00029	<0.00010	<0.00010	0.00199
Molybdenum	µg/L	0.0050 - 0.050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	<0.050	<0.050
Nickel	µg/L	0.0150 - 0.020	<0.0150	<0.0150	<0.020	<0.020	<0.0150	<0.0150	<0.020	<0.020	<0.0150	<0.020	<0.020
Selenium	µg/L	0.010 - 0.040	<0.010	<0.010	<0.040	<0.040	<0.010	<0.010	<0.040	<0.040	<0.010	<0.040	<0.040
Silver	µg/L	0.0020 - 0.0050	<0.0020	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050
Strontium	µg/L	0.0080 - 0.050	<0.0080	<0.0080	<0.050	<0.050	<0.0080	<0.0080	<0.050	<0.050	<0.0080	<0.050	<0.050
Thallium	µg/L	0.00080 - 0.0020	<0.00080	<0.00080	<0.0020	<0.0020	<0.00080	<0.00080	<0.0020	<0.0020	<0.00080	<0.0020	<0.0020
Uranium	µg/L	0.00050 - 0.0020	<0.00050	<0.00050	<0.0020	<0.0020	<0.00050	<0.00050	<0.0020	<0.0020	<0.00050	<0.0020	<0.0020
Vanadium	µg/L	0.0050 - 0.20	<0.0050	<0.0050	<0.20	<0.20	<0.0050	<0.0050	<0.20	<0.20	<0.0050	<0.20	<0.20
Zinc	µg/L	0.060 - 0.10	<0.060	<0.060	0.77^(a)	0.53	0.061	<0.060	0.78^(a)	<0.10	<0.060	0.32	<0.10

Table A-1: Travel Blank, Field Blank, and Equipment Blank Sample Results, 2025

Parameter	Unit	Detection Limit	Travel Blank				Field Blank				Equipment Blank		
			15-Apr-25	12-Jul-25	16-Aug-25	11-Sep-25	16-Apr-25	11-Jul-25	13-Aug-25	13-Sep-25	8-Jul-25	14-Aug-25	14-Sep-25
Dissolved Metals													
Aluminum	µg/L	0.10 - 0.50	<0.10	<0.10	<0.50	<0.50	<0.10	<0.10	<0.50	<0.50	0.20	<0.50	<0.50
Arsenic	µg/L	0.0050 - 0.020	<0.0050	0.0083	<0.020	<0.020	<0.0050	0.0059	<0.020	<0.020	<0.0050	<0.020	<0.020
Barium	µg/L	0.0080 - 0.020	<0.0080	<0.0080	<0.020	<0.020	0.0084	<0.0080	<0.020	<0.020	<0.0080	<0.020	<0.020
Cadmium	µg/L	0.0030 - 0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050
Chromium	µg/L	0.020 - 0.10	<0.020	<0.020	<0.10	<0.10	<0.020	<0.020	<0.10	<0.10	0.031	<0.10	<0.10
Cobalt	µg/L	0.0040 - 0.0050	<0.0040	<0.0040	<0.0050	<0.0050	<0.0040	<0.0040	<0.0050	<0.0050	<0.0040	<0.0050	<0.0050
Copper	µg/L	0.020 - 0.050	<0.020	0.031	<0.050	<0.050	<0.020	0.022	<0.050	<0.050	<0.020	<0.050	<0.050
Iron	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lead	µg/L	0.0030 - 0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0030	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050
Manganese	µg/L	0.0040 - 0.050	<0.0040	<0.0040	<0.050	<0.050	<0.0040	<0.0044	<0.050	<0.050	<0.0040	<0.050	<0.050
Mercury	µg/L	0.00010	0.00013	<0.00010	<0.00010	<0.00010	0.00010	<0.00010	<0.00010	0.00045	0.00012	<0.00010	<0.00010
Molybdenum	µg/L	0.0050 - 0.050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	<0.050	<0.050
Nickel	µg/L	0.0150 - 0.020	<0.0150	<0.0150	<0.020	<0.020	<0.0150	<0.0150	<0.020	<0.020	<0.0150	<0.020	<0.020
Selenium	µg/L	0.010 - 0.040	<0.010	<0.010	<0.040	<0.040	<0.010	<0.010	<0.040	<0.040	<0.010	<0.040	<0.040
Silver	µg/L	0.0020 - 0.0050	<0.0020	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050
Strontium	µg/L	0.0080 - 0.050	<0.0080	<0.0080	<0.050	<0.050	<0.0080	<0.0080	<0.050	<0.050	<0.0080	<0.050	<0.050
Thallium	µg/L	0.00080 - 0.0020	<0.00080	<0.00080	<0.0020	<0.0020	<0.00080	<0.00080	<0.0020	<0.0020	<0.00080	<0.0020	<0.0020
Uranium	µg/L	0.00050 - 0.0020	<0.00050	<0.00050	<0.0020	<0.0020	<0.00050	<0.00050	<0.0020	<0.0020	<0.00050	<0.0020	<0.0020
Vanadium	µg/L	0.0050 - 0.20	<0.0050	<0.0050	<0.20	<0.20	<0.0050	<0.0050	<0.20	<0.20	<0.0050	<0.20	<0.20
Zinc	µg/L	0.060 - 0.10	<0.060	<0.060	<0.10	<0.10	<0.060	<0.060	<0.10	<0.10	<0.060	<0.10	<0.10
Radionuclides													
Radium-226	Bq/L	0.005	-	<0.005	<0.005	<0.005	-	-	<0.005	<0.005	-	<0.005	<0.005
Notable Results Summary													
Number of Notable Results	#	-	0	0	1	2	1	0	1	0	0	0	1

Notes: Value greater than five times the method detection limit are shown in **bold**. The laboratory provided incorrect vials for metal analyses for the August and September programs; these vials were not leached, which was not appropriate for the originally intended analysis; detection limits for these samples were revised for the appropriate analysis for the vials provided.

^(a) The data quality issue related to total zinc concentrations in the August field and travel blanks is discussed in Section 4.4.

µS/cm = microsiemens per centimetre; NTU= nephelometric turbidity unit; mg-N/L = milligrams per litre as nitrogen; mg-P/L = milligrams per litre as phosphorus; Bq/L = becquerels per litre; WAD = weak acid dissociable; - = no data.

Table A-2: Field Duplicate Sample Results, 2025

Parameter	Unit	Detection Limit	BRP-32-1		Relative Percent Difference (%)	BRP-29A-3		Relative Percent Difference ^(a) (%)	BRP-31-3		Relative Percent Difference (%)	BRP-29A-5		Relative Percent Difference ^(a) (%)
			Sample	Duplicate		Sample	Duplicate		Sample	Duplicate		Sample	Duplicate	
			18-Apr-25	18-Apr-25		8-Jul-25	8-Jul-25		14-Aug-25	14-Aug-25		13-Sep-25	13-Sep-25	
Conventional Parameters														
pH ^(a)	-	-	6.7	6.8	0.0	6.5	6.5	0.0	6.0	6.0	0.1	6.0	6.0	0.0
Specific conductivity	µS/cm	2.0	150	150	-	120	130	8.0	130	130	0.0	150	140	6.9
Hardness, as CaCO ₃ (total)	mg/L	0.50	64	61	4.8	45	45	1.1	46	46	0.9	58	58	1.2
Total alkalinity, as CaCO ₃	mg/L	0.50	7.3	7.7	5.2	3.3	3.6	7.6	4.7	4.7	0.0	5.1	5.1	0.2
Total dissolved solids (measured)	mg/L	10	100	110	9.5	76	80	5.1	60	56	6.9	52	56	7.4
Total suspended solids	mg/L	1.0	<1.0	1.3	-	1.4	<1.0	-	<1.0	<1.0	-	<1.0	<1.0	-
Turbidity	NTU	0.10	0.10	<0.10	-	<0.10	0.16	-	<0.10	<0.10	-	0.10	0.11	-
Major Ions														
Calcium	mg/L	0.0020 - 0.010	13	13	0.8	10	10	1.0	10	11	2.9	12	13	2.4
Chloride	mg/L	0.50	14	14	0.0	11	12	8.7	14	14	0.0	17	17	0.0
Fluoride	mg/L	0.010	0.026	0.025	-	0.027	0.026	-	0.011	0.014	-	0.022	0.022	-
Magnesium	mg/L	0.000050 - 0.010	7.4	7.6	2.1	4.7	4.7	0.8	4.8	4.8	1.0	5.8	5.9	2.1
Potassium	mg/L	0.0050 - 0.010	1.3	1.3	0.8	1.3	1.3	1.5	1.2	1.2	0.9	1.3	1.3	0.8
Sodium	mg/L	0.00050 - 0.010	2.2	2.3	1.8	2.0	2.0	1.0	1.9	1.9	0.0	2.2	2.2	1.8
Sulphate	mg/L	0.50	33	33	0.0	26	26	0.0	27	26	3.8	29	29	0.0
Cyanide												-		-
Cyanide	mg/L	0.00050	<0.00050	<0.00050	-	0.0032	0.0034	6.6	0.00055	0.00062	-	<0.00050	<0.00050	-
Cyanide (free)	mg/L	0.00050	<0.00050	<0.00050	-	0.0033	0.0042	25.0	0.00065	0.00054	-	<0.00050	<0.00050	-
Cyanide (WAD)	mg/L	0.00050	<0.00050	<0.00050	-	0.0033	0.0034	0.9	0.00057	0.00069	-	<0.00050	<0.00050	-
Nutrients														
Nitrate, as N	mg-N/L	0.0030	1.3	1.3	0.0	1.9	1.9	0.0	1.5	1.5	0.0	1.4	1.4	0.0
Nitrite as, N	mg-N/L	0.0010	0.14	0.14	0.0	0.0069	0.0071	2.9	0.0063	0.0063	0.0	0.0037	0.0038	-
Total ammonia	mg-N/L	0.0050	0.13	0.12	8.0	0.28	0.29	3.5	0.15	0.15	0.0	0.15	0.15	0.0
Un-ionized ammonia	mg-N/L	0.00050	<0.00050	-	-	<0.00050	-	-	<0.00050	<0.00050	-	<0.00050	-	-
Total nitrogen	mg-N/L	0.020	1.8	1.8	0.0	2.5	2.6	3.9	2.0	1.9	5.1	1.7	1.7	0.0
Total Kjeldahl nitrogen	mg-N/L	0.020	0.35	0.35	0.0	0.52	0.64	20.7	0.44	0.41	7.1	0.33	0.26	23.7
Total phosphorus	mg-P/L	0.0010	<0.0010	0.0011	-	<0.0010	0.0016	-	<0.0010	0.0024	-	0.0075	0.0018	-
Dissolved phosphorus	mg-P/L	0.0010	0.0028	<0.0010	-	0.0012	<0.0010	-	<0.0050	<0.0010	-	0.0015	<0.0010	-
Orthophosphate	mg/L	0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	-	0.0014	<0.0010	-	<0.0010	<0.0010	-
Total organic carbon	mg/L	0.50	5.0	5.1	2.0	3.8	4.2	10.0	3.9	4.0	2.5	4.8	4.7	2.1
Dissolved organic carbon	mg/L	0.50	5.0	4.9	2.0	4.5	4.3	4.5	3.3	3.6	8.7	4.1	4.0	2.5
Reactive silica	mg/L	0.050	2.8	2.8	0.0	1.2	1.4	15.4	0.57	0.62	8.4	0.55	0.70	24.0
Total Metals														
Aluminum	µg/L	0.10 - 0.50	28	25	10.2	47	46	1.3	26	27	1.5	20	21	2.5
Arsenic	µg/L	0.0050 - 0.020	0.36	0.35	2.8	0.40	0.37	5.5	0.34	0.34	0.3	0.34	0.33	1.2
Barium	µg/L	0.0080 - 0.020	22	22	2.3	17	17	0.0	17	17	0.0	18	18	2.8
Cadmium	µg/L	0.0030 - 0.0050	0.018	0.016	13.7	0.026	0.020	26.9	0.018	0.019	-	0.022	0.024	-
Chromium	µg/L	0.020 - 0.10	0.20	0.16	22.2	0.21	0.19	7.5	0.14	0.12	-	<0.10	<0.10	-
Cobalt	µg/L	0.0040 - 0.0050	0.28	0.28	2.9	1.1	1.1	3.7	0.90	0.89	1.0	1.0	1.0	1.0
Copper	µg/L	0.020 - 0.050	2.6	2.4	7.7	2.9	2.9	1.4	2.3	2.3	0.9	2.4	2.4	0.4
Iron	µg/L	1.0	22	16	29.9	34	33	1.8	42	41	0.7	30	31	2.9
Lead	µg/L	0.0030 - 0.0050	0.76	0.18	123.5	0.015	0.015	0.7	0.0067	0.0072	-	0.0062	0.077	-
Manganese	µg/L	0.0040 - 0.050	8.3	8.1	2.7	16	16	1.9	12	12	4.3	14	15	2.1
Mercury	µg/L	0.00010	0.0011	0.0032	100.9	0.0020	0.0020	4.0	0.0017	0.0017	1.8	0.00084	0.00076	10.0
Molybdenum	µg/L	0.0050 - 0.050	0.030	0.023	-	0.034	0.033	4.2	<0.050	<0.050	-	<0.050	<0.050	-
Nickel	µg/L	0.0150 - 0.020	12	12	3.4	9.3	9.4	0.9	7.6	7.5	1.2	9.1	9.1	0.1
Selenium	µg/L	0.010 - 0.040	0.063	0.058	8.3	0.050	0.068	-	0.058	0.052	-	0.052	0.051	-
Silver	µg/L	0.0020 - 0.0050	0.0022	0.0020	-	<0.0020	0.0028	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-
Strontium	µg/L	0.0080 - 0.050	61	60	2.3	52	53	1.3	61	61	0.2	68	68	1.2
Thallium	µg/L	0.00080 - 0.0020	0.0031	0.0032	-	0.0062	0.0068	8.9	0.0052	0.0044	-	0.0046	0.0047	-
Uranium	µg/L	0.00050 - 0.0020	0.013	0.012	9.1	0.016	0.017	7.2	0.0094	0.011	-	0.011	0.010	7.6

Table A-2: Field Duplicate Sample Results, 2025

Parameter	Unit	Detection Limit	BRP-32-1		Relative Percent Difference (%)	BRP-29A-3		Relative Percent Difference ^(a) (%)	BRP-31-3		Relative Percent Difference (%)	BRP-29A-5		Relative Percent Difference ^(a) (%)
			Sample	Duplicate		Sample	Duplicate		Sample	Duplicate		Sample	Duplicate	
			18-Apr-25	18-Apr-25		8-Jul-25	8-Jul-25		14-Aug-25	14-Aug-25		13-Sep-25	13-Sep-25	
Vanadium	µg/L	0.0050 - 0.20	0.062	0.054	13.2	0.069	0.070	0.3	<0.20	<0.20	-	<0.20	<0.20	-
Zinc	µg/L	0.060 - 0.10	4.2	3.0	32.7	2.9	2.6	11.8	1.8	1.8	0.0	2.3	2.3	3.0
Dissolved Metals														
Aluminium	µg/L	0.10 - 0.50	19	19	0.5	34	34	1.8	13	13	3.1	12	11	1.7
Arsenic	µg/L	0.0050 - 0.020	0.35	0.37	6.6	0.35	0.34	4.0	0.33	0.33	0.3	0.31	0.32	4.8
Barium	µg/L	0.0080 - 0.020	22	23	1.8	17	17	0.6	16	17	1.8	17	17	1.2
Cadmium	µg/L	0.0030 - 0.0050	0.018	0.018	1.7	0.026	0.026	2.7	0.018	0.015	-	0.022	0.021	-
Chromium	µg/L	0.020 - 0.10	0.15	0.16	6.7	0.16	0.18	10.4	<0.10	0.10	-	<0.10	<0.10	-
Cobalt	µg/L	0.0040 - 0.0050	0.22	0.19	15.5	1.0	1.0	3.9	0.49	0.53	8.6	0.89	0.90	1.6
Copper	µg/L	0.020 - 0.050	2.4	2.5	2.9	2.6	2.7	2.7	2.0	2.1	1.5	2.1	2.1	0.0
Iron	µg/L	1.0	8.2	8.3	1.2	6.6	6.6	0.0	4.8	5.7	-	4.9	5.0	-
Lead	µg/L	0.0030 - 0.0050	0.52	0.20	89.7	0.0044	0.0036	-	<0.0050	<0.0050	-	<0.0050	0.0108	-
Manganese	µg/L	0.0040 - 0.050	6.9	6.5	6.4	15	15	4.0	5.9	6.4	7.8	12	13	4.0
Mercury	µg/L	0.00010	0.0039	0.00057	149.0	0.0014	0.0014	0.7	0.0016	0.0015	7.8	0.0011	0.00061	53.0
Molybdenum	µg/L	0.0050 - 0.050	0.027	0.029	6.8	0.031	0.041	26.2	<0.050	<0.050	-	<0.050	<0.050	-
Nickel	µg/L	0.0150 - 0.020	12	12	1.7	9.0	9.2	2.0	7.3	7.4	1.5	8.8	8.9	0.8
Selenium	µg/L	0.010 - 0.040	0.061	0.058	5.0	0.071	0.059	18.5	0.048	0.049	-	<0.040	0.049	-
Silver	µg/L	0.0020 - 0.0050	<0.0020	<0.0020	-	<0.0020	0.0022	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-
Strontium	µg/L	0.0080 - 0.050	62	63	1.8	52	52	1.2	59	60	1.2	67	68	1.0
Thallium	µg/L	0.00080 - 0.0020	0.0033	0.0036	-	0.0055	0.0060	9.1	0.0042	0.0049	-	0.0048	0.0048	-
Uranium	µg/L	0.00050 - 0.0020	0.0099	0.010	4.9	0.014	0.014	1.4	0.0069	0.0078	-	0.0081	0.0086	-
Vanadium	µg/L	0.0050 - 0.20	0.049	0.049	1.4	0.032	0.036	10.2	<0.20	<0.20	-	<0.20	<0.20	-
Zinc	µg/L	0.060 - 0.10	3.9	4.9	21.5	2.5	2.4	4.4	1.6	1.6	0.6	2.1	2.2	7.0
Radionuclides														
Radium-226	Bq/L	0.0050	-	-	-	-	-	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-
Notable Results Summary														
Number of Notable Results	#	-	-	-	6	-	-	2	-	-	0	-	-	1

Notes: Relative percent differences greater than 25% with concentrations in both samples greater than five times the DL are shown in **bold**. The laboratory provided incorrect vials for metal analyses for the August and September programs; these vials were not leached, which was not appropriate for the originally intended analysis; detection limits for these samples were revised for the appropriate analysis for the vials provided.

^(a)The data quality objective for pH is a difference between duplicates less than 0.3 pH units; the value reported represents the pH value difference.

µS/cm = microsiemens per centimetre; NTU= nephelometric turbidity unit; mg-N/L = milligrams per litre as nitrogen; mg-P/L = milligrams per litre as phosphorus; Bq/L = becquerels per litre; WAD = weak acid dissociable; - = no data.

Table A-3: Summary of Notable Total and Dissolved Concentrations, 2025

Station	Sampling Program	Constituent	Dissolved Concentration (µg/L)	Total Concentration (µg/L)	Percent Difference ^(a) (%)	Re-analysis Result	Excluded from Dataset?
BRP-29A-3	April	Total Kjeldahl Nitrogen	0.24 ^(b)	0.33 ^(b)	38	Results confirmed	No
BRP-29A-4		Mercury	0.00287	0.00124	131	Results confirmed	No
BRP-29A-5		Mercury	0.00755	0.00467	62	Results confirmed	No
BRP-32-1		Mercury	0.00390	0.00105	271	Results confirmed	No
BRP-32-3		Mercury	0.00234	0.00092	154	Results confirmed	No
BRP-32-4		Mercury	0.00235	0.00107	120	Results confirmed	No
BRP-32-5		Mercury	0.00180	0.00092	96	Results confirmed	No
BRP-38-4		Mercury	0.00266	0.00207	29	Results confirmed	No
GLCB-M		Mercury	0.00263	0.00094	180	Results confirmed	No
GLCB-T		Zinc	4.6	2.9	59	Results confirmed	No
GLSE-B		Mercury	0.00172	0.00092	87	Results confirmed	No
GLSE-M		Mercury	0.00292	0.00107	173	Results confirmed	No
GLSE-T		Mercury	0.00122	0.00097	26	Results confirmed	No
GLWB-M		Mercury	0.00744	0.00151	393	Results confirmed	No
BRP-31-4	July	Selenium	0.074	0.051	45	Results confirmed	No
BRP-38-5		Molybdenum	0.067	<0.0050	n/a ^(c)	Results confirmed	The dissolved result was excluded because it was not consistent with other BRP-38 dissolved molybdenum results from July.
BRP-29A-3	August	Thallium	0.0072	0.0057	28	Results confirmed	No
BRP-38-4		Mercury	0.00073	0.00057	28	Results confirmed	No

^(a) Percent difference between total and dissolved constituents were calculated using the following formula: [(dissolved concentration - total concentration)/total concentration] x 100. The percent difference was calculated when reported concentrations were greater than five times the detection limit. The parameter concentration was flagged when percent difference was greater than 25%.

^(b) Units are in mg-N/L.

^(c) Percent difference not calculated because the total concentration was below the detection limit.

APPENDIX B

**2025 Water Quality – Depth
Profile Tables and Graphs**

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-1: Field Profiles at Goose Lake West Basin at Goose Lake Inflow at BRP-29A, April 2025

Station	Date	Total Depth (m)	Ice Thickness (m)	Effective Depth ^(a) (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-29A-1	17-Apr-25	2.0	1.0	0.50	88	13	0.1	6.1	221
BRP-29A-2	17-Apr-25	3.5	1.4	0.35	83	12	0.2	6.2	225
				0.60	83	12	0.1	6.2	225
				1.10	82	12	0.3	6.2	224
				1.60	79	11	0.5	6.2	223
BRP-29A-3	17-Apr-25	4.5	1.0	0.50	86	12	0.1	6.1	221
				1.00	83	12	0.1	6.1	221
				1.50	83	12	0.3	6.1	221
				2.00	81	11	0.4	6.1	220
				2.50	77	11	0.7	6.0	219
BRP-29A-4	17-Apr-25	6.0	1.0	3.00	65	9.1	0.8	6.0	219
				0.50	80	11	0.1	6.1	223
				1.00	81	12	0.1	6.1	225
				1.50	81	12	0.3	6.1	225
				2.00	81	11	0.5	6.1	224
				2.50	79	11	0.7	6.0	223
				3.00	77	11	0.9	6.0	223
				3.50	76	11	1.0	6.0	224
BRP-29A-5	17-Apr-25	3.5	1.5	4.00	72	10	1.1	5.9	230
				4.50	69	9.5	1.2	5.9	231
				0.50	81	12	0.0	6.3	225
				1.00	81	12	0.0	6.3	225
				1.50	81	12	0.2	6.2	225

(a) Depth starting from underneath the ice layer.
 µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-2: Field Profiles at Goose Lake Central Basin at BRP-32, April 2025**

Station	Date	Total Depth (m)	Ice Thickness (m)	Effective Depth ^(a) (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-32-1	18-Apr-25	4.0	1.5	2.00	88	12	0.8	6.2	158
				2.50	86	12	1.2	6.1	156
				3.00	82	11	1.8	6.1	153
				3.50	80	10	2.0	6.1	151
BRP-32-2	18-Apr-25	4.5	1.3	1.80	89	12	0.6	6.2	158
				2.30	89	12	1.0	6.2	156
				2.80	83	11	1.6	6.1	154
				3.30	85	10	1.9	6.1	152
				3.80	75	10	2.2	6.1	151
				4.10	71	9.4	2.3	6.1	153
BRP-32-3	18-Apr-25	4.5	1.4	1.75	88	12	0.6	6.2	158
				2.31	87	12	1.2	6.2	155
				2.80	82	11	1.6	6.1	154
				3.30	78	10	2.0	6.1	152
				3.80	75	9.9	2.2	6.1	151
				4.20	68	8.9	2.3	6.1	150
BRP-32-4	18-Apr-25	4.3	1.4	1.90	87	12	0.7	6.2	157
				2.40	86	12	1.2	6.2	155
				2.90	82	11	1.6	6.2	153
				3.40	77	10	2.0	6.2	152
				3.90	77	10	2.2	6.2	152
BRP-32-5	18-Apr-25	4.5	1.5	1.80	91	12	0.6	6.3	160
				2.10	90	12	0.7	6.3	157
				2.50	87	12	1.3	6.3	155
				3.00	80	11	1.7	6.2	153
				3.50	75	9.9	2.1	6.2	152
				4.00	74	9.7	2.2	6.2	151

(a) Depth starting from underneath the ice layer.

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables

Table B-3: Field Profiles at Reference B Lake at BRP-38, April 2025

Station	Date	Total Depth (m)	Ice Thickness (m)	Effective Depth ^(a) (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-38-1	16-Apr-25	4.00	1.30	1.50	101	14	0.1	6.3	75
				2.00	97	13	1.8	6.2	71
				2.30	96	13	2.1	6.2	70
				2.90	68	9.0	3.0	6.0	69
				3.50	53	6.8	3.5	6.0	71
BRP-38-2	16-Apr-25	3.75	1.60	2.00	97	13	1.1	6.3	71
				2.60	80	11	2.7	6.3	69
				3.00	69	8.2	3.3	6.2	69
				3.50	63	8.1	3.4	6.2	72
BRP-38-3	16-Apr-25	4.50	1.50	2.00	100	14	1.3	6.4	70
				2.50	95	13	2.4	6.4	67
				3.00	48	6.2	3.6	6.3	66
				3.50	26	3.2	4.0	6.3	68
				4.00	17	2.2	4.1	6.3	69
BRP-38-4	16-Apr-25	3.75	1.75	2.00	96	13	1.5	6.5	70
				2.50	89	12	2.5	6.5	68
				2.75	80	10	2.9	6.4	68
				3.00	63	8.2	3.2	6.4	67
				3.25	35	4.5	3.5	6.3	67
BRP-38-5	16-Apr-25	3.75	1.50	2.00	97	13	1.4	6.5	70
				2.50	87	12	2.3	6.5	68
				3.00	60	7.7	3.0	6.3	68
				3.50	41	5.3	3.7	6.3	68

(a) Depth starting from underneath the ice layer.

µS/cm = microsiemens per centimetre.

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-4: Field Profiles at Goose Lake West Basin at Goose Lake Inflow at BRP-29A, July 2025

Station	Date	Total Depth (m)	Effective Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-29A-1	08-Jul-25	2.0	0.5	106	11	14	6.3	135
			1.0	106	11	14	6.6	136
BRP-29A-2	08-Jul-25	2.3	0.5	107	10	14	6.7	134
			1.0	105	10	14	6.6	132
			1.25	106	10	14	6.6	134
BRP-29A-3	08-Jul-25	3.5	0.5	107	10	14	6.6	137
			1.0	106	10	14	6.5	136
			1.5	106	10	14	6.5	139
			2.0	103	10	13	6.4	159
			2.5	101	10	12	6.3	161
BRP-29A-4	08-Jul-25	5.0	0.5	108	10	15	6.8	132
			1.0	107	10	14	6.7	132
			1.5	106	11	14	6.7	140
			2.0	104	10	13	6.5	151
			2.5	103	10	12	6.5	158
			3.0	102	10	12	6.4	159
			3.5	103	11	12	6.4	160
BRP-29A-5	09-Jul-25	3.0	4.0	103	11	12	6.4	150
			0.5	108	10	15	7.1	83
			1.0	108	10	15	7.0	89
			1.5	108	10	15	6.9	88
			2.0	107	10	14	6.9	93

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables

Table B-5: Field Profiles at Goose Lake Central Basin at BRP-32, July 2025

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-32-1	09-Jul-25	4.2	4.2	0.5	109	10	15	7.3	43
				1.0	109	10	15	7.3	43
				1.5	108	10	15	7.3	42
				2.0	108	10	15	7.3	42
				2.5	108	10	15	7.3	42
				3.0	108	10	15	7.3	43
				3.2	108	10	14	7.3	41
BRP-32-2	09-Jul-25	4.0	4.0	0.5	109	10	15	7.3	42
				1.0	109	10	15	7.3	42
				1.5	108	10	15	7.3	42
				2.0	108	10	14	7.3	42
				2.5	108	10	14	7.3	42
				3.0	108	10	14	7.3	39
BRP-32-3	09-Jul-25	5.0	4.5	0.5	109	10	15	7.2	42
				1.0	109	10	15	7.2	42
				1.5	109	10	15	7.2	42
				2.0	108	10	15	7.2	42
				2.5	108	10	15	7.2	42
				3.0	108	10	15	7.2	42
				3.5	107	10	14	7.2	40
BRP-32-4	11-Jul-25	4.0	3.5	0.5	100	10	13	7.0	99
				1.0	100	10	13	7.0	99
				1.5	100	10	13	7.0	99
				2.0	100	10	13	7.0	99
				2.5	100	10	13	7.0	99
				3.0	100	10	13	7.0	99
BRP-32-5	11-Jul-25	4.4	3.5	0.5	100	10	13	7.0	99
				1.0	100	10	13	7.0	99
				1.5	100	10	13	7.0	99
				2.0	100	10	13	7.0	99
				2.5	100	10	13	7.0	99
				3.0	100	10	13	7.0	99
				3.4	100	10	13	7.0	99

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-6: Field Profiles at Reference B Lake at BRP-38, July 2025**

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-38-1	12-Jul-25	3.9	3.9	0.5	100	10	12	7.4	36
				1.0	100	10	12	7.4	36
				1.5	100	10	12	7.4	36
				2.0	100	10	12	7.4	36
				2.5	100	10	12	7.4	36
				2.9	100	10	12	7.4	36
BRP-38-2	12-Jul-25	3.8	3.8	0.5	100	10	12	7.4	36
				1.0	100	10	12	7.4	36
				1.5	100	10	12	7.4	36
				2.0	100	10	12	7.4	36
				2.5	100	10	12	7.4	36
				2.8	100	10	12	7.4	36
BRP-38-3	12-Jul-25	4.0	4.0	0.5	100	10	12	7.4	36
				1.0	100	10	12	7.4	36
				1.5	100	10	12	7.4	36
				2.0	100	10	12	7.4	36
				2.5	100	10	12	7.4	36
				3.0	100	10	12	7.4	36
BRP-38-4	12-Jul-25	3.5	3.5	0.5	100	10	12	7.4	36
				1.0	100	10	12	7.4	36
				1.5	100	10	12	7.4	36
				2.0	100	10	12	7.4	36
				2.5	100	10	12	7.4	36
BRP-38-5	12-Jul-25	3.5	3.5	0.5	100	10	12	7.4	36
				1.0	100	10	12	7.4	36
				1.5	100	10	12	7.4	36
				2.0	100	10	12	7.4	36
				2.5	100	10	12	7.4	36

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-7: Field Profiles at Goose Lake West Basin at Goose Lake Inflow at BRP-29A, August 2025**

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-29A-1	12-Aug-25	2.1	2.1	0.5	104	11	11	6.7	150
				1.0	104	11	11	6.7	148
				1.1	104	11	11	6.7	150
BRP-29A-2	12-Aug-25	5.0	5.0	0.5	105	11	12	6.7	148
				1.0	105	11	12	6.7	148
				1.5	105	11	12	6.7	148
				2.0	105	11	12	6.7	148
				2.5	105	11	12	6.7	148
				3.0	105	11	12	6.7	148
				3.5	105	11	12	6.7	148
BRP-29A-3	12-Aug-25	4.0	4.0	0.5	105	11	11	6.6	150
				1.0	105	11	11	6.7	150
				1.5	104	11	11	6.6	149
				2.0	104	11	11	6.7	142
				2.5	104	11	11	6.7	151
BRP-29A-4	12-Aug-25	3.9	3.9	3.0	104	11	11	6.6	151
				0.5	106	11	12	6.7	150
				1.0	106	11	12	6.7	150
				1.5	105	11	12	6.8	150
				2.0	105	11	12	6.8	148
BRP-29A-5	12-Aug-25	3.1	3.1	2.5	105	11	12	6.8	150
				3.0	105	11	12	6.7	150
				0.5	107	11	12	6.7	144
				1.0	106	11	12	6.7	150
				1.5	106	11	12	6.7	150
				2.0	106	11	12	6.7	149
				2.1	106	11	12	6.7	149

µS/cm = microsiemens per centimetre.

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-8: Field Profiles at Goose Lake Central Basin at BRP-32, August 2025

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-32-1	13-Aug-25	4.0	4.0	0.5	104	11	13	7.0	76
				1.0	104	11	13	7.0	77
				1.5	104	11	13	7.1	76
				2.0	104	11	13	7.0	77
				2.5	104	11	13	7.1	77
				3.0	104	11	13	7.0	77
BRP-32-2	13-Aug-25	4.5	4.0	0.5	104	11	13	7.0	77
				1.0	104	11	13	7.0	76
				1.5	104	11	13	7.0	77
				2.0	104	11	13	7.0	77
				2.5	104	11	13	7.0	77
				3.0	104	11	13	7.1	74
BRP-32-3	13-Aug-25	5.0	4.5	3.5	104	11	13	7.1	76
				0.5	103	11	12	7.0	75
				1.0	103	11	12	7.0	77
				1.5	103	11	12	7.0	77
				2.0	103	11	12	7.0	77
				2.5	103	11	12	7.0	76
BRP-32-4	13-Aug-25	4.0	4.0	3.0	103	11	12	7.0	75
				3.5	103	11	12	7.0	77
				4.0	103	11	12	7.0	76
				0.5	104	11	13	7.0	77
				1.0	104	11	13	7.0	76
				1.5	104	11	13	7.0	77
BRP-32-5	13-Aug-25	4.5	4.0	2.0	104	11	13	7.0	73
				2.5	104	11	13	7.0	77
				3.0	104	11	13	7.0	76
				0.5	104	11	12	7.0	76
				1.0	103	11	12	7.0	76
				1.5	104	11	12	7.0	77
BRP-32-5	13-Aug-25	4.5	4.0	2.0	103	11	12	7.0	77
				2.5	103	11	12	7.0	76
				3.0	104	11	12	7.0	77
				3.5	104	11	12	7.0	77

µS/cm = microsiemens per centimetre.

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-9: Field Profiles at Reference B Lake at BRP-38, August 2025

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-38-1	16-Aug-25	3.75	3.75	0.50	105	11	14	7.5	32
				1.00	105	11	14	7.5	32
				1.50	105	11	14	7.5	32
				2.00	105	11	14	7.6	32
				2.50	105	11	14	7.6	32
				2.75	105	11	14	7.6	32
BRP-38-2	16-Aug-25	3.50	3.50	0.50	105	11	14	7.4	32
				1.00	105	11	14	7.5	32
				1.50	105	11	14	7.5	32
				2.00	105	11	14	7.5	32
				2.50	105	11	14	7.5	32
BRP-38-3	16-Aug-25	3.50	3.50	0.50	104	11	13	7.7	32
				1.00	104	11	13	7.7	32
				1.50	104	11	13	7.8	32
				2.00	104	11	13	7.8	32
				2.50	104	11	13	7.7	32
BRP-38-4	16-Aug-25	3.50	3.50	0.50	105	11	14	7.4	32
				1.00	105	11	14	7.5	32
				1.50	105	11	14	7.5	32
				2.00	104	11	13	7.5	32
				2.50	104	11	13	7.5	32
BRP-38-5	16-Aug-25	3.50	3.50	0.50	104	11	13	7.5	30
				1.00	104	11	13	7.5	32
				1.50	104	11	13	7.5	32
				2.00	104	11	13	7.5	31
				2.50	103	10	13	7.5	32

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-10: Field Profiles at Goose Lake West Basin at Goose Lake Inflow at BRP-29A, September 2025**

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-29A-1	10-Sep-25	2.5	2.5	0.5	100	11	8.2	6.9	176
				1.0	101	11	8.2	6.9	186
				1.5	101	11	8.2	6.8	195
BRP-29A-2	10-Sep-25	4.0	4.0	0.5	102	11	8.2	6.9	155
				1.0	102	11	8.2	6.9	157
				1.5	101	11	8.2	6.9	157
				2.0	102	11	8.2	6.9	156
				2.5	102	11	8.2	6.9	159
				3.0	101	11	8.2	6.9	159
BRP-29A-3	10-Sep-25	4.0	4.0	0.5	101	11	8.2	6.9	161
				1.0	101	11	8.2	6.9	167
				1.5	101	11	8.2	6.9	164
				2.0	101	11	8.2	6.9	171
				2.5	101	11	8.2	6.8	186
				3.0	100	11	8.2	6.8	191
BRP-29A-4	13-Sep-25	5.5	5.0	0.5	101	11	8.3	7.1	132
				1.0	101	11	8.3	7.2	136
				1.5	101	11	8.3	7.2	138
				2.0	101	11	8.2	7.2	143
				2.5	101	11	8.2	7.2	144
				3.0	100	11	8.2	7.2	144
				3.5	100	11	8.2	7.1	146
				4.0	100	11	8.2	7.1	146
				4.5	100	11	8.2	7.1	145
BRP-29A-5	13-Sep-25	3.0	3.0	0.5	101	11	8.3	7.0	137
				1.0	101	11	8.3	7.0	138
				1.5	101	11	8.3	7.0	138
				2.0	101	11	8.2	7.0	139

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-11: Field Profiles at Goose Lake Central Basin at BRP-32, September 2025**

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-32-1	13-Sep-25	4.0	4.0	0.5	102	12	8.5	7.5	79
				1.0	102	12	8.5	7.5	78
				1.5	102	12	8.5	7.5	79
				2.0	102	12	8.5	7.5	79
				2.5	102	12	8.5	7.5	79
				3.0	102	11	8.5	7.5	78
BRP-32-2	14-Sep-25	4.3	4.3	0.5	102	12	8.7	7.4	82
				1.0	102	12	8.7	7.4	82
				1.5	102	11	8.7	7.3	82
				2.0	102	12	8.7	7.3	81
				2.5	102	11	8.7	7.3	82
				3.0	102	11	8.7	7.3	82
BRP-32-3	14-Sep-25	4.5	4.5	3.3	102	11	8.6	7.3	82
				0.5	102	12	8.7	7.2	82
				1.0	102	12	8.7	7.2	82
				1.5	102	12	8.7	7.2	82
				2.0	102	11	8.7	7.2	82
				2.5	102	11	8.7	7.2	82
BRP-32-4	14-Sep-25	4.3	4.3	3.0	102	11	8.7	7.2	82
				3.5	102	11	8.7	7.2	82
				0.5	102	12	8.8	7.1	82
				1.0	102	12	8.8	7.1	82
				1.5	102	12	8.8	7.1	82
				2.0	102	12	8.8	7.1	82
				2.5	102	12	8.8	7.1	82
				3.0	102	12	8.8	7.1	82
				3.3	102	12	8.8	7.2	82

2025 Water Quality – Field Profiles Figures and Tables**Table B-11: Field Profiles at Goose Lake Central Basin at BRP-32, September 2025**

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-32-5	14-Sep-25	4.5	4.5	0.5	102	12	8.8	7.1	81
				1.0	102	12	8.8	7.1	81
				1.5	102	12	8.8	7.1	81
				2.0	102	12	8.8	7.1	78
				2.5	102	12	8.8	7.1	78
				3.0	102	12	8.8	7.1	82
				3.5	102	12	8.8	7.1	82

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables

Table B-12: Field Profiles at Reference B Lake at BRP-38, September 2025

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-38-1	11-Sep-25	3.50	3.50	0.50	101	12	7.7	7.4	32
				1.00	101	12	7.7	7.4	31
				1.50	101	12	7.7	7.4	32
				2.00	101	12	7.7	7.4	32
				2.50	101	12	7.7	7.4	32
BRP-38-2	11-Sep-25	3.50	3.50	0.50	101	12	7.7	7.3	32
				1.00	101	12	7.7	7.3	31
				1.50	101	12	7.7	7.3	32
				2.00	101	12	7.7	7.3	31
				2.50	101	12	7.7	7.4	32
BRP-38-3	11-Sep-25	3.75	3.75	0.50	101	12	7.7	7.3	32
				1.00	101	12	7.7	7.3	32
				1.50	101	12	7.7	7.3	32
				2.00	101	12	7.7	7.3	32
				2.50	101	12	7.7	7.3	32
BRP-38-4	11-Sep-25	3.50	3.50	0.50	101	12	7.7	7.3	32
				1.00	101	12	7.7	7.3	32
				1.50	101	12	7.7	7.4	32
				2.00	101	12	7.7	7.3	32
				2.50	101	12	7.7	7.4	32
BRP-38-5	11-Sep-25	3.50	3.50	0.50	101	12	7.7	7.3	32
				1.00	101	12	7.7	7.3	32
				1.50	101	12	7.7	7.3	32
				2.00	101	12	7.8	7.4	32
				2.50	101	12	7.8	7.3	30

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables**Table B-13: Field Profiles at Goose Lake to Support the Hydrodynamic Water Quality Model, April 2025**

Station	Date	Total Depth (m)	Ice Thickness (m)	Effective Depth ^(a) (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
GLTL	15-Apr-25	5.50	1.40	1.50	91	10	0.4	6.2	172
				2.00	76	10	1.3	6.2	169
				2.50	76	10	1.6	6.2	168
				3.00	46	6.2	2.3	6.1	166
				3.50	40	5.2	2.5	6.1	170
				4.00	36	4.7	2.8	6.0	175
				4.50	34	4.5	2.8	6.0	175
				5.00	32	4.2	2.9	6.0	176
GLSE	15-Apr-25	4.50	1.35	1.50	98	14	0.3	6.0	163
				2.00	95	13	0.7	6.0	165
				2.50	94	13	1.2	6.0	163
				3.00	92	13	1.5	6.0	163
				3.50	89	12	1.7	6.0	161
				4.00	90	11	1.9	5.9	161
GLWB	17-Apr-25	4.50	1.00	1.50	86	12	0.1	6.1	221
				2.00	83	12	0.1	6.1	221
				2.50	83	12	0.3	6.1	221
				3.00	81	11	0.4	6.1	220
				3.50	77	11	0.7	6.0	219
				4.00	65	9.1	0.8	6.0	219
GLCB	15-Apr-25	4.50	1.40	1.50	89	13	0.4	6.2	155
				2.00	89	12	0.8	6.2	152
				2.50	85	12	1.4	6.2	149
				3.00	82	11	1.7	6.2	147
				3.50	78	10	2.1	6.2	146

(a) Depth starting from underneath the ice layer.

µS/cm = microsiemens per centimetre.

2025 Water Quality – Field Profiles Figures and Tables

Table B-14: Field Profiles at Goose Lake at BRP-31 Collected for Invetigative Purposes, July to September 2025

Station	Date	Total Depth (m)	Secchi Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
BRP-31-3	09-Jul-25	3.5	3.5	0.5	109	10	15	6.8	87
				1.0	108	10	15	6.7	87
				1.5	108	10	15	6.8	86
				2.0	108	10	15	6.8	86
				2.5	106	10	14	6.7	86
BRP-31-4	09-Jul-25	3.2	3.2	0.5	109	10	16	6.3	87
				1.0	109	10	15	6.3	86
				1.5	109	10	15	6.2	86
				2.0	108	10	15	6.1	86
				2.2	108	10	15	6.1	86
BRP-31-3	14-Aug-25	3.50	3.50	0.50	103	11	13	6.8	125
				1.00	103	11	13	6.9	124
				1.50	102	11	13	6.9	125
				2.00	101	10	12	6.9	123
				2.50	101	10	12	6.9	119
BRP-31-4	12-Aug-25	3.00	3.00	0.50	108	11	12	7.2	126
				1.00	108	11	12	7.2	120
				1.50	108	11	12	7.1	123
				2.00	108	11	12	7.1	120
BRP-31-3	13-Sep-25	3.50	3.50	0.50	101	11	8.5	7.1	144
				1.00	101	11	8.5	7.1	145
				1.50	101	11	8.5	7.1	139
				2.00	101	11	8.5	7.1	144
BRP-31-4	13-Sep-25	3.50	3.50	0.50	101	11	8.4	7.0	145
				1.00	101	11	8.4	7.0	145
				1.50	101	11	8.4	7.0	145
				2.00	101	11	8.4	7.0	146
				2.50	101	11	8.4	7.0	145

µS/cm = microsiemens per centimetre.

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-15: Field Measurements for the Plume Delineation Study, August 15 2025

Profile Number	Time of Profile	Easting (m)	Northing (m)	Total Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
Baseline ^(a)	08:45	433652	7270835	4.00	1.00	105.3	10.7	13.3	7.2	77
					2.00	105.1	10.7	13.2	7.4	77
					3.00	104.9	10.7	13.1	7.5	78
1	09:41	431149	7269944	1.75	1.00	96.1	10.2	11.3	6.7	150
2	09:54	431166	7269954	2.50	1.00	98.6	10.3	11.9	6.7	144
					1.50	97.3	10.3	11.5	6.7	148
3	10:07	431183	7269948	3.50	1.00	100.7	10.4	12.3	6.8	138
					1.75	99.7	10.4	12.1	6.8	141
					2.50	99.7	10.4	12.1	6.8	141
4	10:23	431199	7269944	8.50	1.00	101.3	10.5	12.6	6.8	136
					4.25	97.3	10.3	11.6	6.8	148
					7.50	95.1	10.3	10.5	6.6	163
5	10:47	431218	7269948	9.50	1.00	101.5	10.5	12.6	6.8	135
					5.75	97.0	10.3	11.4	6.8	150
					8.50	94.2	10.3	10.2	6.6	163
6	11:03	431252	7269948	3.25	1.00	100.8	10.5	12.4	6.7	139
					1.60	99.2	10.4	12.1	6.7	143
					2.25	98.5	10.3	11.9	6.7	145
7	11:17	431281	7269950	3.00	1.00	101.1	10.4	12.5	6.7	137
					1.50	100.3	10.4	12.2	6.7	140
					2.00	99.7	10.4	12.2	6.7	134
8	11:34	431316	7269970	3.50	1.00	102.6	10.5	12.9	6.8	133
					1.75	102.0	10.5	12.6	6.8	137
					2.50	99.4	10.4	12.1	6.7	143
9	11:53	431169	7269942	2.25	1.00	100.0	10.4	12.4	6.7	141
10	11:59	431204	7269925	8.50	1.00	102.0	10.5	12.8	6.8	136
					4.25	97.8	10.3	11.7	6.7	146
					7.50	95.2	10.3	10.5	6.8	163
11	12:20	431238	7269927	5.75	1.00	102.1	10.5	12.9	6.7	136
					3.00	98.7	10.3	11.9	6.7	145
					4.75	98.0	10.3	11.7	6.7	139
12	13:03	431263	7269925	3.00	1.00	102.7	10.5	13.0	7.1	135
					2.00	99.4	10.4	12.1	7.0	143
13	13:15	431295	7269934	3.75	1.00	101.3	10.4	12.7	6.9	130
					1.75	100.9	10.4	12.5	6.9	140
					2.00	100.5	10.4	12.4	6.9	141
14	13:30	431180	7269975	4.50	1.00	103.5	10.5	13.3	6.8	135
					2.25	101.1	10.5	12.4	6.8	141
					3.50	99.5	10.4	11.8	6.8	146

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-15: Field Measurements for the Plume Delineation Study, August 15 2025

Profile Number	Time of Profile	Easting (m)	Northing (m)	Total Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
15	13:44	431217	7269972	3.25	1.00	102.4	10.5	13.0	6.7	138
					2.25	100.9	10.4	12.4	6.7	142
16	14:02	431297	7269990	2.25	1.00	104.4	10.5	13.6	6.8	134
					1.25	104.6	10.5	13.4	6.8	134
17	14:18	431435	7270049	4.50	1.00	103.5	10.5	13.2	6.8	141
					3.00	100.1	10.5	11.9	6.8	148
					4.00	89.7	9.4	11.7	6.8	150
18	14:40	431515	7270217	10.50	1.00	102.2	10.5	12.6	6.7	142
					5.25	99.9	10.5	11.7	6.9	151
					9.50	96.8	10.6	9.9	7.0	126
19	14:56	431580	7270323	2.25	1.00	101.8	10.6	12.3	6.7	146
					1.25	101.6	10.6	12.2	6.7	147

Appendix B:
2025 Water Quality – Field Profiles Figures and Tables

Table B-15: Field Measurements for the Plume Delineation Study, August 15 2025

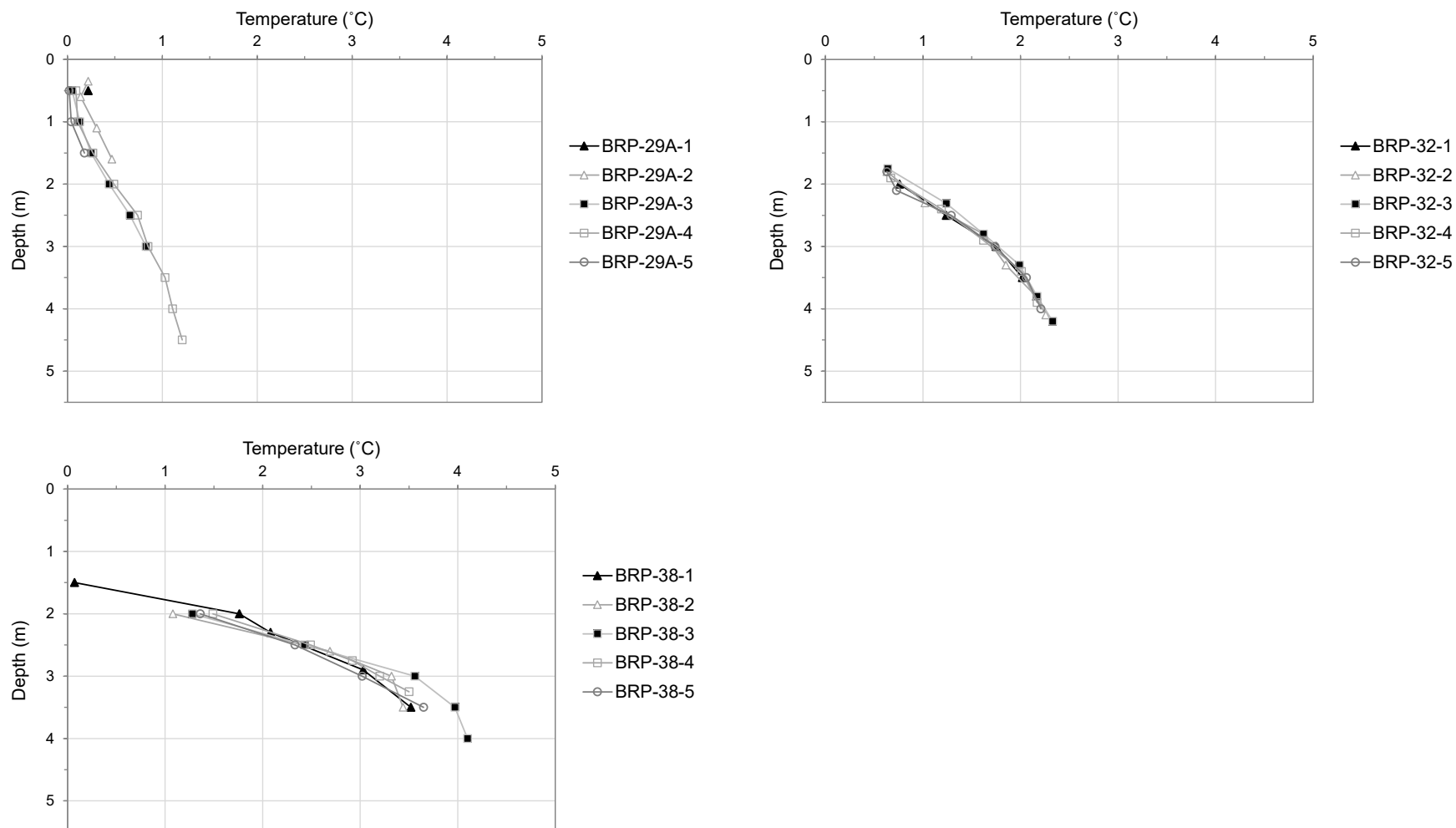
Profile Number	Time of Profile	Easting (m)	Northing (m)	Total Depth (m)	Depth (m)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Water Temperature (°C)	pH	Specific Conductivity (µS/cm)
20	15:04	431731	7270359	3.00	1.00	104.5	10.6	13.5	6.8	142
					1.50	104.3	10.6	13.4	6.8	141
					2.00	104.0	10.6	13.1	6.8	143
21	15:17	431853	7270274	3.25	1.00	104.5	10.5	13.6	6.9	135
					1.75	104.3	10.6	13.4	6.9	140
					2.00	104.3	10.6	13.3	6.9	139
22	15:28	432034	7270206	2.75	1.00	105.2	10.6	13.9	6.9	126
					1.30	105.2	10.6	13.6	6.9	137
					1.75	104.2	10.7	12.9	6.8	143
23	15:40	432290	7270144	3.00	1.00	106.0	10.6	14.0	7.0	109
					1.50	105.3	10.6	13.7	6.9	123
					2.00	105.0	10.6	13.4	6.9	130
24	15:55	432617	7270241	3.75	1.00	105.5	10.6	13.7	7.0	109
					1.75	102.8	10.5	12.9	6.9	129
					2.75	102.1	10.5	12.8	6.9	134
25	16:11	432916	7270311	2.50	1.00	108.1	10.7	14.6	7.2	85
					1.50	108.0	10.7	14.6	7.2	85
26	16:21	433041	7270374	3.00	1.00	108.4	10.7	14.6	7.1	84
					1.50	107.7	10.7	14.3	7.1	84
					2.00	107.0	10.7	14.1	7.2	83
27	16:31	433172	7270437	3.50	1.00	108.1	10.7	14.2	7.2	82
					1.75	106.7	10.7	13.9	7.2	82
					2.50	106.3	10.7	13.7	7.2	87
End of Day Baseline ^(b)	16:43	433646	7270515	4.25	1.00	107.0	10.7	13.8	7.2	76
					2.00	106.0	10.7	13.5	7.3	83
					3.25	105.2	10.7	13.3	7.2	88

Notes: Light blue cells are locations within Goose Lake Main Basin. Dark grey cells are locations in the channel north of the island. Light Grey cells are locations in the channel that leads into the Main Basin, to the east of the island. Coordinates refer to zone 13W.

(a) Baseline station is station BRP-32-4, located in Goose Lake Main Basin.

(b) Time restraints prevented returning to BRP-32-4 to verify field measurements. Area is within the Main Basin of Goose Lake, approximately 320 m south west of BRP-32-4.

µS/cm = microsiemens per centimetre.

Figure B-1: Temperature Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025

Note: Depth starts from underneath the ice layer.

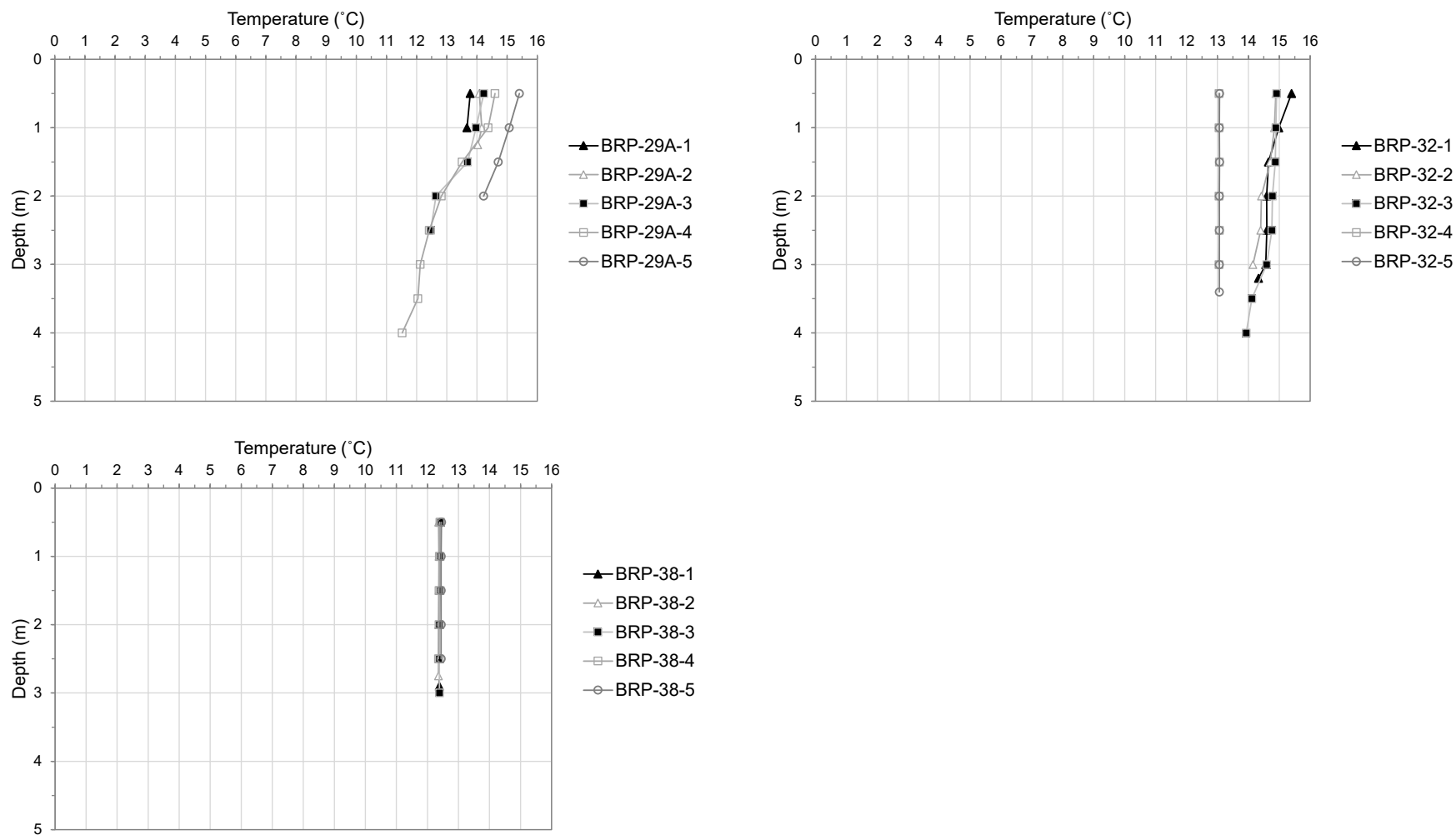
Figure B-2: Temperature Profiles for the Open-water Season (July) at Goose Lake and Reference B Lake, 2025

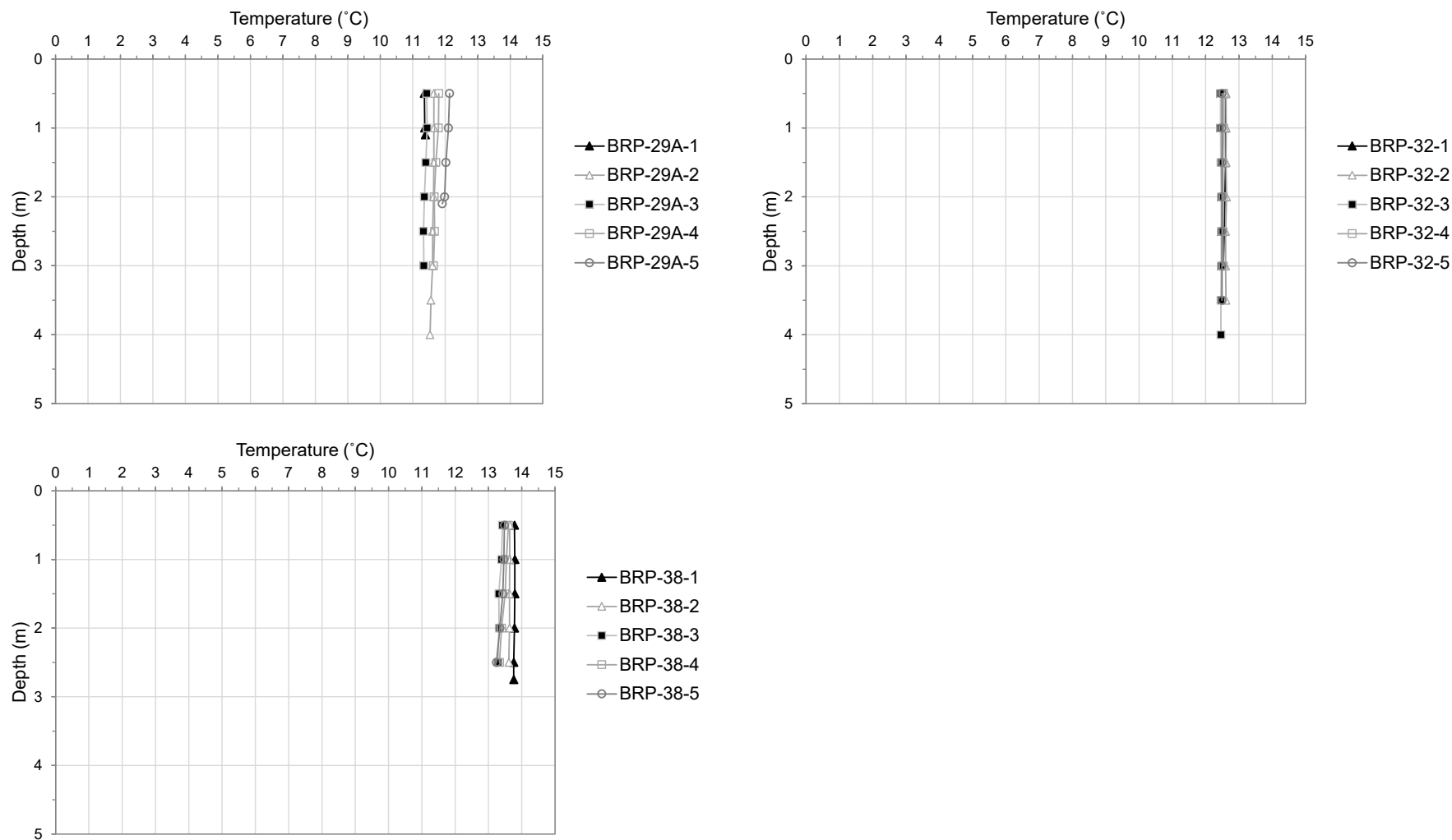
Figure B-3: Temperature Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025

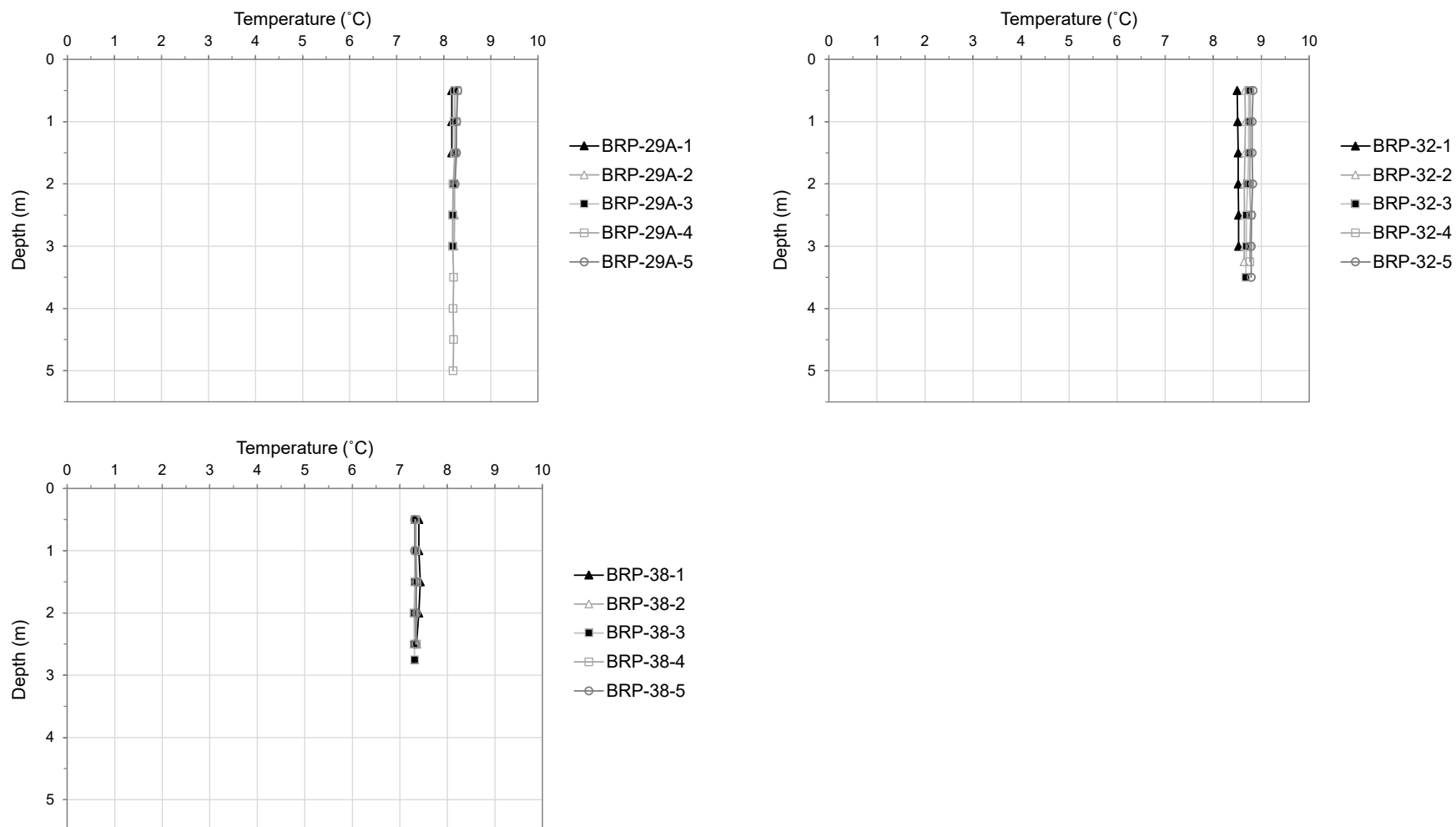
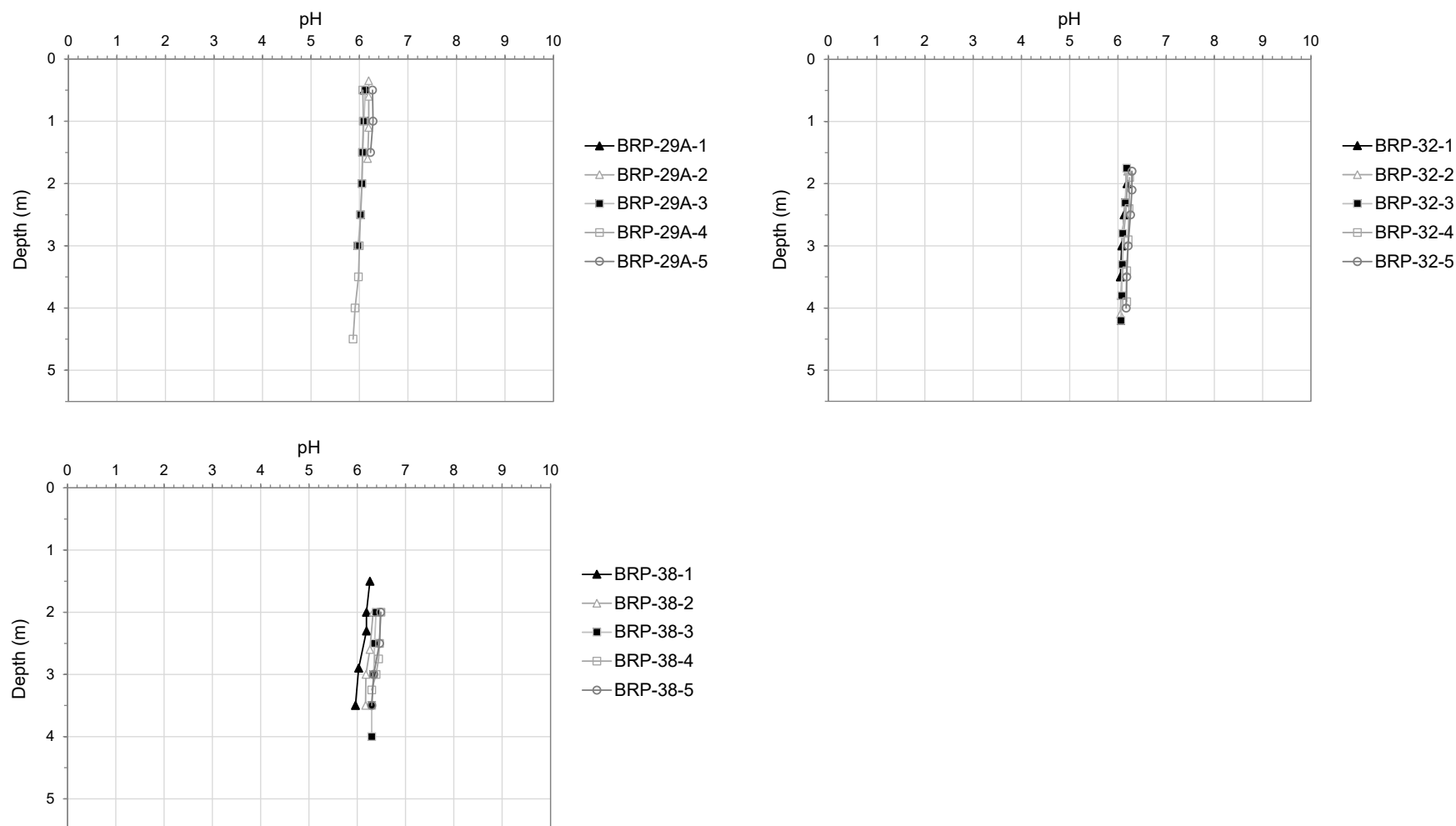
Figure B-4: Temperature Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025

Figure B-5: pH Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025

Note: Depth starts from underneath the ice layer.

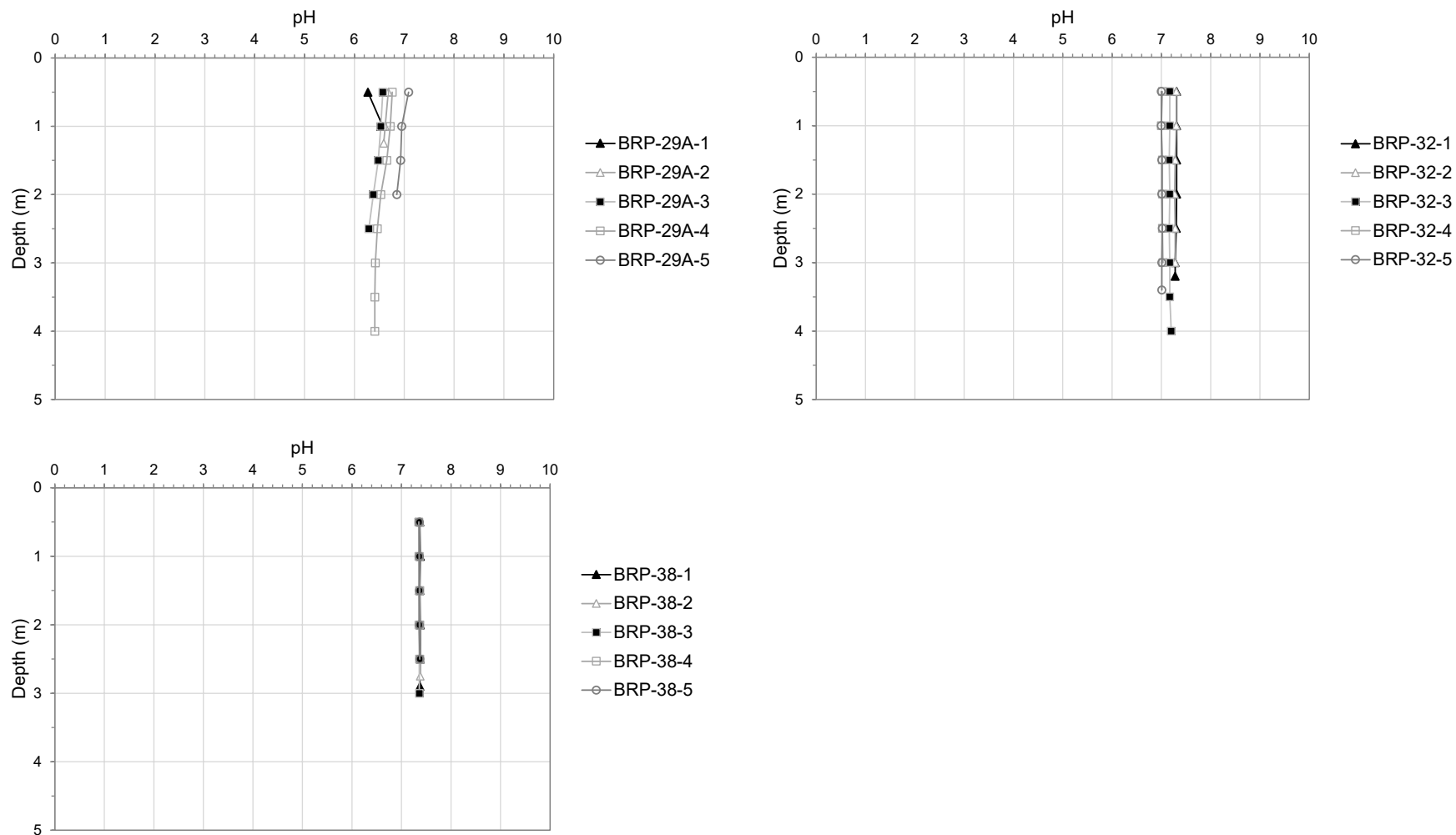
Figure B-6: pH Profiles for the Open-water Season (July) at Goose Lake and Reference B Lake, 2025

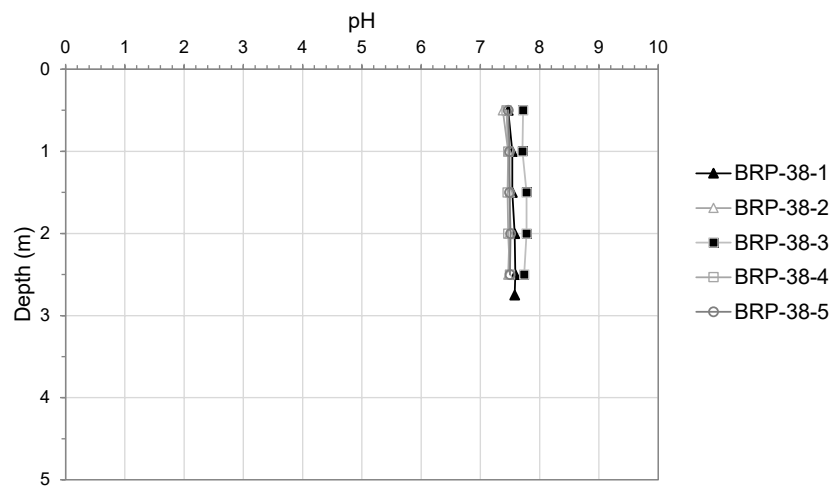
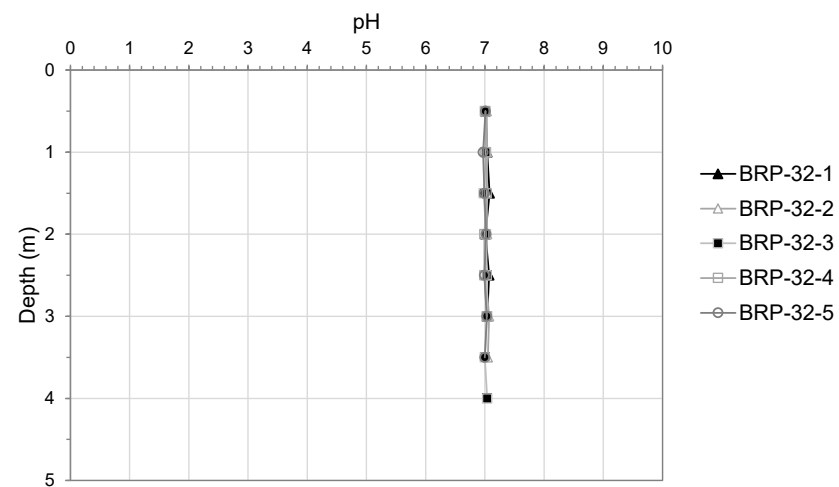
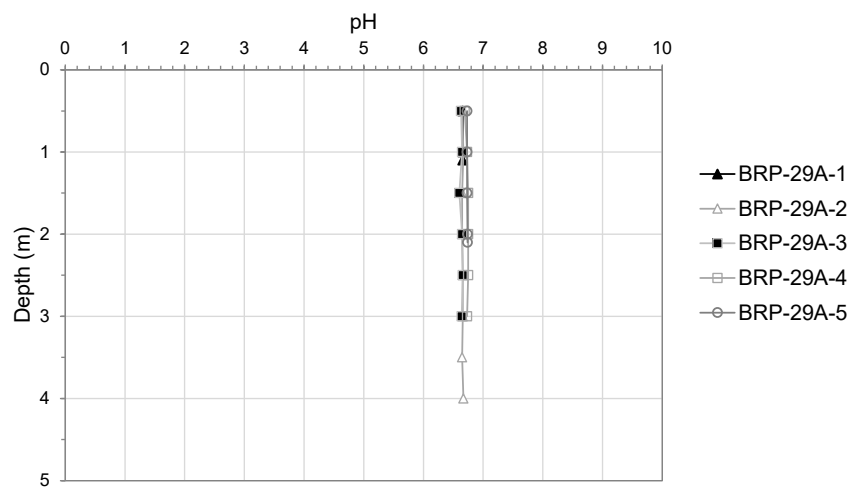
Figure B-7: pH Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025

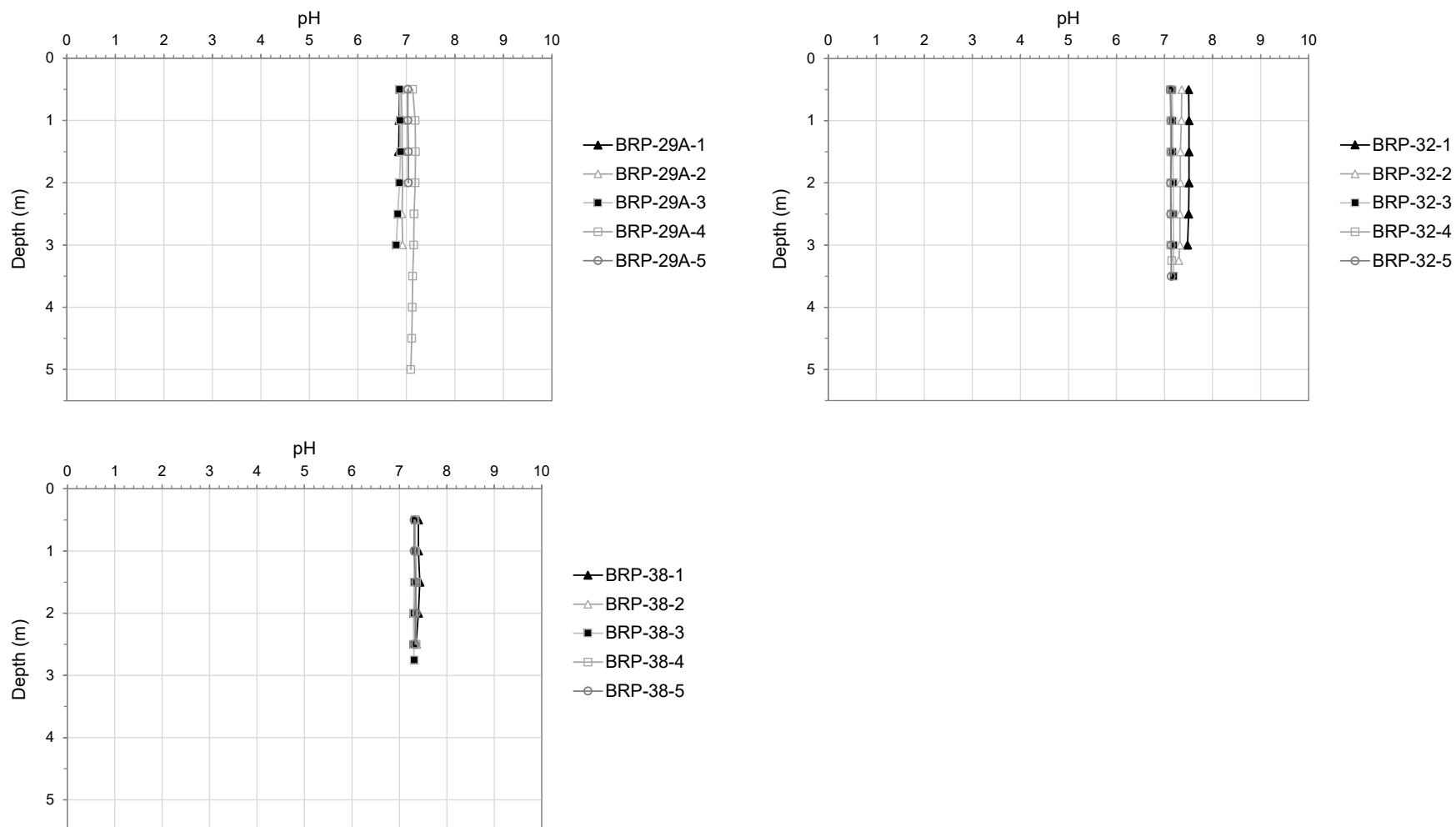
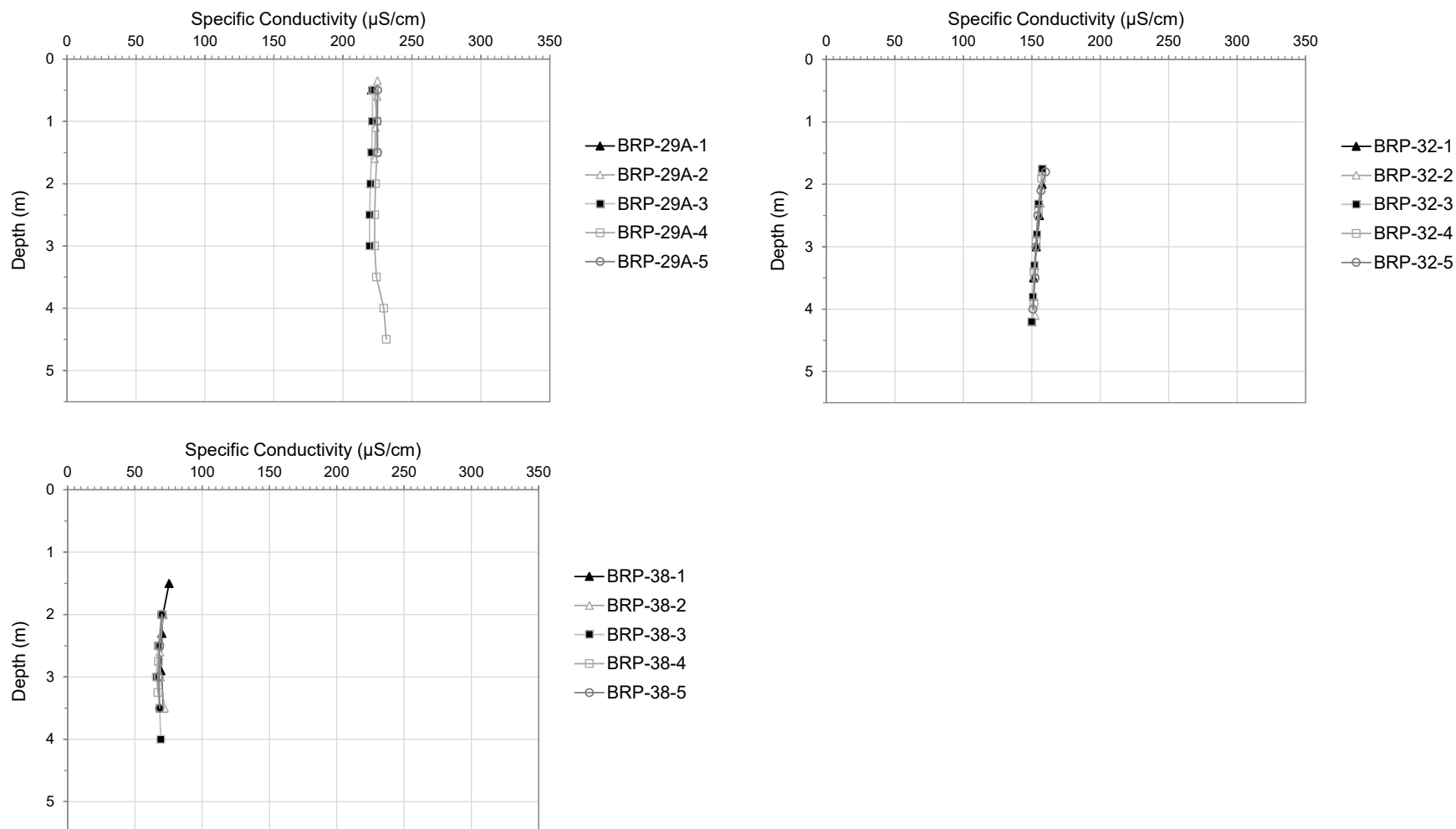
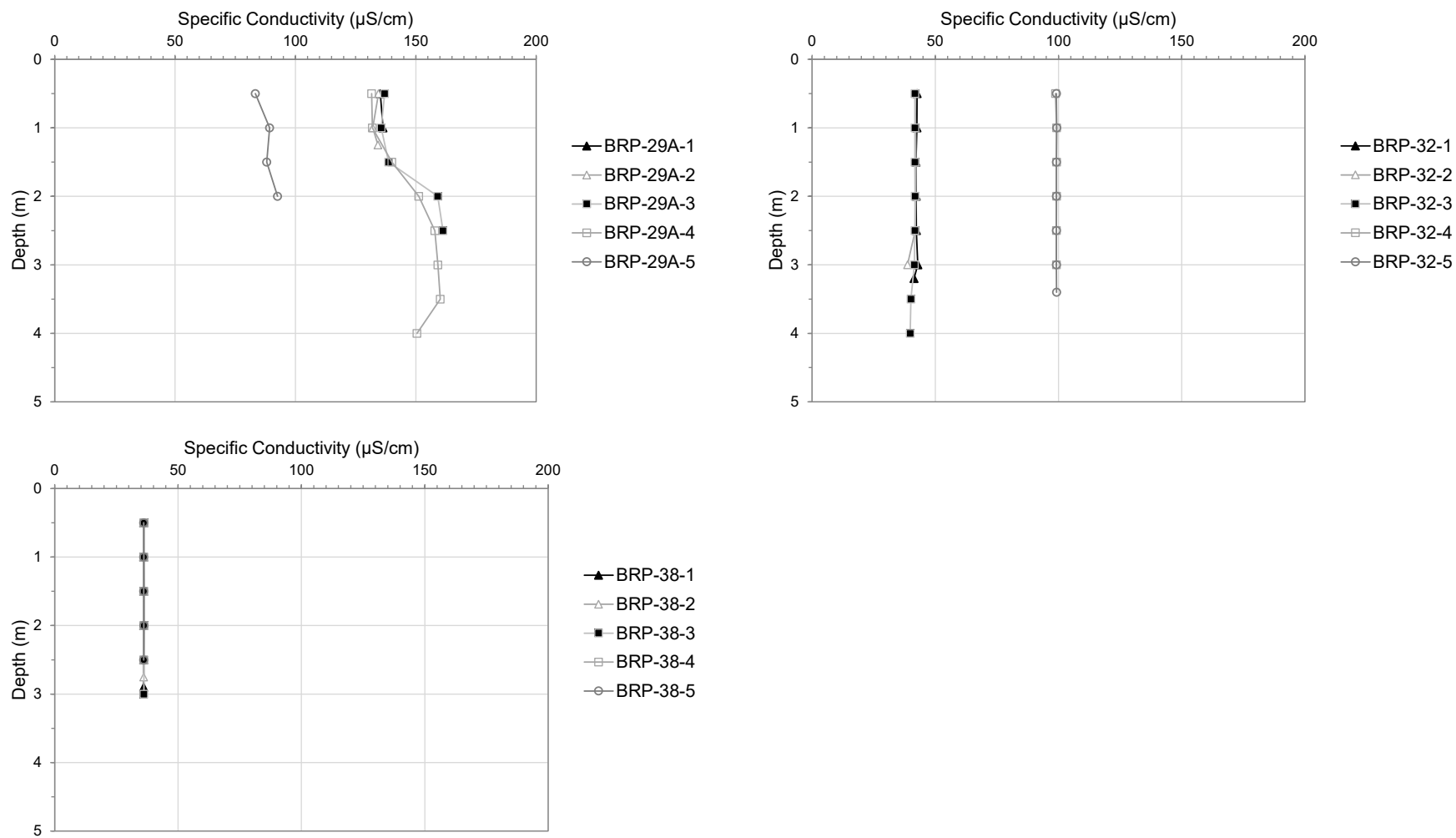
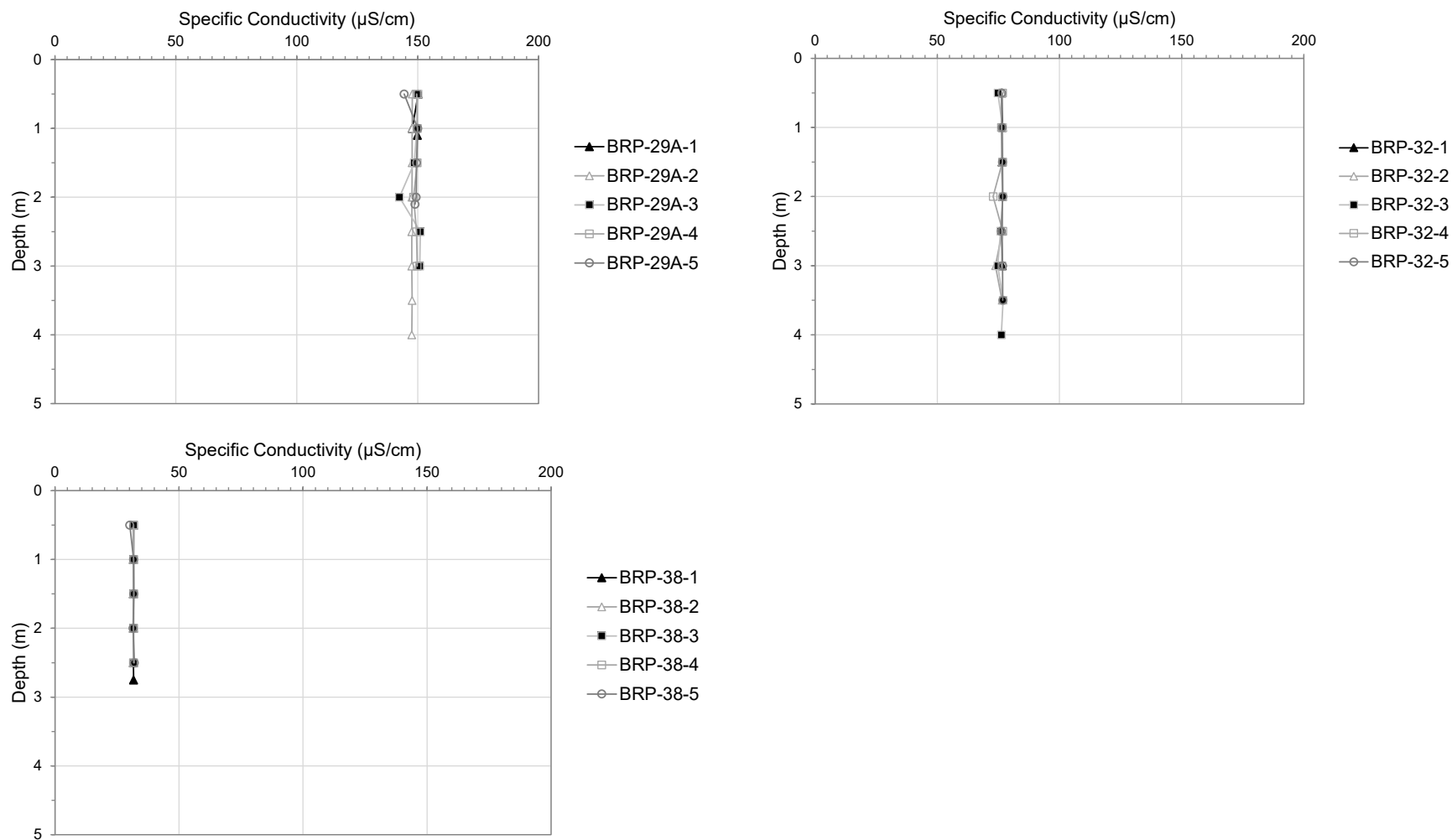
Figure B-8: pH Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025

Figure B-9: Specific Conductivity Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025

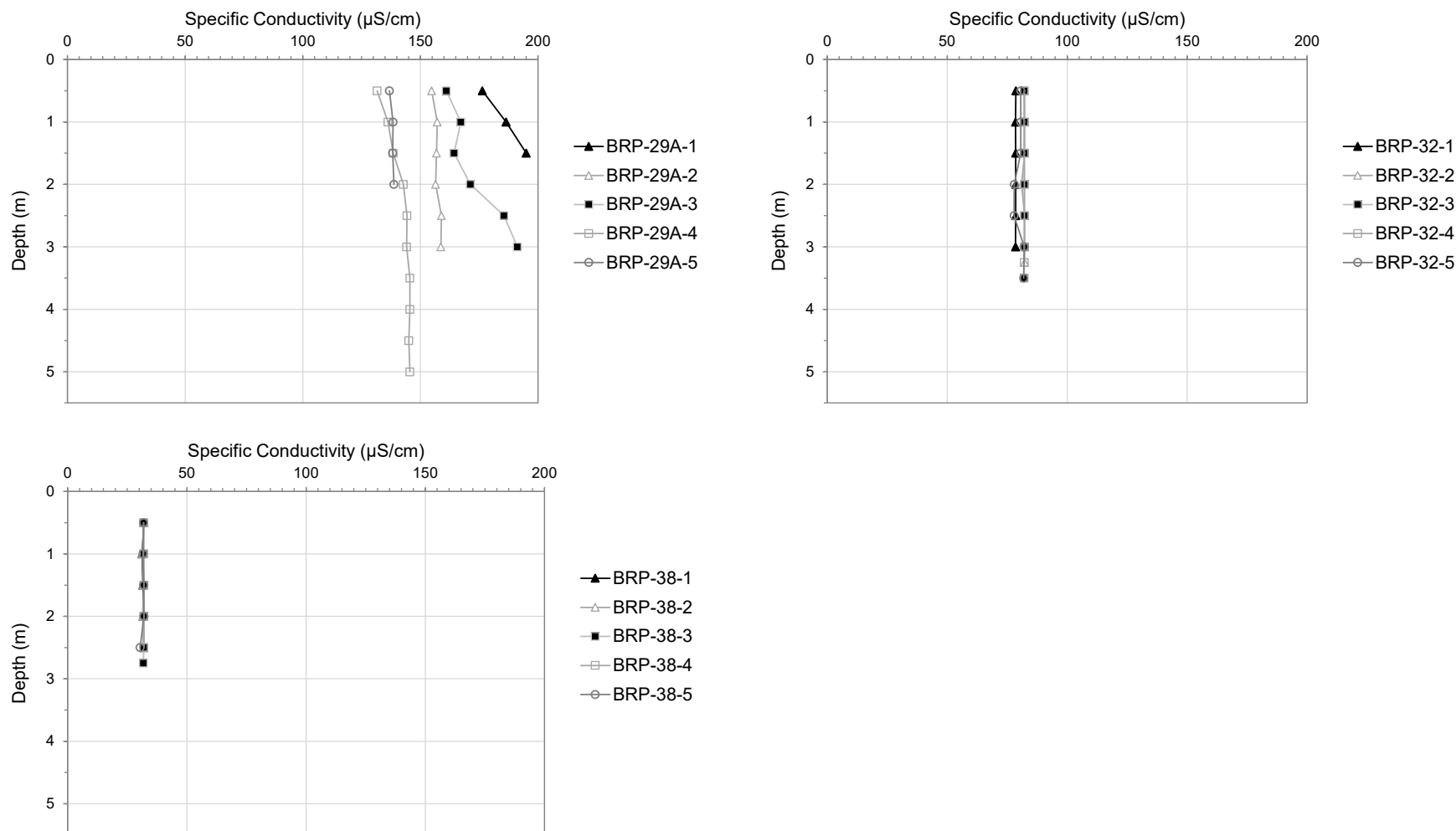
Note: Depth starts from underneath the ice layer.
 $\mu\text{S}/\text{cm}$ = microsiemens per centimetre.

Figure B-10: Specific Conductivity Profiles for the Open-water Season (July) at Goose Lake and Reference B Lake, 2025

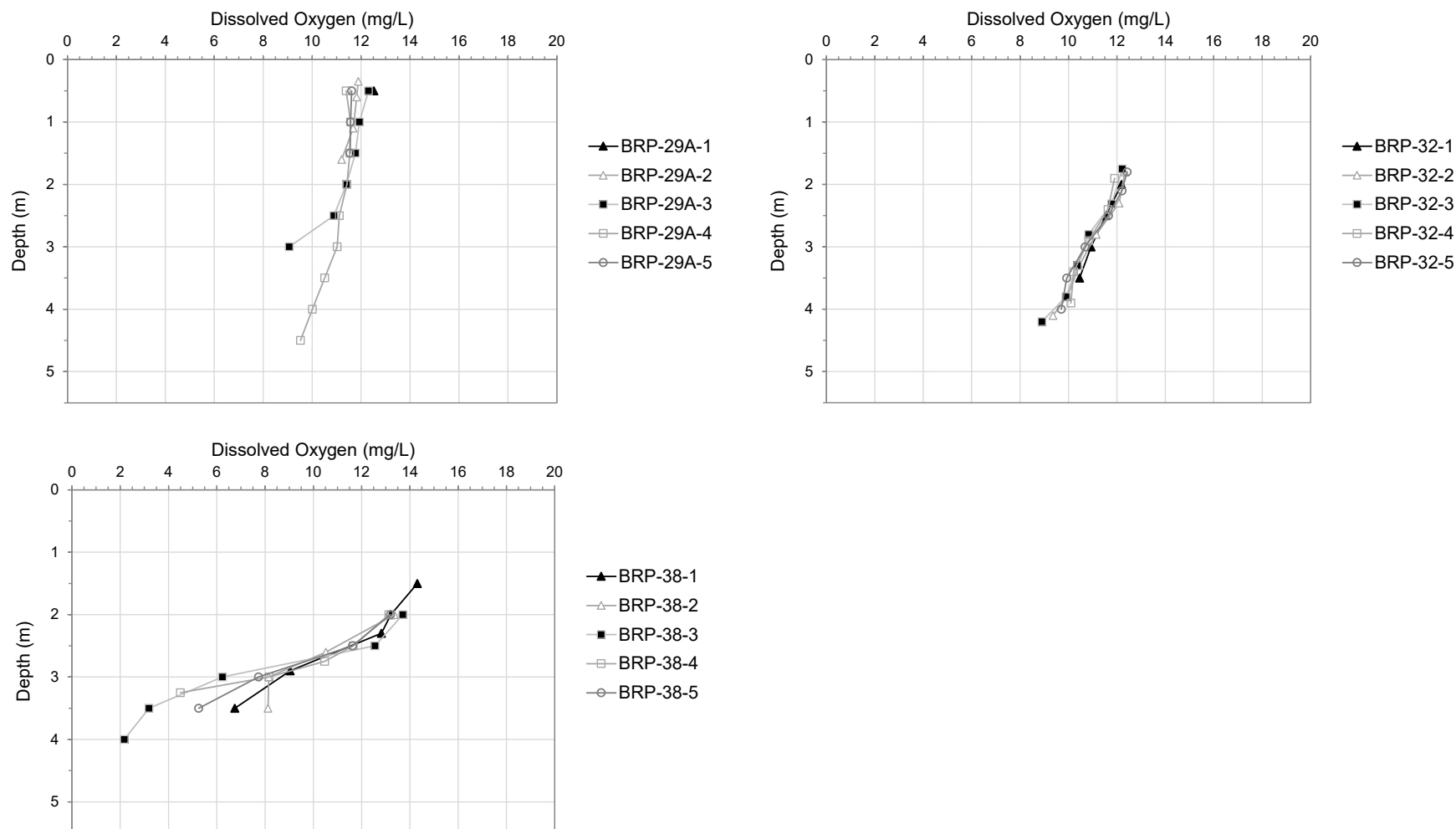
$\mu\text{S/cm}$ = microsiemens per centimetre.

Figure B-11: Specific Conductivity Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025

$\mu\text{S/cm}$ = microsiemens per centimetre.

Figure B-12: Specific Conductivity Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025

$\mu\text{S}/\text{cm}$ = microsiemens per centimetre.

Figure B-13: Dissolved Oxygen Concentration Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025

Note: Depth starts from underneath the ice layer.

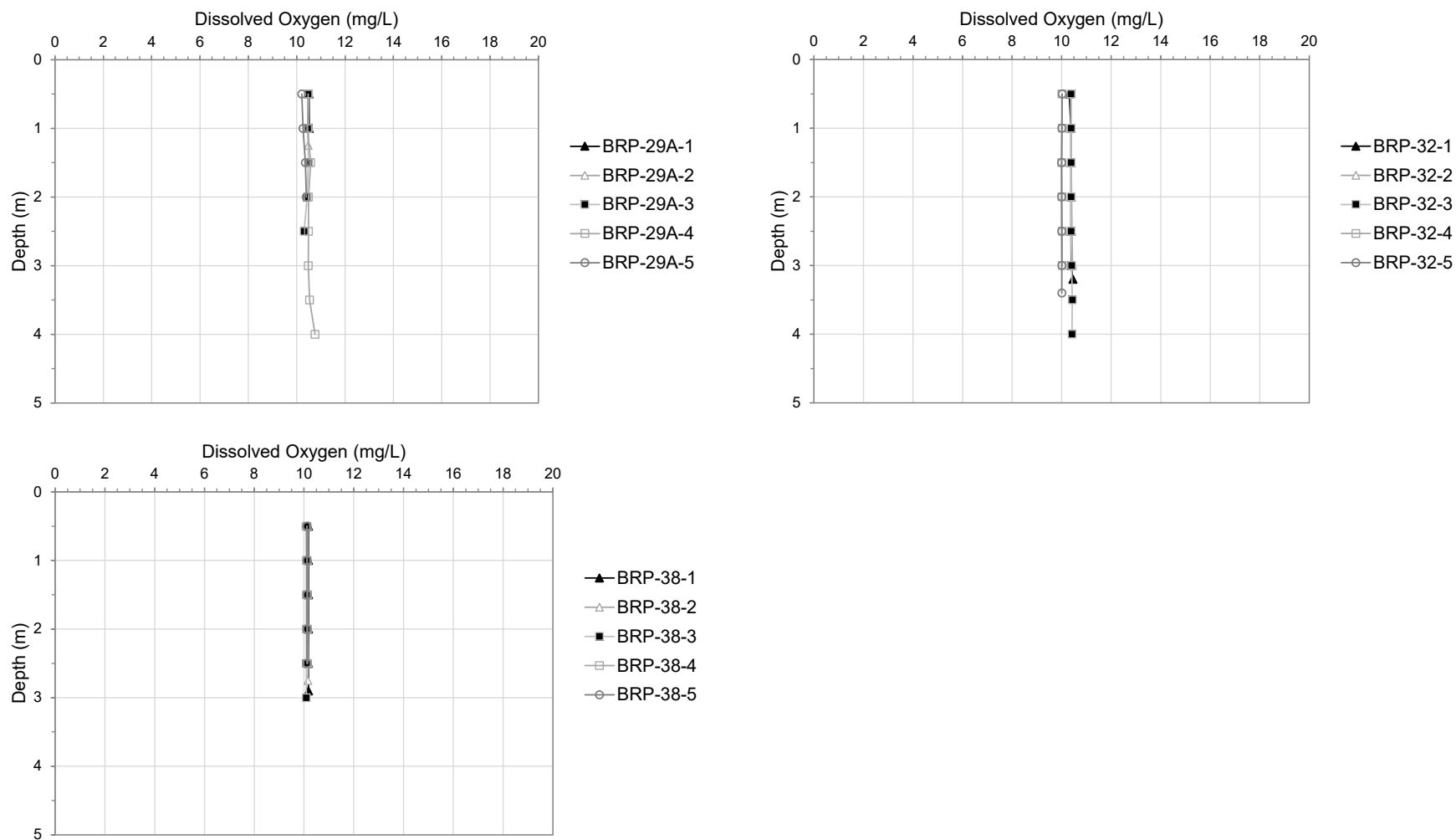
Figure B-14: Dissolved Oxygen Concentration Profiles for the Open-water Season (July) at Goose Lake and Reference B Lake, 2025

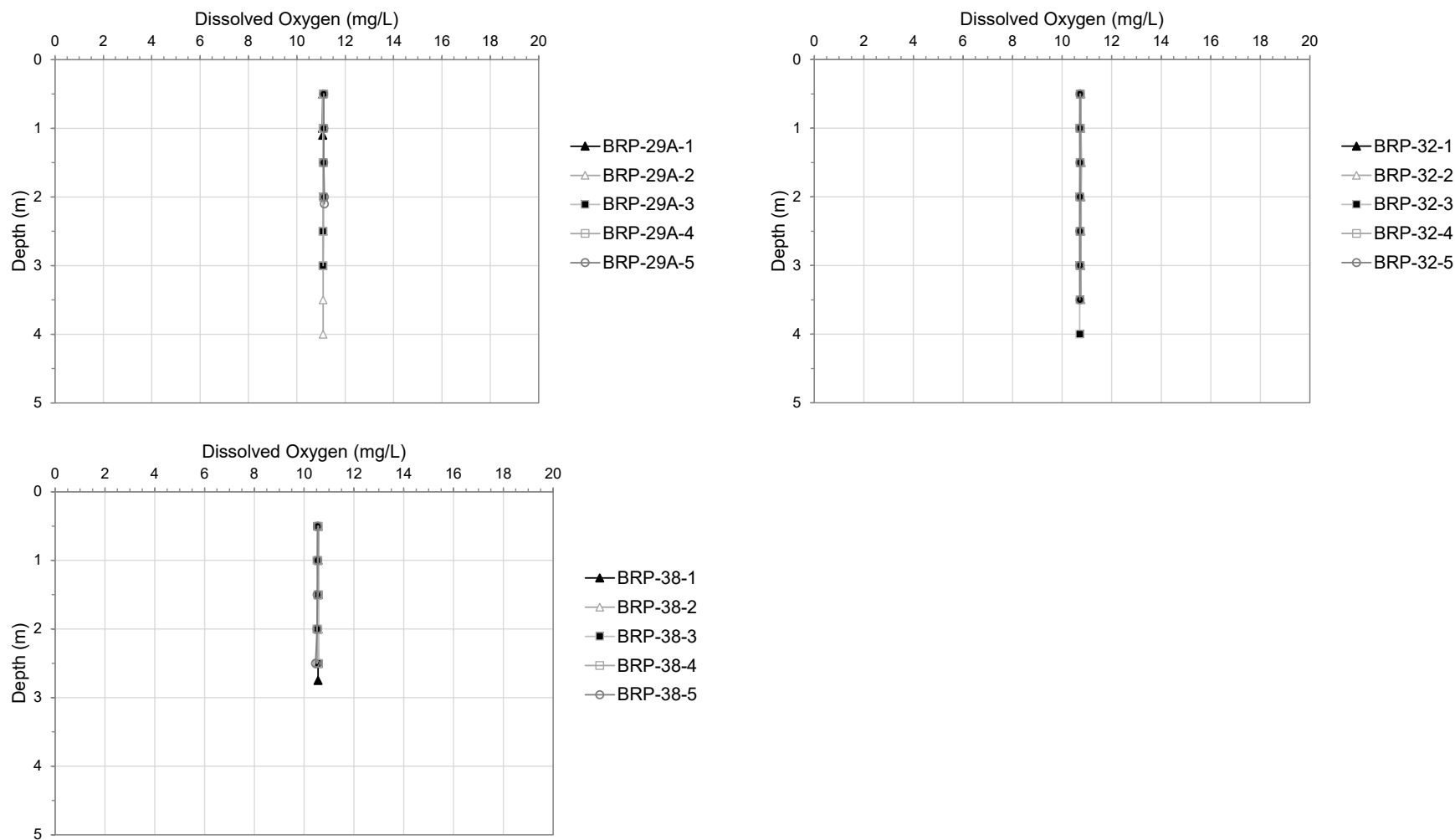
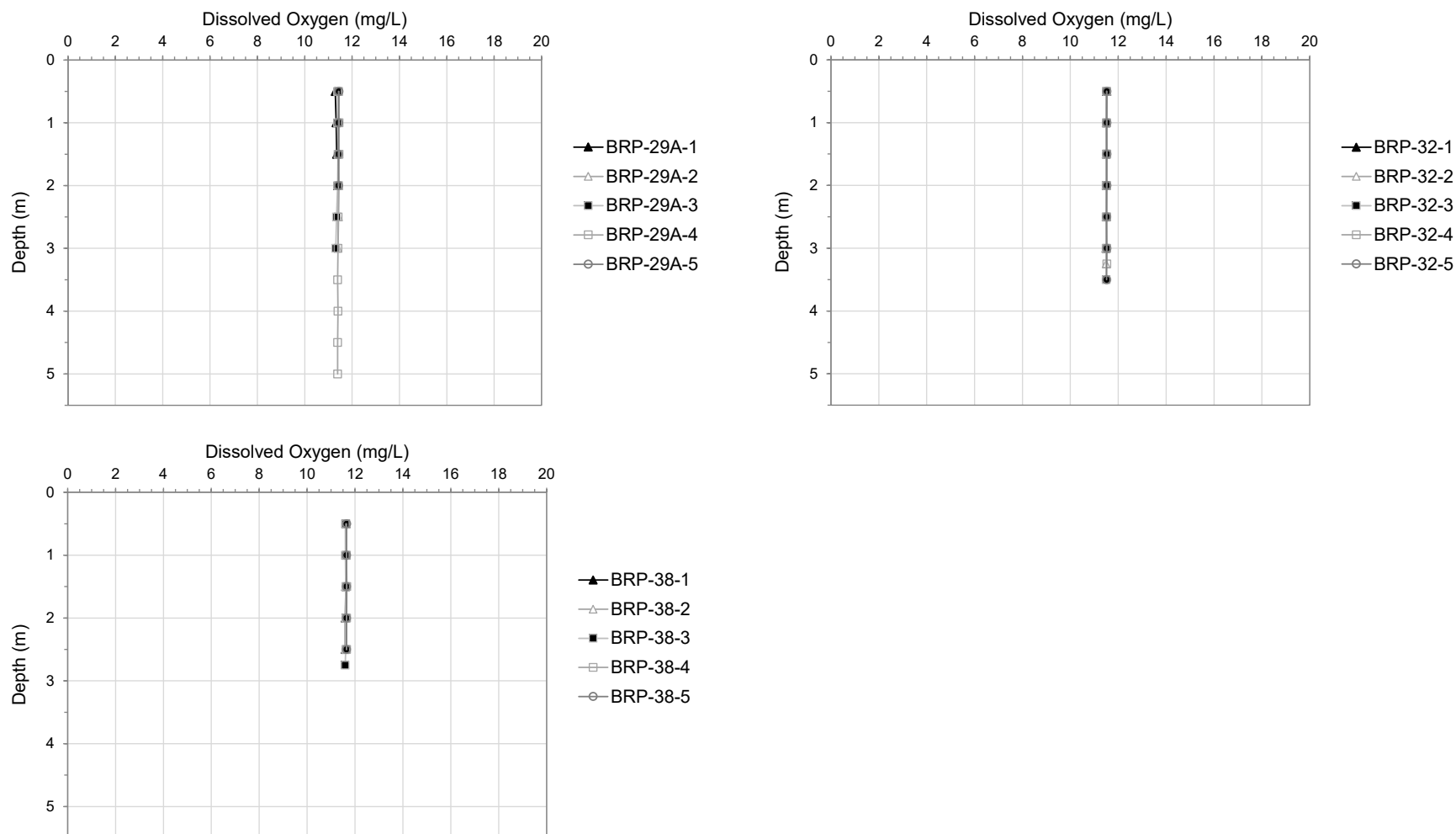
Figure B-15: Dissolved Oxygen Concentration Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025

Figure B-16: Dissolved Oxygen Concentration Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025

APPENDIX C

**2025 Water Quality – Chlorophyll *a*
Data Analysis**

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C1. INTRODUCTION

Chlorophyll *a* is an indicator parameter used to classify the nutrient status and productivity of a waterbody. It is the primary photosynthetic pigment contained in phytoplankton, which is why it is widely used as a surrogate measure of phytoplankton biomass and primary productivity in lakes (Franklin et al. 2012). It is a required parameter of interest in the Aquatic Effects Management Plan (AEMP; B2Gold Nunavut 2025).

Between 2011 and 2021, chlorophyll *a* was measured by filtering up to one litre of water through a 0.45 µm pore size cellulose membrane filter¹. However, long times were required to filter the targeted water volume (e.g., up to 1 hour per sample) and multiple filters were often required because of clogging issues.

The chlorophyll *a* study carried out in 2024 indicated that using 1.2 µm pore size glass microfiber type C (GF/C) filters would benefit the AEMP by collecting scientifically defensible chlorophyll *a* data in a cost-effective manner (WSP 2025). Another round of chlorophyll *a* data collection was recommended for 2025, using both 0.45 µm cellulose membrane filters and 1.2 µm GF/C filters to derive a conversion factor and adjust the historical 0.45 µm cellulose membrane chlorophyll *a* data for use in the AEMP. This appendix presents the data collected in 2025 for the comparison study, derives the conversion factor, and presents historical data converted to 1.2 µm GF/C filter for use in the AEMP.

C2. METHODS

C2.1 Sample Collection

At three of the five stations in Goose Lake West Bay, Goose Lake Central Basin, and Reference B Lake in September 2025, two sets of triplicate water samples were collected: one set was collected and filtered using 0.45 µm cellulose membrane filters and a second set was collected and filtered using 1.2 µm GF/C filters (i.e., 47 mm Whatman glass microfiber filter type C). Note that all chlorophyll *a* data collected in 2025 are presented in Appendix D, Table D-5.

Consistent with the AEMP sampling methods, water samples were collected at 1 m below the water surface. Water samples were collected in amber bottles and filtered at the camp at the end of the day. Each chlorophyll *a* sample consisted of 0.5 to 1 L of water. Water samples for chlorophyll *a* analysis were kept in the dark, away from sunlight, and maintained at a low temperature until filtered. Water collected for chlorophyll *a* analysis was filtered using an electric pump and either 0.45 µm cellulose membrane filters supplied by the analytical laboratory or 1.2 µm GF/C filters. Filters were placed in black tubes provided by the laboratory or wrapped in aluminum foil, labelled with the sample ID, date and time, and kept frozen until the end of the program, when they were delivered to ALS Canada Ltd. (ALS) in Yellowknife for analysis. These procedures were consistent with sampling in 2024 (WSP 2025).

C2.2 Conversion Factor for Chlorophyll *a* Concentrations

A conversion factor was established from the linear relationship between chlorophyll *a* concentrations measured with two filter sizes in 2024 and 2025, allowing comparison of chlorophyll *a* data processed using different filter sizes. Historical data from samples filtered using 0.45 µm cellulose membrane filter were then converted using the fitted equation to estimate concentrations that would have been measured if filtered through a 1.2 µm GF/C filter.

¹ With the exception of 2017, when samples were filtered using 1.2 µm GF/C filters.

C3. RESULTS

C3.1 2025 Chlorophyll a Concentrations in Samples from Different Filter Sizes

Consistent with the filter size study carried out in 2024, higher chlorophyll a concentrations were generally measured in samples filtered using the 1.2 µm GF/C filter compared to the 0.45 µm cellulose membrane filter (Table C-1; Figure C-1). Chlorophyll a concentrations were greater in two samples filtered through the 0.45 µm cellulose membrane filter compared to the 1.2 µm GF/C filter, replicate 1 at BRP-38-1 and replicate 3 at BRP-29A-1. Results from these two visual outliers were not used in the regression. Variability was generally similar between the two filter sizes, with greater coefficient of variation fluctuating between filter sizes.

Table C-1: Summary of Chlorophyll a Concentrations by Filter Type, September 2025

Location	Sample	Chlorophyll a Concentration (µg/L)											
		0.45 µm Cellulose Membrane Filter						1.2 µm Glass Microfiber Type C Filter					
		Rep 1	Rep 2	Rep 3	Mean	CV (%)	Mean Volume Filtered (L)	Rep 1	Rep 2	Rep 3	Mean	CV (%)	Mean Volume Filtered (L)
Goose Lake West Basin at Goose Lake Inflow	BRP-29A-1	0.99	1.09	1.19	1.09	9.2	1.00	1.74	1.18	0.84	1.25	36	1.00
	BRP-29A-2	1.02	1.07	1.08	1.06	3.0	0.83	1.68	1.53	1.75	1.65	6.8	0.83
	BRP-29A-3	1.1	1.16	1.05	1.10	5.0	1.00	1.56	1.74	1.59	1.63	5.9	1.00
	Mean				1.08	5.7	0.94	Mean			1.51	16	0.94
Goose Lake Central Basin	BRP-32-1	2.13	1.68	1.73	1.85	13	1.00	2.64	2.75	2.56	2.65	3.6	1.00
	BRP-32-2	2.09	2.04	1.91	2.01	4.6	1.00	2.96	2.80	2.28	2.68	13	1.00
	BRP-32-3	2.21	2.26	2.54	2.34	7.6	1.00	2.72	2.71	3.22	2.88	10	1.00
	Mean				2.07	8.5	1.00	Mean			2.74	9.0	1.00
Reference B Lake	BRP-38-1	1.97	1.64	1.68	1.76	10	1.00	1.82	2.18	2.3	2.10	12	1.00
	BRP-38-2	1.93	1.59	2.01	1.84	12	1.00	2.22	2.33	2.36	2.30	3.2	1.00
	BRP-38-3	1.76	1.43	1.68	1.62	11	0.67	2.07	2.36	2.22	2.22	6.5	0.67
	Mean				1.74	11	0.89	Mean			2.21	7.2	0.89

Notes: The coefficient of variation (CV) was calculated as a percentage of the mean (i.e., standard deviation/mean × 100).

Rep = replicate; CV = coefficient of variation.

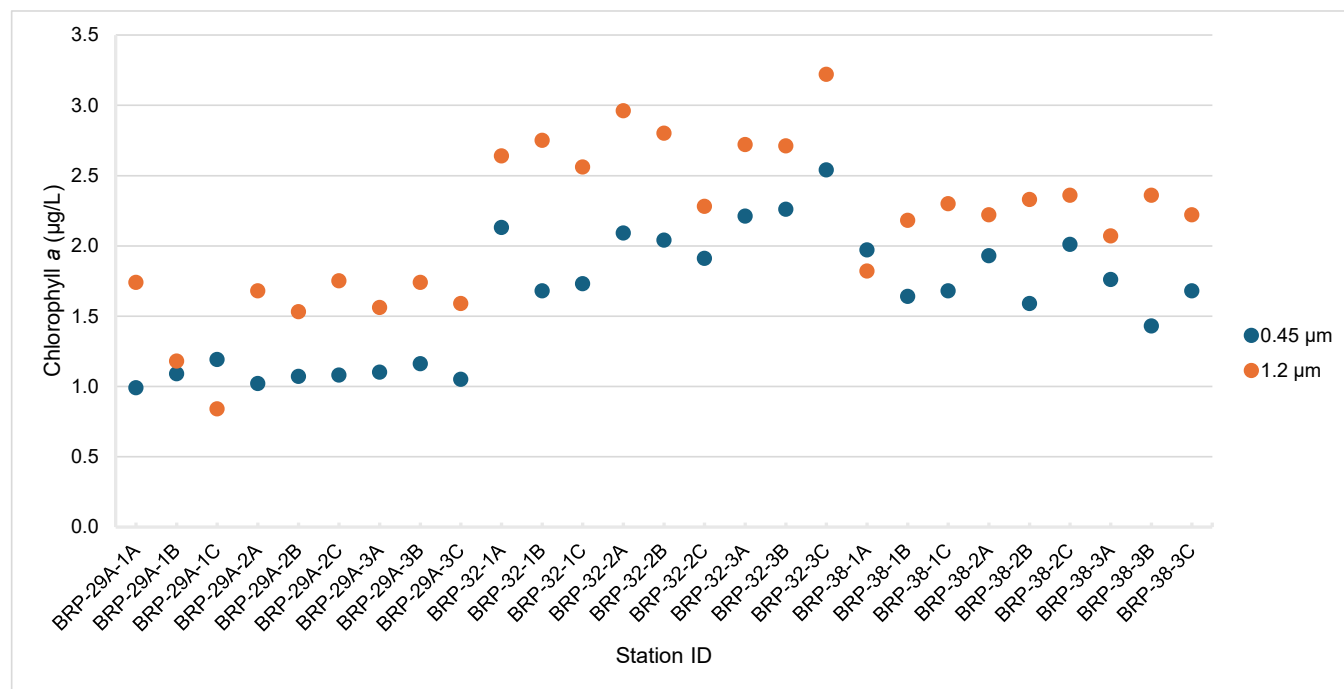


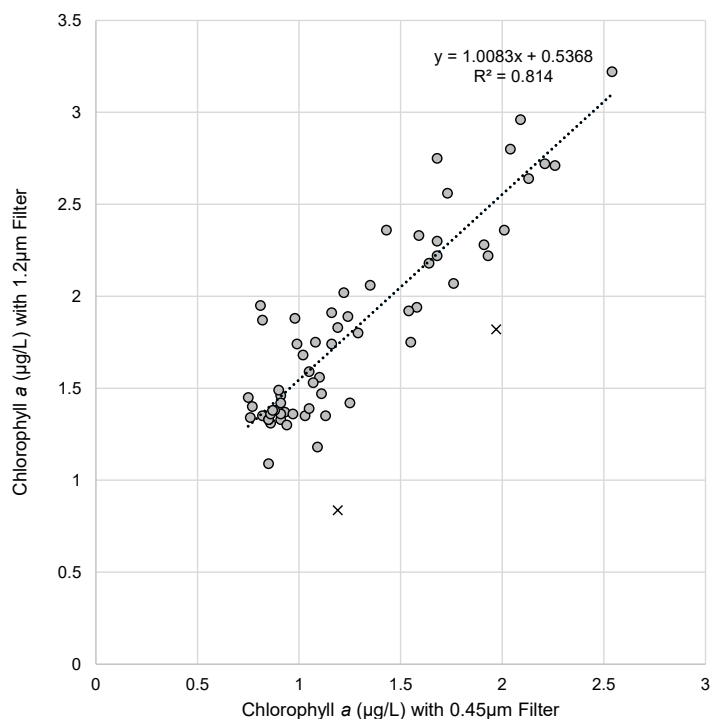
Figure C-1: Chlorophyll a Concentrations in Samples Filtered using 0.45 Cellulose Membrane and 1.2 µm Glass Microfiber Type C Filters, September 2025

C3.2 Conversion Factor

A conversion factor was derived from the linear relationship ($R^2 = 0.814$) between chlorophyll a concentrations in samples that were filtered using 0.45 µm cellulose membrane and 1.2 µm GF/C filters from September 2024 and 2025 (Figure C-2). Chlorophyll a concentrations measured from using 1.2 µm GF/C filters can be calculated using the formula in equation 1.

$$\text{Chlorophyll } a \text{ (1.2 } \mu\text{m GF/C filter)} = 1.0083 * (\text{chlorophyll } a \text{ 0.45 } \mu\text{m cellulose membrane filter}) + 0.5368$$

Equation 1



Note: Two visual outliers (presented as “x” in the plot above) were removed from the dataset (BRP-38-1 replicate 1 and BRP-29A-1 replicate 3 in 2025).

Figure C-2: Relationship between Chlorophyll a Concentrations Filtered using 0.45 µm Cellulose Membrane Filter and 1.2 µm Glass Microfiber Type C Filter, 2024 and 2025

C3.3 Historical Chlorophyll a Concentrations Dataset

Historical chlorophyll a concentrations filtered using a 0.45 µm cellulose membrane filter were adjusted (i.e., converted to concentrations from a 1.2 µm GF/C filter) using the formula derived in Section C3.2. Historical concentrations for samples already filtered using 1.2 µm GF/C filters were reported without applying the conversion and paired 0.45 µm-filtered sample data were not used for the historical dataset. Chlorophyll a concentrations for historical data (i.e., 2011 to 2025; Rescan 2012a, 2012b, 2014; Golder 2018, 2019, 2022; WSP 2025)² and their adjusted values are provided in Table C-2. The adjusted historical chlorophyll a concentrations will be used in the AEMP (i.e., for generating normal ranges, comparison of medians, and statistical analyses).

² Chlorophyll a data were not collected during the 2014, 2015, 2016, 2019, 2020, 2022, and 2023 programs.

Table C-2: Historical Chlorophyll a Results Converted to a 1.2 µm Glass Microfiber Type C Filter, 2011 to 2025

Location	Sample Name	Date	UTM (NAD 83, Zone 13V)		Mean Volume Filtered (L)	Filter Size (µm)	Chlorophyll a (µg/L)			Mean Chlorophyll a (µg/L)	Chlorophyll a Results Converted to 1.2 µm GF/C (µg/L) ^(a)			Mean Chlorophyll a Converted to 1.2 µm GF/C Filter (µg/L) ^(b)
			Easting (m)	Northing (m)			Rep 1	Rep 2	Rep 3		Rep 1	Rep 2	Rep 3	
Goose Lake West Bay	GOOSE NECK REP 1 (1M) LAKE	07-Aug-11	432555	7270236	-	0.45	0.54	0.11	0.41	0.35	1.08	0.65	0.95	0.89
	GOOSE LAKE NECK (1M)	11-Apr-12	432944	7270323	-	0.45	0.12	0.16	0.20	0.16	0.66	0.70	0.74	0.70
	GOOSE LAKE NECK (1M)	14-Aug-12	432944	7270323	-	0.45	0.54	0.19	0.24	0.32	1.08	0.73	0.78	0.86
	BRP-31-01	05-Aug-17	432124	7269884	0.50	1.2	0.64	0.80	0.84	0.76	0.64	0.80	0.84	0.76
	BRP-31-02	05-Aug-17	432099	7269875	0.50	1.2	0.86	0.86	0.84	0.85	0.86	0.86	0.84	0.85
	BRP-31-03	07-Aug-17	432069	7269866	0.50	1.2	0.71	0.99	0.88	0.86	0.71	0.99	0.88	0.86
	BRP-31-04	07-Aug-17	432006	7269866	0.50	1.2	0.90	0.81	0.99	0.90	0.90	0.81	0.99	0.90
	BRP-31-05	07-Aug-17	431997	7269864	0.50	1.2	0.65	0.69	0.77	0.70	0.65	0.69	0.77	0.70
	BRP-31-6	25-Apr-18	431700	7269887	0.50	0.45	0.77	0.72	0.79	0.76	1.31	1.26	1.33	1.30
	BRP-31-7	25-Apr-18	431663	7269880	0.50	0.45	1.15	0.76	0.75	0.89	1.70	1.30	1.29	1.43
	BRP-31-8	25-Apr-18	431681	7269880	0.50	0.45	0.98	0.87	0.90	0.92	1.52	1.41	1.44	1.46
	BRP-31-9	25-Apr-18	431780	7269853	0.50	0.45	0.63	0.73	0.80	0.72	1.17	1.27	1.34	1.26
	BRP-31-10	25-Apr-18	431829	7269849	1.00	0.45	1.28	0.68	0.80	0.92	1.83	1.22	1.34	1.46
	BRP-31-1	11-Jul-18	432124	7269886	0.49	0.45	0.52	0.49	0.50	0.50	1.06	1.03	1.04	1.04
	BRP-31-2	11-Jul-18	432103	7269877	0.70	0.45	0.47	0.44	0.35	0.42	1.01	0.98	0.89	0.96
	BRP-31-3	12-Jul-18	432072	7269863	1.00	0.45	0.56	0.51	0.67	0.58	1.10	1.05	1.21	1.12
	BRP-31-4	12-Jul-18	432000	7269860	1.00	0.45	0.66	0.51	0.57	0.58	1.20	1.05	1.11	1.12
	BRP-31-5	12-Jul-18	431958	7269881	1.00	0.45	0.50	0.56	0.45	0.50	1.04	1.10	0.99	1.04
	BRP-29-1	16-Jul-18	431294	7269940	0.50	0.45	0.35	0.37	0.34	0.35	0.89	0.91	0.88	0.89
	BRP-29-2	16-Jul-18	431365	7269998	0.50	0.45	0.34	0.26	0.36	0.32	0.88	0.80	0.90	0.86
	BRP-29-3	13-Jul-18	431331	7269964	0.83	0.45	0.64	0.62	0.50	0.59	1.18	1.16	1.04	1.13
	BRP-29-4	16-Jul-18	431423	7269937	0.50	0.45	0.41	0.32	0.29	0.34	0.95	0.86	0.83	0.88
	BRP-29-5	13-Jul-18	431504	7269919	0.50	0.45	0.52	0.56	0.52	0.53	1.06	1.10	1.06	1.07
	BRP-31-1	12-Aug-18	432144	7269882	0.58	0.45	0.46	0.52	0.52	0.50	1.00	1.06	1.06	1.04
	BRP-31-2	12-Aug-18	432106	7269869	0.50	0.45	0.53	0.36	0.52	0.47	1.07	0.90	1.06	1.01
	BRP-31-3	12-Aug-18	432063	7269858	0.53	0.45	0.50	0.35	0.34	0.40	1.04	0.89	0.88	0.94
	BRP-31-4	12-Aug-18	432006	7269866	0.58	0.45	0.48	0.35	0.44	0.42	1.02	0.89	0.98	0.96
	BRP-31-5	12-Aug-18	431959	7269875	0.58	0.45	0.14	0.22	0.37	0.24	0.68	0.76	0.91	0.78
	BRP-29-1	12-Aug-18	431310	7269936	0.56	0.45	0.56	0.53	0.55	0.55	1.10	1.07	1.09	1.09
	BRP-29-2	12-Aug-18	431372	7270000	0.50	0.45	0.57	0.61	0.46	0.55	1.11	1.15	1.00	1.09
	BRP-29-3	12-Aug-18	431338	7269973	0.57	0.45	0.08	0.51	0.45	0.35	0.62	1.05	0.99	0.89
	BRP-29-4	13-Aug-18	431405	7269945	0.70	0.45	0.68	0.38	0.44	0.50	1.22	0.92	0.98	1.04
	BRP-29-5	15-Aug-18	431522	7269909	0.60	0.45	0.60	0.67	0.53	0.60	1.14	1.21	1.07	1.14
	BRP-31-1	06-Sep-18	432132	7269880	1.00	0.45	0.19	0.19	0.04	0.14	0.73	0.73	0.58	0.68
	BRP-31-2	06-Sep-18	432108	7269875	1.00	0.45	0.19	0.23	0.22	0.21	0.73	0.77	0.76	0.75
	BRP-31-3	06-Sep-18	432073	7269886	1.00	0.45	0.21	0.19	0.21	0.20	0.75	0.73	0.75	0.74
	BRP-31-4	06-Sep-18	432004	7269856	1.00	0.45	0.19	0.16	0.19	0.18	0.73	0.70	0.73	0.72
	BRP-31-5	06-Sep-18	431959	7269885	1.00	0.45	0.22	0.22	0.24	0.23	0.76	0.76	0.78	0.77
	BRP-29-1	07-Sep-18	431313	7269941	1.00	0.45	0.49	0.59	0.62	0.57	1.03	1.13	1.16	1.11
	BRP-29-2	07-Sep-18	431372	7270008	1.00	0.45	0.55	0.55	0.33	0.48	1.09	1.09	0.87	1.02
	BRP-29-3	07-Sep-18	431335	7269962	1.00	0.45	0.55	0.41	0.55	0.50	1.09	0.95	1.09	1.04
	BRP-29-4	07-Sep-18	431425	7269938	1.00	0.45	0.49	0.48	0.54	0.50	1.03	1.02	1.08	1.04
	BRP-29-5	07-Sep-18	431507	7269922	1.00	0.45	0.41	0.61	0.59	0.54	0.95	1.15	1.13	1.08
	BRP-31-1	04-Aug-24	432124	7269886	0.73	0.45	0.85	0.85	0.90	0.87	1.39	1.39	1.44	1.41
	BRP-31-2	04-Aug-24	432103	7269877	0.50	0.45	0.76	0.85	0.86	0.82	1.30	1.39	1.40	1.37
	BRP-31-3	04-Aug-24	432072	7269863	0.50	0.45	0.75	0.91	0.94	0.87	1.29	1.45	1.48	1.41

Location	Sample Name	Date	UTM (NAD 83, Zone 13V)		Mean Volume Filtered (L)	Filter Size (µm)	Chlorophyll a (µg/L)			Mean Chlorophyll a (µg/L)	Chlorophyll a Results Converted to 1.2 µm GF/C (µg/L) ^(a)			Mean Chlorophyll a Converted to 1.2 µm GF/C Filter (µg/L) ^(b)
			Easting (m)	Northing (m)			Rep 1	Rep 2	Rep 3		Rep 1	Rep 2	Rep 3	
	BRP-31-4	04-Aug-24	432000	7269860	0.50	0.45	0.86	1.04	0.90	0.93	1.40	1.59	1.44	1.48
	BRP-31-5	04-Aug-24	431958	7269881	0.50	0.45	0.92	0.99	2.16	1.36	1.46	1.54	2.71	1.90
	BRP-31-1	19-Sep-24	432124	7269886	0.75	0.45	1.10	1.12	1.11	1.11	1.65	1.67	1.66	1.66
	BRP-31-2	19-Sep-24	432103	7269877	0.68	0.45	0.92	1.07	1.05	1.01	1.46	1.62	1.60	1.56
	BRP-31-3	19-Sep-24	432072	7269863	1.00	0.45	0.92	1.02	1.06	1.00	1.46	1.57	1.61	1.55
	BRP-31-4	19-Sep-24	432000	7269860	0.71	0.45	1.02	0.81	1.03	0.95	1.57	1.35	1.58	1.50
	BRP-31-5	19-Sep-24	431958	7269881	0.70	0.45	0.71	1.06	1.09	0.95	1.25	1.61	1.64	1.50
	BRP-31-1	04-Aug-24	432124	7269886	1.00	1.2	1.09	1.33	1.49	1.30	1.09	1.33	1.49	1.30
	BRP-31-2	04-Aug-24	432103	7269877	1.00	1.2	1.34	1.33	1.36	1.34	1.34	1.33	1.36	1.34
	BRP-31-3	04-Aug-24	432072	7269863	1.00	1.2	1.45	1.36	1.30	1.37	1.45	1.36	1.30	1.37
	BRP-29A-1	08-Jul-25	431313	7269941	0.86	0.45	1.20	0.95	<0.88	1.01	1.75	1.49	1.42	1.56
	BRP-29A-2	08-Jul-25	431372	7270008	1.00	0.45	0.77	0.63	<0.53	0.64	1.31	1.17	1.07	1.19
	BRP-29A-3	08-Jul-25	431335	7269962	1.00	0.45	0.79	0.69	0.58	0.69	1.33	1.23	1.12	1.23
	BRP-29A-4	08-Jul-25	431425	7269938	0.99	0.45	0.85	0.71	0.54	0.70	1.39	1.25	1.08	1.24
	BRP-29A-5	09-Jul-25	431507	7269922	1.00	0.45	0.94	0.88	0.89	0.90	1.48	1.42	1.43	1.45
	BRP-29A-1	12-Aug-25	431313	7269941	1.00	0.45	1.00	0.82	1.00	0.94	1.55	1.36	1.55	1.48
	BRP-29A-2	12-Aug-25	431372	7270008	1.00	0.45	0.65	0.84	0.86	0.78	1.19	1.38	1.40	1.33
	BRP-29A-3	12-Aug-25	431335	7269962	1.00	0.45	0.88	0.82	0.66	0.79	1.42	1.36	1.20	1.33
	BRP-29A-4	12-Aug-25	431425	7269938	0.97	0.45	0.80	0.72	0.73	0.75	1.34	1.26	1.27	1.29
	BRP-29A-5	12-Aug-25	431507	7269922	1.00	0.45	0.83	0.60	0.71	0.71	1.37	1.14	1.25	1.26
	BRP-29A-1	10-Sep-25	431313	7269941	1.00	0.45	0.99	1.09	1.19	1.09	1.54	1.64	1.74	1.64
	BRP-29A-2	10-Sep-25	431372	7270008	0.83	0.45	1.02	1.07	1.08	1.06	1.57	1.62	1.63	1.60
	BRP-29A-3	10-Sep-25	431335	7269962	1.00	0.45	1.10	1.16	1.05	1.10	1.65	1.71	1.60	1.65
	BRP-29A-4	13-Sep-25	431425	7269938	1.00	0.45	1.40	1.31	1.22	1.31	1.95	1.86	1.77	1.86
	BRP-29A-5	13-Sep-25	431507	7269922	1.00	0.45	1.40	1.45	1.17	1.34	1.95	2.00	1.72	1.89
	BRP-29A-1	10-Sep-25	431313	7269941	1.00	1.2	1.74	1.18	0.84	1.25	1.74	1.18	0.84	1.25
	BRP-29A-2	10-Sep-25	431372	7270008	0.83	1.2	1.68	1.53	1.75	1.65	1.68	1.53	1.75	1.65
	BRP-29A-3	10-Sep-25	431335	7269962	1.00	1.2	1.56	1.74	1.59	1.63	1.56	1.74	1.59	1.63
	BRP-31-3	09-Jul-25	432072	7269863	1.00	0.45	0.90	0.85	0.84	0.86	1.44	1.39	1.38	1.41
	BRP-31-4	09-Jul-25	432000	7269860	1.00	0.45	0.80	1.00	0.97	0.92	1.34	1.55	1.51	1.47
	BRP-31-3	14-Aug-25	432072	7269863	1.00	0.45	0.83	0.93	0.65	0.80	1.37	1.47	1.19	1.35
	BRP-31-4	12-Aug-25	432000	7269860	1.00	0.45	0.94	<0.53	1.10	0.86	1.48	1.07	1.65	1.40
	BRP-31-3	13-Sep-25	432072	7269863	1.00	0.45	1.25	1.15	1.00	1.13	1.80	1.70	1.55	1.68
	BRP-31-4	13-Sep-25	432000	7269860	1.00	0.45	1.26	1.38	1.16	1.27	1.81	1.93	1.71	1.81
Goose Lake Central Basin	GOOSE CENTRAL SHALLOW (1M) LA	07-Aug-11	433825	7270927	-	0.45	0.54	0.65	0.46	0.55	1.08	1.19	1.00	1.09
	GOOSE LAKE CENTRAL (1M)	11-Apr-12	433887	7270990	-	0.45	0.35	0.32	0.39	0.35	0.89	0.86	0.93	0.89
	GOOSE LAKE CENTRAL (1M)	17-Aug-12	433887	7270990	-	0.45	0.30	0.34	0.23	0.29	0.84	0.88	0.77	0.83
	GOOSECENT (1M)	13-Apr-13	434096	7270916	-	0.45	0.19	0.35	0.26	0.27	0.73	0.89	0.80	0.81
	GOONECK (1M)	21-Jul-13	432913	7270309	-	0.45	0.11	0.13	0.23	0.16	0.65	0.67	0.77	0.69
	GOOCENT (1M)	21-Jul-13	433913	7271012	-	0.45	0.34	0.25	0.16	0.25	0.88	0.79	0.70	0.79
	GOOSECENT-1	28-Apr-18	433887	7270990	0.50	0.45	0.36	0.61	0.42	0.46	0.90	1.15	0.96	1.00
	GOOSECENT-2	28-Apr-18	434026	7271039	0.50	0.45	0.46	0.45	0.52	0.48	1.00	0.99	1.06	1.02
	GOOSECENT-3	28-Apr-18	434038	7270973	0.50	0.45	0.40	0.37	0.41	0.39	0.94	0.91	0.95	0.93
	GOOSECENT-4	28-Apr-18	434054	7270989	0.50	0.45	0.43	0.31	0.38	0.37	0.97	0.85	0.92	0.91
	GOOSECENT-5	28-Apr-18	434074	7271011	0.50	0.45	0.44	0.50	0.55	0.50	0.98	1.04	1.09	1.04
	BRP-32-1	13-Aug-18	433690	7270849	0.63	0.45	0.46	0.78	0.66	0.63	1.00	1.32	1.20	1.18
	BRP-32-2	13-Aug-18	433681	7270890	0.63	0.45	0.68	0.71	0.63	0.67	1.22	1.25	1.17	1.22

Location	Sample Name	Date	UTM (NAD 83, Zone 13V)		Mean Volume Filtered (L)	Filter Size (µm)	Chlorophyll a (µg/L)			Mean Chlorophyll a (µg/L)	Chlorophyll a Results Converted to 1.2 µm GF/C (µg/L) ^(a)			Mean Chlorophyll a Converted to 1.2 µm GF/C Filter (µg/L) ^(b)
			Easting (m)	Northing (m)			Rep 1	Rep 2	Rep 3		Rep 1	Rep 2	Rep 3	
	BRP-32-3	13-Aug-18	433673	7270944	0.70	0.45	0.69	0.57	0.69	0.65	1.23	1.11	1.23	1.19
	BRP-32-4	13-Aug-18	433652	7270835	0.70	0.45	0.75	0.55	0.68	0.66	1.29	1.09	1.22	1.20
	BRP-32-5	13-Aug-18	433653	7270898	0.68	0.45	0.73	0.56	0.71	0.67	1.27	1.10	1.25	1.21
	BRP-32-1	03-Aug-24	433690	7270849	0.40	0.45	0.81	1.58	1.24	1.21	1.35	2.13	1.79	1.76
	BRP-32-2	03-Aug-24	433681	7270890	0.47	0.45	1.55	1.29	1.22	1.35	2.10	1.84	1.77	1.90
	BRP-32-3	03-Aug-24	433673	7270944	0.40	0.45	1.19	1.54	1.35	1.36	1.74	2.09	1.90	1.91
	BRP-32-4	03-Aug-24	433652	7270835	0.40	0.45	1.16	0.98	0.82	0.99	1.71	1.52	1.36	1.53
	BRP-32-5	03-Aug-24	433653	7270898	0.50	0.45	1.49	1.26	1.39	1.38	2.04	1.81	1.94	1.93
	BRP-32-1	18-Sep-24	433690	7270849	0.37	0.45	2.26	1.86	2.12	2.08	2.82	2.41	2.67	2.63
	BRP-32-2	18-Sep-24	433681	7270890	0.35	0.45	2.34	1.79	2.18	2.10	2.90	2.34	2.73	2.66
	BRP-32-3	18-Sep-24	433673	7270944	0.33	0.45	1.95	1.70	2.01	1.89	2.50	2.25	2.56	2.44
	BRP-32-4	18-Sep-24	433652	7270835	0.38	0.45	2.13	1.92	2.11	2.05	2.68	2.47	2.66	2.61
	BRP-32-5	18-Sep-24	433653	7270898	0.47	0.45	2.45	2.32	2.64	2.47	3.01	2.88	3.20	3.03
	BRP-32-1	03-Aug-24	433690	7270849	1.00	1.2	1.95	1.94	1.89	1.93	1.95	1.94	1.89	1.93
	BRP-32-2	03-Aug-24	433681	7270890	1.00	1.2	1.75	1.80	2.02	1.86	1.75	1.80	2.02	1.86
	BRP-32-3	03-Aug-24	433673	7270944	1.00	1.2	1.83	1.92	2.06	1.94	1.83	1.92	2.06	1.94
	BRP-32-4	03-Aug-24	433652	7270835	1.00	1.2	1.91	1.88	1.87	1.89	1.91	1.88	1.87	1.89
	BRP-32-1	09-Jul-25	433690	7270849	1.00	0.45	0.86	0.75	0.75	0.79	1.40	1.29	1.29	1.33
	BRP-32-2	09-Jul-25	433681	7270890	1.00	0.45	0.82	0.91	1.00	0.91	1.36	1.45	1.55	1.45
	BRP-32-3	09-Jul-25	433673	7270944	1.00	0.45	0.87	0.83	0.98	0.89	1.41	1.37	1.52	1.44
	BRP-32-4	11-Jul-25	433652	7270835	1.00	0.45	0.56	0.77	1.10	0.81	1.10	1.31	1.65	1.35
	BRP-32-5	11-Jul-25	433653	7270898	1.00	0.45	1.10	1.10	0.77	0.99	1.65	1.65	1.31	1.54
	BRP-32-1	13-Aug-25	433690	7270849	1.00	0.45	2.10	2.00	1.80	1.97	2.65	2.55	2.35	2.52
	BRP-32-2	13-Aug-25	433681	7270890	1.00	0.45	2.10	2.00	2.00	2.03	2.65	2.55	2.55	2.59
	BRP-32-3	13-Aug-25	433673	7270944	1.00	0.45	1.60	1.80	2.10	1.83	2.15	2.35	2.65	2.39
	BRP-32-4	13-Aug-25	433652	7270835	1.00	0.45	1.90	2.00	2.00	1.97	2.45	2.55	2.55	2.52
	BRP-32-5	13-Aug-25	433653	7270898	1.00	0.45	2.00	1.70	1.90	1.87	2.55	2.25	2.45	2.42
	BRP-32-1	13-Sep-25	433690	7270849	1.00	0.45	2.13	1.68	1.73	1.85	2.68	2.23	2.28	2.40
	BRP-32-2	14-Sep-25	433681	7270890	1.00	0.45	2.09	2.04	1.91	2.01	2.64	2.59	2.46	2.57
	BRP-32-3	14-Sep-25	433673	7270944	1.00	0.45	2.21	2.26	2.54	2.34	2.77	2.82	3.10	2.89
	BRP-32-4	14-Sep-25	433652	7270835	1.00	0.45	2.57	2.19	2.13	2.30	3.13	2.74	2.68	2.85
	BRP-32-5	14-Sep-25	433653	7270898	1.00	0.45	2.28	2.00	2.18	2.15	2.84	2.55	2.73	2.71
	BRP-32-1	13-Sep-25	433690	7270849	1.00	1.2	2.64	2.75	2.56	2.65	2.64	2.75	2.56	2.65
	BRP-32-2	14-Sep-25	433681	7270890	1.00	1.2	2.96	2.80	2.28	2.68	2.96	2.80	2.28	2.68
	BRP-32-3	14-Sep-25	433673	7270944	1.00	1.2	2.72	2.71	3.22	2.88	2.72	2.71	3.22	2.88
Goose Lake Southeast Basin	GOOSESTH-1	27-Apr-18	434332	7270048	0.50	0.45	0.94	0.91	0.97	0.94	1.48	1.45	1.51	1.48
	GOOSESTH-2	27-Apr-18	434333	7270080	0.50	0.45	0.70	0.76	0.78	0.75	1.24	1.30	1.32	1.29
	GOOSESTH-3	27-Apr-18	434305	7270101	0.50	0.45	0.69	0.63	0.65	0.66	1.23	1.17	1.19	1.20
	GOOSESTH-4	28-Apr-18	434312	7270131	0.50	0.45	0.51	0.53	0.54	0.53	1.05	1.07	1.08	1.07
	GOOSESTH-5	28-Apr-18	434330	7270115	0.50	0.45	0.72	0.73	0.76	0.74	1.26	1.27	1.30	1.28
	BRP-33-1	08-Aug-18	434315	7270028	-	0.45	0.06	0.04	<0.010	0.04	0.60	0.58	0.55	0.57
	BRP-33-2	08-Aug-18	434298	7270044	-	0.45	<0.010	<0.010	<0.010	0.01	0.55	0.55	0.55	0.55
	BRP-33-3	09-Aug-18	434296	7270005	0.71	0.45	0.69	0.54	0.22	0.48	1.23	1.08	0.76	1.02
	BRP-33-4	09-Aug-18	434245	7270038	0.93	0.45	0.56	0.68	0.62	0.62	1.10	1.22	1.16	1.16
	BRP-33-5	10-Aug-18	434259	7270081	0.80	0.45	0.65	0.63	0.73	0.67	1.19	1.17	1.27	1.21
Goose Lake Tail	GOOSE LAKE TAIL (1M)	11-Apr-12	434645	7271418	-	0.45	0.11	0.19	0.05	0.12	0.65	0.73	0.59	0.65
	GOOSETAILNEW (1M)	14-Apr-13	434645	7271418	-	0.45	0.15	0.29	0.18	0.21	0.69	0.83	0.72	0.75

Location	Sample Name	Date	UTM (NAD 83, Zone 13V)		Mean Volume Filtered (L)	Filter Size (µm)	Chlorophyll a (µg/L)			Mean Chlorophyll a (µg/L)	Chlorophyll a Results Converted to 1.2 µm GF/C (µg/L) ^(a)			Mean Chlorophyll a Converted to 1.2 µm GF/C Filter (µg/L) ^(b)
			Easting (m)	Northing (m)			Rep 1	Rep 2	Rep 3		Rep 1	Rep 2	Rep 3	
Reference B Lake	REFERENCE B (1M) LAKE	08-Aug-11	442019	7258465	-	0.45	0.87	0.30	0.65	0.61	1.41	0.84	1.19	1.15
	REFBLK (1M)	13-Apr-13	442019	7258465	-	0.45	0.20	0.38	0.02	0.20	0.74	0.92	0.56	0.74
	REFBLK (1M)	17-Jul-13	442025	7258460	-	0.45	0.36	0.17	0.32	0.28	0.90	0.71	0.86	0.82
	BRP-38-01	10-Aug-17	441915	7258860	0.50	1.2	0.74	0.87	1.06	0.89	0.74	0.87	1.06	0.89
	BRP-38-02	10-Aug-17	441949	7258835	0.50	1.2	0.99	0.93	1.09	1.00	0.99	0.93	1.09	1.00
	BRP-38-03	10-Aug-17	441991	7258802	0.50	1.2	1.08	1.14	1.18	1.13	1.08	1.14	1.18	1.13
	BRP-38-04	10-Aug-17	442026	7258776	0.50	1.2	0.95	1.22	1.26	1.14	0.95	1.22	1.26	1.14
	BRP-38-05	10-Aug-17	442056	7258741	0.50	1.2	1.18	0.18	1.04	0.80	1.18	0.18	1.04	0.80
	REF-BLK-1	26-Apr-18	442019	7258465	0.50	0.45	0.55	0.46	0.39	0.47	1.09	1.00	0.93	1.01
	REF-BLK-2	26-Apr-18	442064	7258480	0.50	0.45	0.09	0.22	0.24	0.18	0.63	0.76	0.78	0.72
	REF-BLK-3	26-Apr-18	442025	7258506	0.50	0.45	0.24	0.22	0.26	0.24	0.78	0.76	0.80	0.78
	REF-BLK-4	26-Apr-18	442047	7258455	0.50	0.45	0.20	0.19	0.21	0.20	0.74	0.73	0.75	0.74
	REF-BLK-5	26-Apr-18	442022	7258430	0.50	0.45	0.23	0.22	0.14	0.20	0.77	0.76	0.68	0.74
	BRP-40-1	15-Jul-18	442060	7258569	0.50	0.45	0.30	0.30	0.33	0.31	0.84	0.84	0.87	0.85
	BRP-40-2	15-Jul-18	442027	7258592	0.30	0.45	0.21	0.24	0.28	0.24	0.75	0.78	0.82	0.78
	BRP-40-3	15-Jul-18	441961	7258708	0.30	0.45	0.28	0.28	0.27	0.28	0.82	0.82	0.81	0.82
	BRP-40-4	15-Jul-18	441983	7258654	0.30	0.45	0.24	0.24	0.25	0.24	0.78	0.78	0.79	0.78
	BRP-40-5	15-Jul-18	441961	7258708	0.30	0.45	0.22	0.21	0.30	0.24	0.76	0.75	0.84	0.78
	BRP-40-1	15-Aug-18	442059	7258574	0.63	0.45	0.74	0.68	0.53	0.65	1.28	1.22	1.07	1.19
	BRP-40-2	15-Aug-18	442030	7258588	0.63	0.45	0.70	0.48	0.50	0.56	1.24	1.02	1.04	1.10
	BRP-40-3	15-Aug-18	441989	7258602	0.71	0.45	0.62	0.50	0.54	0.55	1.16	1.04	1.08	1.09
	BRP-40-4	15-Aug-18	441978	7258645	0.68	0.45	0.65	0.55	0.63	0.61	1.19	1.09	1.17	1.15
	BRP-40-5	15-Aug-18	441990	7258699	0.72	0.45	0.67	0.55	0.63	0.62	1.21	1.09	1.17	1.16
	BRP-40-1	08-Sep-18	442057	7258570	1.00	0.45	0.24	0.43	0.40	0.36	0.78	0.97	0.94	0.90
	BRP-40-2	08-Sep-18	442026	7258593	1.00	0.45	0.39	0.37	0.32	0.36	0.93	0.91	0.86	0.90
	BRP-40-3	08-Sep-18	441984	7258607	1.00	0.45	0.37	0.41	0.41	0.40	0.91	0.95	0.95	0.94
	BRP-40-4	08-Sep-18	441977	7258653	1.00	0.45	0.46	0.48	0.43	0.46	1.00	1.02	0.97	1.00
	BRP-40-5	08-Sep-18	441955	7258713	1.00	0.45	0.44	0.42	0.42	0.43	0.98	0.96	0.96	0.97
	BRP-38-1	02-Aug-24	442060	7258569	0.43	0.45	0.86	0.97	1.13	0.99	1.40	1.51	1.68	1.53
	BRP-38-2	02-Aug-24	442027	7258592	0.50	0.45	1.03	0.91	1.05	1.00	1.58	1.45	1.60	1.54
	BRP-38-3	02-Aug-24	441961	7258708	0.32	0.45	0.93	0.91	1.11	0.98	1.47	1.45	1.66	1.53
	BRP-38-4	02-Aug-24	441983	7258654	0.30	0.45	0.82	0.77	1.25	0.95	1.36	1.31	1.80	1.49
	BRP-38-5	02-Aug-24	441990	7258699	0.30	0.45	0.91	0.88	0.87	0.89	1.45	1.42	1.41	1.43
	BRP-38-1	20-Sep-24	442060	7258569	0.69	0.45	1.38	1.26	1.35	1.33	1.93	1.81	1.90	1.88
	BRP-38-2	20-Sep-24	442027	7258592	0.40	0.45	1.17	1.29	0.94	1.13	1.72	1.84	1.48	1.68
	BRP-38-3	20-Sep-24	441961	7258708	0.51	0.45	1.25	1.20	1.25	1.23	1.80	1.75	1.80	1.78
	BRP-38-4	20-Sep-24	441983	7258654	0.50	0.45	1.24	1.33	1.35	1.31	1.79	1.88	1.90	1.85
	BRP-38-5	20-Sep-24	441990	7258699	0.63	0.45	1.13	1.53	1.81	1.49	1.68	2.08	2.36	2.04
	BRP-38-1	02-Aug-24	442060	7258569	1.00	1.2	1.31	1.36	1.35	1.34	1.31	1.36	1.35	1.34
	BRP-38-2	02-Aug-24	442027	7258592	1.00	1.2	1.35	1.46	1.39	1.40	1.35	1.46	1.39	1.40
	BRP-38-3	02-Aug-24	441961	7258708	1.00	1.2	1.37	1.42	1.47	1.42	1.37	1.42	1.47	1.42
	BRP-38-4	02-Aug-24	441983	7258654	0.97	1.2	1.35	1.40	1.42	1.39	1.35	1.40	1.42	1.39
	BRP-38-5	02-Aug-24	441990	7258699	0.97	1.2	1.33	1.38	1.38	1.36	1.33	1.38	1.38	1.36
	BRP-38-1	12-Jul-25	442060	7258569	0.98	0.45	0.88	0.80	1.80	1.16	1.42	1.34	2.35	1.71
	BRP-38-2	12-Jul-25	442027	7258592	0.77	0.45	1.40	1.60	1.70	1.57	1.95	2.15	2.25	2.12
	BRP-38-3	12-Jul-25	441961	7258708	0.77	0.45	1.60	1.40	1.60	1.53	2.15	1.95	2.15	2.08
	BRP-38-4	12-Jul-25	441983	7258654	0.50	0.45	1.50	1.40	1.60	1.50	2.05	1.95	2.15	2.05

Location	Sample Name	Date	UTM (NAD 83, Zone 13V)		Mean Volume Filtered (L)	Filter Size (µm)	Chlorophyll a (µg/L)			Mean Chlorophyll a (µg/L)	Chlorophyll a Results Converted to 1.2 µm GF/C (µg/L) ^(a)			Mean Chlorophyll a Converted to 1.2 µm GF/C Filter (µg/L) ^(b)
			Easting (m)	Northing (m)			Rep 1	Rep 2	Rep 3		Rep 1	Rep 2	Rep 3	
	BRP-38-5	12-Jul-25	441990	7258699	0.50	0.45	1.60	1.30	<1.1	1.33	2.15	1.85	1.65	1.88
	BRP-38-1	16-Aug-25	442060	7258569	1.00	0.45	<0.53	0.56	0.67	0.59	1.07	1.10	1.21	1.13
	BRP-38-2	16-Aug-25	442027	7258592	1.00	0.45	0.74	0.73	0.72	0.73	1.28	1.27	1.26	1.27
	BRP-38-3	16-Aug-25	441961	7258708	1.00	0.45	0.67	0.66	<0.53	0.62	1.21	1.20	1.07	1.16
	BRP-38-4	16-Aug-25	441983	7258654	1.00	0.45	<0.53	0.72	<0.53	0.59	1.07	1.26	1.07	1.14
	BRP-38-5	16-Aug-25	441990	7258699	1.00	0.45	<0.53	0.85	<0.53	0.64	1.07	1.39	1.07	1.18
	BRP-38-1	11-Sep-25	442060	7258569	1.00	0.45	1.97	1.64	1.68	1.76	2.52	2.19	2.23	2.31
	BRP-38-2	11-Sep-25	442027	7258592	1.00	0.45	1.93	1.59	2.01	1.84	2.48	2.14	2.56	2.40
	BRP-38-3	11-Sep-25	441961	7258708	0.67	0.45	1.76	1.43	1.68	1.62	2.31	1.98	2.23	2.17
	BRP-38-4	11-Sep-25	441983	7258654	0.50	0.45	1.61	1.50	1.79	1.63	2.16	2.05	2.34	2.18
	BRP-38-5	11-Sep-25	441990	7258699	0.50	0.45	1.45	1.41	1.77	1.54	2.00	1.96	2.32	2.09
	BRP-38-1	11-Sep-25	442060	7258569	1.00	1.2	1.82	2.18	2.30	2.10	1.82	2.18	2.30	2.10
	BRP-38-2	11-Sep-25	442027	7258592	0.67	1.2	2.22	2.33	2.36	2.30	2.22	2.33	2.36	2.30
	BRP-38-3	11-Sep-25	441961	7258708	0.67	1.2	2.07	2.36	2.22	2.22	2.07	2.36	2.22	2.22
Propeller Lake	PROPELLAR LAKE (1M)	12-Apr-12	435154	7274437	-	0.45	0.11	0.06	0.06	0.08	0.65	0.60	0.60	0.61
	PROLK (1M)	19-Jul-13	435162	7274446	-	0.45	0.15	0.10	0.18	0.14	0.69	0.64	0.72	0.68
	BRP-35-1	16-Aug-21	435261	7272824	1.00	0.45	0.95	0.90	0.93	0.93	1.49	1.44	1.47	1.47
	BRP-35-2	16-Aug-21	435269	7272857	1.00	0.45	1.23	1.07	0.88	1.06	1.78	1.62	1.42	1.61
	BRP-35-3	16-Aug-21	435338	7272909	1.00	0.45	0.96	0.85	0.60	0.80	1.50	1.39	1.14	1.35
	BRP-35-4	16-Aug-21	435340	7272865	1.00	0.45	0.97	0.90	0.95	0.94	1.51	1.44	1.49	1.48
	BRP-35-5	16-Aug-21	435288	7272889	1.00	0.45	0.99	0.90	1.00	0.96	1.54	1.44	1.55	1.51
	BRP-36-1	14-Aug-21	434643	7279131	1.00	0.45	0.59	0.86	0.82	0.76	1.13	1.40	1.36	1.30
	BRP-36-2	14-Aug-21	434753	7278767	1.00	0.45	1.02	1.06	0.85	0.98	1.57	1.61	1.39	1.52
Propeller Lake	BRP-36-3	14-Aug-21	434821	7278579	1.00	0.45	1.06	1.10	1.17	1.11	1.61	1.65	1.72	1.66
	BRP-36-4	14-Aug-21	434140	7278584	1.00	0.45	0.98	0.98	0.89	0.95	1.52	1.52	1.43	1.49
	BRP-36-5	14-Aug-21	434615	7279207	1.00	0.45	0.90	1.00	0.89	0.93	1.44	1.55	1.43	1.47

Note: Average chlorophyll a concentrations were calculated using data rounded at two decimals and data reported below the detection limit were used at the detection limit.

(a) Only data for sampled filtered using 0.45 µm cellulose membrane filters were converted using equation 1 presented in Section 3.2. Historical concentrations for samples already filtered using 1.2 µm GF/C filters were reported without applying the conversion and paired 0.45 µm-filtered sample data were not used for the historical dataset.

(b) Mean chlorophyll a data of historical data converted to a 1.2 µm GF/C filter (i.e., grey shaded results) will be used to compare AEMP results to historical data.

GF/C = glass microfiber type C; - = no data.

C4. CONCLUSION

Results of the chlorophyll a samples collected in 2025 were consistent with 2024 results, where concentrations were generally greater in samples filtered using a 1.2 µm GF/C filter compared to a 0.45 µm cellulose membrane filter. A conversion factor was derived from the linear relationship between the two, and historical data filtered through a 0.45 µm cellulose membrane filter were adjusted (i.e., converted to concentrations from a 1.2 µm filter). Starting in 2026, chlorophyll a samples collected under the AEMP will be filtered using 1.2 µm GF/C filters.

C5. REFERENCES

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APPENDIX D

**2025 Water Quality – Analytical
Chemistry and Other Results**

D1 – Certificate of Analysis

Table D-1: Water Quality Results Compared to AEMP Benchmarks and Summary Statistics for Samples Collected in Goose Lake West Bay, 2025

Parameter	Unit	AEMP Benchmark	Stations					Summary Statistics						Stations					Summary Statistics						Stations				
			BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	BRP-29A-5	April					BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	BRP-29A-5	July					BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	BRP-29A-5		
			17/Apr/25	17/Apr/25	17/Apr/25	17/Apr/25	17/Apr/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	8/Jul/25	8/Jul/25	8/Jul/25	8/Jul/25	8/Jul/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	12/Aug/25	12/Aug/25	12/Aug/25	12/Aug/25	12/Aug/25
Easting	m	-	431313	431372	431335	431425	431507	-	-	-	-	-	-	431313	431372	431335	431425	431507	-	-	-	-	-	-	431313	431372	431335	431425	431507
Northing	m	-	7269941	7270008	7269962	7269938	7269922	-	-	-	-	-	-	7269941	7270008	7269962	7269938	7269922	-	-	-	-	-	-	7269941	7270008	7269962	7269938	7269922
Station depth	m	-	2.0	3.5	4.5	6.0	3.5	-	-	-	-	-	-	2.0	2.3	3.5	5.0	3.0	-	-	-	-	-	-	2.1	5.0	5.0	3.9	3.1
Field Measured																													
pH	-	6.5 - 9.0	6.1 ^(A)	6.2 ^(A)	6.1 ^(A)	6.1 ^(A)	6.3 ^(A)	6.1	6.2	6.1	6.3	0.1	0.0	6.6	6.6	6.5	6.7	7.0	6.5	6.7	6.6	7.0	0.2	0.1	6.7	6.7	6.7	6.7	6.7
Specific conductivity	µS/cm	-	221	225	221	225	225	221	223	224	225	1.9	0.85	136	132	136	132	89	89	125	132	136	20	8.99	148	148	150	150	150
Temperature	°C	-	0.10	0.30	0.10	0.10	0	0	0.12	0.10	0.30	0.11	0.05	14	14	14	14	15	14	14	14	15	0.53	0.24	11	12	11	12	12
Dissolved oxygen	mg/L	-	13	12	12	12	12	12	12	12	13	0.38	0.17	11	11	11	11	10	10	10	11	11	0.089	0.04	11	11	11	11	11
Dissolved oxygen	%	-	88	82	84	81	81	81	83	82	88	2.7	1.21	106	107	106	107	108	106	107	107	108	0.64	0.29	104	105	105	106	107
Turbidity	NTU	-	1.1	0.92	0.97	-	1.0	0.92	0.99	1.00	1.1	0.061	0.03	0.42	0.42	0.38	0.35	0.53	0.35	0.42	0.42	0.53	0.068	0.03	0.16	0.17	0.15	0.35	0.17
Conventional Parameters																													
pH	-	6.5 - 9.0	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	0.00	0.00	6.5	6.5	6.5	6.5	6.6	6.5	6.5	6.5	6.6	0.045	0.02	6.2 ^(A)	6.2 ^(A)	6.2 ^(A)	6.2 ^(A)	6.2 ^(A)
Specific conductivity	µS/cm	-	220	230	220	220	220	220	222	220	230	4.5	2.00	120	120	120	120	120	120	120	120	120	0.00	0.00	150	150	150	150	150
Hardness, as CaCO ₃	mg/L	-	89	93	89	87	93	87	90	89	93	2.7	1.21	43	43	45	44	41	41	43	43	45	1.4	0.60	59	60	58	58	59
Total alkalinity, as CaCO ₃	mg/L	-	8.1	8.2	8.2	6.9	8.1	6.9	7.9	8.1	8.2	0.56	0.25	3.6	3.6	3.3	3.7	3.6	3.3	3.6	3.6	3.7	0.16	0.07	4.0	4.3	3.8	4.0	3.9
Total dissolved solids (measured)	mg/L	500	150	150	140	170	170	140	156	150	170	13	6.00	76	72	76	72	72	72	74	72	76	2.2	0.98	80	88	80	64	48
Total dissolved solids (APHA 2005) ^(h)	mg/L	500	123	128	122	122	127	122	124	123	128	2.9	1.29	66	68	67	65	64	64	66	66	68	1.4	0.62	83	84	83	84	83
Total suspended solids	mg/L	8.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.50	<1.0	<1.0	-	-	<1.0	<0.99	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Total organic carbon	mg/L	-	5.9	6.4	5.9	5.8	5.8	5.8	6.0	5.9	6.4	0.25	0.11	4.7	4.5	3.8	4.6	5.0	3.8	4.5	4.6	5.0	0.44	0.20	3.7	3.8	3.7	3.6	4.9
Dissolved organic carbon	mg/L	-	6.1	5.8	6.4	5.5	6.0	5.5	6.0	6.0	6.4	0.34	0.15	4.3	3.9	4.5	5.6	5.3	3.9	4.7	4.5	5.6	0.71	0.32	4.1	4.0	4.1	3.6	4.8
Turbidity	NTU	-	0.12	<0.10	<0.1	0.10	<0.1	<0.1	0.1	<0.1	0.1	-	-	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	0.064	<0.10	0.12	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Major Ions																													
Calcium	mg/L	-	19	20	20	20	20	19	20	20	20	0.51	0.2	9.6	9.8	10	9.8	9.1	9.1	9.7	9.8	10	0.37	0.17	13	14	13	13	13
Chloride	mg/L	120	24	26	24	24	25	24	25	24	26	0.89	0.4	11	12	11	11	11	11	11	11	12	0.45	0.20	18	18	18	18	18
Fluoride	mg/L	0.12	0.029	0.026	0.031	0.027	0.026	0.026	0.028	0.027	0.031	0.0022	0.001	0.027	0.027	0.027	0.026	0.026	0.026	0.027	0.027	0.027	0.00055	0.00024	0.014	0.014	0.015	0.015	0.014
Magnesium	mg/L	-	9.8	10	9.8	9.4	10	9.4	9.9	9.8	10	0.40	0.2	4.5	4.4	4.7	4.7	4.4	4.4	4.5	4.5	4.7	0.13	0.059	6.2	6.3	6.2	6.1	6.3
Potassium	mg/L	-	1.6	1.7	1.7	1.6	1.7	1.6	1.6	1.7	1.7	0.060	0.03	1.3	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3	0.040	0.0177	1.4	1.4	1.4	1.4	1.4
Sodium	mg/L	-	2.8	3.0	2.9	2.8	3.2	2.8	2.9	2.9	3.2	0.18	0.08	1.9	1.9	2.0	2.0	1.8	1.8	1.9	1.9	2.0	0.061	0.027	2.2	2.2	2.2	2.2	2.2
Sulphate	mg/L	218 - 309 ^(h)	46	46	44	45	46	44	45	46	46	0.89	0.4	25	26	26	25	25	25	25	25	26	0.55	0.24	30	30	30	30	30
Reactive silica	mg/L	-	3.6	3.7	3.6	3.6	3.8	3.6	3.7	3.6	3.8	0.089	0.0	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	0.045	0.020	0.85	0.86	0.83	0.83	0.86
Total cyanide	mg/L	0.0050	0.00060	<0.00050	0.00050	<0.00050	<0.00050	<0.00050	0.00037	<0.00050	0.00060	-	-	0.0022	0.0025	0.0032	0.0020	0.0020	0.0024	0.0022	0.0032	0.00050	0.00022	0.0011	0.0011	0.0012	0.0011	0.0010	
Cyanide (free)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	0.0023	0.0030	0.0033	0.0021	0.0025	0.0021	0.0026	0.0025	0.0033	0.00047	0.00021	0.00088	0.00094	0.00088	0.00088	0.00086
Cyanide (WAD)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	0.0023	0.0024	0.0033	0.0019	0.0021	0.0019	0.0024	0.0023	0.0033	0.00056	0.00025	0.0011	0.0011	0.0011	0.00099	0.0010
Nutrients																													
Nitrate, as N	mg-N/L	2.9	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.5	0.045	0.02	1.9	1.9	1.9	1.7	1.8	1.7	1.8	1.9	1.9	0.089	0.040	1.9	1.9	1.9	2.2	1.9
Nitrite, as N	mg-N/L	0.060	0.052	0.068 ^(A)	0.058	0.069 ^(A)	0.12 ^(A)	0.052	0.073	0.068	0.12	0.027	0.012	0.0067	0.0084	0.0069	0.0066	0.0066	0.0070	0.0067	0.0084	0.00077	0.00034	0.0041	0.0046	0.0043	0.0047	0.0050	
Nitrate + nitrite	mg-N/L	-	2.4	2.6	2.4	2.4	2.5	2.4	2.5	2.4	2.6	0.089	0.040	2.0	1.9	1.9	1.7	1.8	1.7	1.9	1.9	2.0	0.11	0.051	1.9	1.9	1.9	2.2	1.9
Total ammonia	mg-N/L	5.7 - 149 ^(b)	0.33	0.33	0.33	0.31	0.26	0.26	0.31	0.33	0.33	0.030	0.014	0.25	0.25	0.28	0.24	0.24	0.24	0.25	0.25	0.28	0.016	0.007	0.29	0.29	0.29	0.31	0.28
Un-ionized ammonia	mg-N/L	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00059	<0.00050	0.00032	<0.00050	0.00059	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total phosph																													

Table D-1: Water Quality Results Compared to AEMP Bench

Parameter	Unit	AEMP Benchmark	Summary Statistics							Stations					Summary Statistics						
			August							BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	BRP-29A-5	September						
			Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	10/Sep/25						10/Sep/25	10/Sep/25	13/Sep/25	13/Sep/25	Minimum	Mean	Median
Easting	m	-	-	-	-	-	-	-	431313	431372	431335	431425	431507	-	-	-	-	-	-	-	
Northing	m	-	-	-	-	-	-	-	7269941	7270008	7269962	7269938	7269922	-	-	-	-	-	-	-	
Station depth	m	-	-	-	-	-	-	-	2.5	4.0	4.0	5.5	3.0	-	-	-	-	-	-	-	
Field Measured																					
pH	-	6.5 - 9.0	6.7	6.7	6.7	6.7	0.0	0.0	6.9	6.9	6.9	7.2	7.0	6.9	7.0	6.9	7.2	0.1	0.1		
Specific conductivity	µS/cm	-	148	149	150	150	1.2	0.5	186	157	167	136	138	136	157	157	186	21	9.4		
Temperature	°C	-	11	12	12	12	0.29	0.13	8.2	8.2	8.2	8.3	8.3	8.2	8.2	8.2	8.3	0.055	0.024		
Dissolved oxygen	mg/L	-	11	11	11	11	0.0	0.0	11	11	11	12	11	11	11	11	12	0.071	0.032		
Dissolved oxygen	%	-	104	105	105	107	0.95	0.42	101	102	101	101	101	101	101	101	102	0.40	0.18		
Turbidity	NTU	-	0.15	0.20	0.17	0.35	0.084	0.038	0.28	0.28	0.30	0.26	0.23	0.23	0.27	0.28	0.30	0.026	0.012		
Conventional Parameters																					
pH	-	6.5 - 9.0	6.2	6.2	6.2	6.2	0.0	0.0	6.0 ^(A)	6.0 ^(A)	6.0 ^(A)	6.0 ^(A)	6.0 ^(A)	6.0	6.0	6.0	6.0	0.0	0.0		
Specific conductivity	µS/cm	-	150	150	150	150	0.0	0.0	190	150	160	150	150	150	160	150	190	17	7.7		
Hardness, as CaCO ₃	mg/L	-	58	59	59	60	0.79	0.35	71	59	61	56	55	55	60	59	71	6.4	2.9		
Total alkalinity, as CaCO ₃	mg/L	-	3.8	4.0	4.0	4.3	0.19	0.083	4.5	4.7	4.7	5.1	5.1	4.5	4.8	4.7	5.1	0.28	0.13		
Total dissolved solids (measured)	mg/L	500	48	72	80	88	16	7.2	120	96	96	76	52	52	88	96	120	25	11		
Total dissolved solids (APHA 2005) ^(h)	mg/L	500	83	83	83	84	0.55	0.24	99	81	84	78	78	78	84	81	99	8.9	4.0		
Total suspended solids	mg/L	8.0	<1.0	0.50	<1.0	<1.0	-	-	1.3	1.8	1.6	<1.0	<1.0	<1.0	1.1	1.3	1.8	0.61	0.27		
Total organic carbon	mg/L	-	3.6	3.9	3.7	4.9	0.54	0.24	4.2	4.4	23	4.6	4.8	4.2	8.2	4.6	23	8.3	3.7		
Dissolved organic carbon	mg/L	-	3.6	4.1	4.1	4.8	0.43	0.19	4.0	4.3	4.0	4.1	4.1	4.0	4.1	4.1	4.3	0.12	0.055		
Turbidity	NTU	-	<0.10	0.06	<0.10	0.10	-	-	0.14	0.14	0.15	0.20	0.10	0.10	0.15	0.14	0.20	0.036	0.016		
Major Ions																					
Calcium	mg/L	-	13	13	13	14	0.19	0.084	17	14	14	13	12	12	14	14	17	1.7	0.77		
Chloride	mg/L	120	18	18	18	18	0.0	0.0	24	18	19	17	17	17	19	18	24	2.9	1.3		
Fluoride	mg/L	0.12	0.014	0.014	0.014	0.015	0.00055	0.00024	0.024	0.023	0.024	0.022	0.022	0.022	0.023	0.023	0.024	0.0010	0.00045		
Magnesium	mg/L	-	6.1	6.2	6.2	6.3	0.11	0.047	7.1	6.1	6.2	5.9	5.8	5.8	6.2	6.1	7.1	0.51	0.23		
Potassium	mg/L	-	1.4	1.4	1.4	1.4	0.015	0.0066	1.6	1.4	1.4	1.3	1.3	1.3	1.4	1.4	1.6	0.13	0.058		
Sodium	mg/L	-	2.2	2.2	2.2	2.2	0.015	0.0066	2.7	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.7	0.22	0.10		
Sulphate	mg/L	218 - 309 ^(d)	30	30	30	30	0.0	0.0	34	29	30	29	29	29	30	29	34	2.2	1.0		
Reactive silica	mg/L	-	0.83	0.85	0.85	0.86	0.015	0.0068	0.74	0.63	0.66	0.61	0.55	0.55	0.64	0.63	0.74	0.070	0.031		
Total cyanide	mg/L	0.0050	0.0010	0.0011	0.0011	0.0012	0.000062	0.000028	0.0011	0.00080	0.00076	<0.00050	<0.00050	<0.00050	0.00063	0.00076	0.0011	0.00037	0.00017		
Cyanide (free)	mg/L	-	0.00086	0.00090	0.00088	0.00094	0.000037	0.000017	0.00082	0.00069	0.00069	<0.00050	<0.00050	<0.00050	0.00054	0.00069	0.00082	0.00027	0.00012		
Cyanide (WAD)	mg/L	-	0.00099	0.0011	0.0011	0.0011	0.000065	0.000029	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00031	<0.00050	0.00053	-	-		
Nutrients																					
Nitrate, as N	mg-N/L	2.9	1.9	2.0	1.9	2.2	0.13	0.06	2.1	1.5	1.6	1.4	1.4	1.4	1.6	1.5	2.1	0.29	0.13		
Nitrite, as N	mg-N/L	0.060	0.0041	0.0045	0.0046	0.0050	0.00035	0.00016	0.0044	0.0048	0.0038	0.0038	0.0037	0.0037	0.0041	0.0038	0.0048	0.00048	0.00021		
Nitrate + nitrite	mg-N/L	-	1.9	2.0	1.9	2.2	0.13	0.060	2.1	1.5	1.6	1.4	1.4	1.4	1.6	1.5	2.1	0.29	0.13		
Total ammonia	mg-N/L	5.7 - 149 ^(b)	0.28	0.29	0.29	0.31	0.011	0.0049	0.30	0.16	0.19	0.16	0.15	0.15	0.19	0.16	0.30	0.062	0.028		
Un-ionized ammonia	mg-N/L	-	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-		
Total phosphorus	mg-P/L	0.010	<0.0010	0.0015	0.0013	0.0023	0.00078	0.00035	0.0012	0.0012	0.0015	0.0017	0.0075	0.0012	0.0026	0.0015	0.0075	0.0027	0.0012		
Dissolved phosphorus	mg-P/L	-	<0.0010	0.0005	<0.0010	<0.0010	-	-	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	0.00070	<0.0010	0.0015	-	-		
Orthophosphate	mg-P/L	-	<0.0010	0.0005	<0.0010	<0.0010	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00050	<0.0010	<0.0010	-	-		
Total Nitrogen	mg-N/L	-	2.3	2.5	2.5	2.7	0.16	0.071	2.5	1.9	2.1	3.1	1.7	1.7	2.3	2.1	3.1	0.55	0.25		
Total Kjeldahl nitrogen	mg-N/L	-	0.44	0.55	0.54	0.67	0.084	0.038	0.45	0.43	0.46	1.8	0.33	0.33	0.69	0.45	1.8	0.62	0.28		
Chlorophyll <i>a</i> (0.45 µm) ^(g)	µg/L	-	0.71	0.79	0.78	0.94	0.086	0.039	1.1	1.1	1.1	1.3	1.3	1.1	1.2	1.1	1.3	0.13	0.060		
Chlorophyll <i>a</i> (1.2 µm) ^(g)	µg/L	-	-	-	-	-	-	-	1.3	1.7	1.6	-	-	1.3	1.5	1.6	1.7	0.22	0.13		
Total Metals																					
Aluminum	µg/L	260 - 500 ^(c, a, d)	32	33	33	34	0.78	0.35	31	22	25	21	20	20	24	22	31	4.2	1.9		
Arsenic	µg/L	10	0.33	0.33	0.33	0.34	0.0038	0.0017	0.35	0.32	0.36	0.34	0.34	0.32	0.34	0.34	0.36	0.013	0.0058		
Barium	µg/L	1,000	19	20	20	20	0.13	0.058	23	19	20	19	18	18	20	19	23	1.9	0.87		
Cadmium	µg/L	0.075 - 0.15 ^(a)	0.030	0.033	0.033	0.036	0.0026	0.0012	0.037	0.023	0.024	0.021	0.022	0.021	0.025	0.023	0.037	0.0065	0.0029		
Chromium	µg/L	5 ^(e)	0.12	0.13	0.13	0.14	0.0084	0.0037	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	0.06	<0.10	0.10	-	-		
Cobalt	µg/L	0.78 - 0.99 ^(a)	1.6	1.6	1.6	1.7	0.048	0.022	2.2 ^(A)	1.2 ^(A)	1.3 ^(A)	1.1 ^(A)	1.0 ^(A)	1.0	1.4	1.2	2.2	0.50	0.22		
Copper	µg/L	4.2	2.8	2.8	2.8	2.8	0.025	0.011	2.7	2.4	2.5	2.4	2.4	2.4	2.5	2.4	2.7	0.14	0.061		
Iron	µg/L	370 - 520 ^(c, d)	25	26	26	27	0.84	0.38	33	31	33	33	30	30	31	31	33	1.2	0.54		
Lead	µg/L	7.0 - 10 ^(a, d)	0.0079	0.0089	0.0088	0.010	0.00080	0.00036	0.013	0.0076	0.0089	0.0063	0.0062	0.0062	0.0083	0.0076	0.013	0.0026	0.0012		
Manganese	µg/L	-	24	25	24	26	0.68	0.31	33	17	20	15	14	14	20	17	33	7.8	3.5		
Mercury	µg/L	0.026	0.0014	0.0016	0.0016	0.0021	0.00026	0.00011	0.00133	0.00131	0.00102	0.00132	0.00084	0.00084	0.00116	0.00131	0.00133	0.00022	0.00010		
Molybdenum	µg/L	73	<0.050	0.025	<0.050	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.025	<0.050	<0.050	-	-		
Nickel	µg/L	25 - 91 ^(a)	10	11	11	11	0.071	0.032	12	9.5	10.0	9.4	9.1	9.1	10	9.5	12	1.3	0.60		
Selenium	µg/L	1.0	0.077	0.085	0.084	0.090	0.0052	0.0023	0.070	0.060	0.059	0.047	0.052	0.047	0.058	0.059	0.070	0.0087	0.0039		
Silver	µg/L	0.25	<0.0050	0.0025	<0.0050	<0.0050	-	-	<0.0050	<0.0050	0.0054	<0.0050	<0.0050	<0.0050	0.0031	<0.0050	0.0054	-	-		
Strontium	µg/L	2,500	73	74	74	75															

Table D-2: Water Quality Results Compared to AEMP Benchmarks and Summary Statistics for Samples Collected in Goose Lake Central Basin, 2025

Parameter	Unit	AEMP Benchmark	Stations					Summary Statistics						Stations					Summary Statistics						Stations					Summary Statistics					
			BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	BRP-32-5	April						BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	BRP-32-5	July						BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	BRP-32-5	August					
			18/Apr/25	18/Apr/25	18/Apr/25	18/Apr/25	18/Apr/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	9/Jul/25	9/Jul/25	9/Jul/25	11/Jul/25	11/Jul/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	13/Aug/25	13/Aug/25	13/Aug/25	13/Aug/25	13/Aug/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error
Easting	m	-	433690	433681	433673	433652	433653	-	-	-	-	-	-	433690	433681	433673	433652	433653	-	-	-	-	-	-	433690	433681	433673	433652	433653	-	-	-	-	-	-
Northing	m	-	7270849	7270890	7270944	7270835	7270898	-	-	-	-	-	-	7270849	7270890	7270944	7270835	7270898	-	-	-	-	-	-	7270849	7270890	7270944	7270835	7270898	-	-	-	-	-	-
Station depth	m	-	4.00	4.50	4.50	4.30	4.50	-	-	-	-	-	-	4.20	4.00	5.00	4.00	4.40	-	-	-	-	-	-	4.00	4.50	5.00	4.00	4.50	-	-	-	-	-	-
Field Measured																																			
pH	-	6.5 - 9.0	6.1 ^(A)	6.2 ^(A)	6.2 ^(A)	6.2 ^(A)	6.3 ^(A)	6.1	6.2	6.2	6.3	0.1	0.03	7.3	7.3	7.2	7.0	7.0	7.0	7.2	7.2	7.3	0.2	0.1	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	0.0	0.0	
Specific conductivity	µS/cm	-	156	156	155	155	155	155	155	155	156	0.66	0.30	43	42	42	99	99	42	65	43	99	31	14	77	76	77	76	76	76	76	77	0.22	0.099	
Temperature	°C	-	1.2	1.0	1.2	1.2	1.3	1.0	1.2	1.2	1.3	0.11	0.049	15	15	15	13	13	13	14	15	15	0.99	0.44	13	13	13	13	13	13	13	13	0.055	0.024	
Dissolved oxygen	mg/L	-	12	12	12	12	12	12	12	12	12	0.23	0.10	10	10	10	10	10	10	10	10	10	0.22	0.098	11	11	11	11	11	11	11	11	0.045	0.020	
Dissolved oxygen	%	-	86	89	87	86	87	86	87	86	87	1.4	0.64	109	109	109	100	100	100	105	109	109	4.8	2.2	104	104	103	104	104	103	104	104	0.43	0.19	
Turbidity	NTU	-	1.0	1.1	0.94	1.1	0.95	0.94	1.0	1.0	1.1	0.061	0.027	0.43	0.20	0.29	0.51	0.63	0.20	0.41	0.43	0.63	0.17	0.077	0.24	0.25	0.27	0.18	0.24	0.18	0.24	0.24	0.27	0.034	0.015
Conventional Parameters																																			
pH	-	6.5 - 9.0	6.7	6.8	6.8	6.7	6.8	6.7	6.8	6.8	6.8	0.1	0.02	7.1	6.6	6.5	7.0	6.1 ^(A)	6.1	6.7	6.6	7.1	0.4	0.2	6.3 ^(A)	6.3 ^(A)	6.3 ^(A)	6.2 ^(A)	6.2 ^(A)	6.2	6.3	6.3	6.3	0.1	0.0
Specific conductivity	µS/cm	-	150	150	150	150	150	150	150	150	150	0	0	85	74	74	72	72	72	75	74	85	5.5	2.4	75	77	77	76	77	75	76	77	0.89	0.40	
Hardness, as CaCO ₃	mg/L	-	63	63	61	62	65	61	63	63	65	1.2	0.55	28	28	28	28	28	28	28	28	0.22	0.098	31	31	30	31	31	30	31	31	31	0.29	0.13	
Total alkalinity, as CaCO ₃	mg/L	-	7.3	7.5	7.6	7.5	7.5	7.3	7.5	7.5	7.6	0.11	0.048	9.9	4.4	4.0	4.5	4.9	4.0	5.5	4.5	9.9	2.5	1.1	5.0	4.9	5.0	5.1	5.0	4.9	5.0	5.1	0.068	0.030	
Total dissolved solids (measured)	mg/L	500	100	100	100	120	120	100	108	100	120	11	4.9	44	36	36	52	52	36	44	44	52	8.0	3.6	60	56	52	56	52	52	55	56	60	3.3	1.5
Total dissolved solids (APHA 2005) ^(B)	mg/L	500	85	85	84	84	85	84	85	85	85	0.68	0.30	43	40	39	39	40	39	40	40	43	1.8	0.80	41	41	41	41	41	41	41	41	0.16	0.070	
Total suspended solids	mg/L	8.0	<1.0	<1.0	<1.0	<0.99	<1.0	<0.99	0.50	<1.0	<1.0	-	-	1.3	<0.99	<1.0	<1.0	<1.0	<0.99	0.66	<1.0	1.3	-	-	1.1	<1.0	<1.0	1.6	<1.0	<1.0	0.84	<1.0	1.6	-	-
Total organic carbon	mg/L	-	5.0	4.9	5.1	4.9	5.2	4.9	5.0	5.0	5.2	0.13	0.058	4.3	4.2	4.1	3.7	3.6	3.6	4.0	4.1	4.3	0.31	0.14	4.5	4.2	4.2	4.5	4.2	4.2	4.3	4.2	4.5	0.16	0.073
Dissolved organic carbon	mg/L	-	5.0	5.1	5.1	5.1	5.4	5.0	5.1	5.1	5.4	0.15	0.068	5.2	3.8	5.1	3.7	3.9	3.7	4.3	3.9	5.2	0.74	0.33	4.4	4.3	4.0	4.2	4.3	4.0	4.2	4.3	4.4	0.15	0.068
Turbidity	NTU	-	0.10	<0.10	0.13	<0.10	<0.10	<0.10	0.076	<0.10	0.13	-	-	0.11	0.13	0.16	0.15	<0.10	<0.10	0.12	0.13	0.16	0.044	0.019	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	0.06	<0.10	0.11	-	-
Major Ions																																			
Calcium	mg/L	-	13	13	13	13	14	13	13	13	14	0.41	0.19	5.9	5.8	5.8	5.7	5.7	5.7	5.8	5.8	5.9	0.10	0.046	6.2	6.2	6.1	6.2	6.3	6.1	6.2	6.2	6.3	0.046	0.021
Chloride	mg/L	120	14	14	14	14	14	14	14	14	14	0	0	5.6	5.5	5.2	4.9	5.4	4.9	5.3	5.4	5.6	0.28	0.12	5.4	5.4	5.4	5.5	5.4	5.4	5.4	5.5	0.045	0.020	
Fluoride	mg/L	0.12	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0	0	0.025	0.025	0.023	0.024	0.028	0.023	0.025	0.025	0.028	0.0019	0.00084	0.015	0.014	0.014	0.014	<0.010	<0.010	0.012	0.014	0.015	0.0042	0.0019
Magnesium	mg/L	-	7.4	7.4	7.2	7.4	7.4	7.2	7.3	7.4	7.4	0.078	0.035	3.3	3.3	3.2	3.4	3.4	3.2	3.3	3.3	3.4	0.062	0.028	3.6	3.7	3.6	3.8	3.6	3.6	3.7	3.6	3.8	0.065	0.029
Potassium	mg/L	-	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	0.032	0.014	0.65	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.65	0.0075	0.0034	0.66	0.67	0.66	0.67	0.66	0.66	0.66	0.67	0.0043	0.0019	
Sodium	mg/L	-	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	0.039	0.017	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.012	0.0055	1.1	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.2	0.018	0.0080	
Sulphate	mg/L	128 - 216 ^(A)	33	33	33	33	33	33	33	33	33	0	0	17	17	17	17	17	17	17	17	17	0	0	18	18	18	18	18	18	18	18	18	0	0
Reactive silica	mg/L	-	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0	0	0.99	1.1	0.99	0.95	0.97	0.95	1.0	0.99	1.1	0.058	0.026	0.27	0.27	0.27	0.29	0.27	0.27	0.27	0.29	0.0089	0.0040	
Total cyanide	mg/L	0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	0.00050	0.00060	<0.00050	0.00037	<0.00050	0.00060	-	-	<0.00050	<0.00050	<0.00050	0.00055	<0.00050	<0.00050	0.00031	<0.00050	0.00055	-	-
Cyanide (free)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	0.00053	0.00066	<0.00050	0.00039	<0.00050	0.00066	-	-	<0.00050	<0.00050	<0.00050	<0.00050	0.00052	<0.00050	0.00030	<0.00050	0.00052	-	-
Cyanide (WAD)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	0.00051	0.00058	<0.00050	0.00037	<0.00050	0.00058	-	-	<0.00050	<0.00050	<0.00050	0.00058	0.00050	<0.00050					

Table D-2: Water Quality Results Compared to AEMP Benchma

Parameter	Unit	AEMP Benchmark	Stations					Summary Statistics					
			BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	BRP-32-5	September					
			13/Sep/25	14/Sep/25	14/Sep/25	14/Sep/25	14/Sep/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error
Easting	m	-	433690	433681	433673	433652	433653	-	-	-	-	-	-
Northing	m	-	7270849	7270890	7270944	7270835	7270898	-	-	-	-	-	-
Station depth	m	-	4.00	4.25	4.50	4.25	4.50	-	-	-	-	-	-
Field Measured													
pH	-	6.5 - 9.0	7.5	7.4	7.2	7.1	7.1	7.1	7.3	7.2	7.5	0.2	0.1
Specific conductivity	µS/cm	-	78	82	82	82	81	78	81	82	82	1.6	0.73
Temperature	°C	-	8.5	8.7	8.7	8.8	8.8	8.5	8.7	8.7	8.8	0.12	0.055
Dissolved oxygen	mg/L	-	12	12	12	12	12	12	12	12	12	0	0
Dissolved oxygen	%	-	102	102	102	102	102	102	102	102	102	0.18	0.080
Turbidity	NTU	-	0.32	0.25	0.25	0.26	0.28	0.25	0.27	0.26	0.32	0.029	0.013
Conventional Parameters													
pH	-	6.5 - 9.0	6.0 ^(A)	6.0 ^(A)	6.1 ^(A)	6.0 ^(A)	6.0 ^(A)	6.0	6.0	6.0	6.1	0.0	0.0
Specific conductivity	µS/cm	-	85	86	84	86	84	84	85	85	86	1.0	0.45
Hardness, as CaCO ₃	mg/L	-	32	33	33	33	33	32	33	33	33	0.26	0.12
Total alkalinity, as CaCO ₃	mg/L	-	6.2	6.0	6.1	6.1	5.9	5.9	6.1	6.1	6.2	0.12	0.052
Total dissolved solids (measured)	mg/L	500	28	36	24	32	32	24	30	32	36	4.6	2.0
Total dissolved solids (APHA 2005) ^(B)	mg/L	500	44	44	44	44	44	44	44	44	44	0.17	0.077
Total suspended solids	mg/L	8.0	1.3	<1.0	<1.0	1.3	<1.0	<1.0	0.82	<1.0	1.3	-	-
Total organic carbon	mg/L	-	4.8	4.6	4.9	4.8	4.6	4.6	4.7	4.8	4.9	0.13	0.060
Dissolved organic carbon	mg/L	-	4.2	4.4	4.5	4.2	4.2	4.2	4.3	4.2	4.5	0.14	0.063
Turbidity	NTU	-	0.13	0.15	0.14	0.14	0.11	0.11	0.13	0.14	0.15	0.015	0.0068
Major Ions													
Calcium	mg/L	-	6.7	6.8	6.7	6.8	6.7	6.7	6.8	6.7	6.8	0.045	0.020
Chloride	mg/L	120	6.0	6.0	6.4	6.1	6.4	6.0	6.2	6.1	6.4	0.20	0.092
Fluoride	mg/L	0.12	0.022	0.022	0.023	0.022	0.021	0.021	0.022	0.022	0.023	0.00071	0.00032
Magnesium	mg/L	-	3.8	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.9	0.038	0.017
Potassium	mg/L	-	0.76	0.76	0.76	0.76	0.75	0.75	0.76	0.76	0.76	0.0034	0.0015
Sodium	mg/L	-	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.4	0.010	0.0045
Sulphate	mg/L	128 - 218 ^(A)	19	19	19	19	19	19	19	19	19	0	0
Reactive silica	mg/L	-	<0.050	0.065	0.084	<0.050	0.190	<0.050	0.078	0.065	0.190	0.068	0.030
Total cyanide	mg/L	0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-
Cyanide (free)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-
Cyanide (WAD)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-
Nutrients													
Nitrate, as N	mg-N/L	2.9	0.52	0.52	0.51	0.52	0.50	0.50	0.51	0.52	0.52	0.0089	0.0040
Nitrite, as N	mg-N/L	0.060	0.0018	0.0018	0.0017	0.0018	0.0018	0.0017	0.0018	0.0018	0.0018	0.000045	0.000020
Nitrate + nitrite	mg-N/L	-	0.52	0.52	0.51	0.52	0.50	0.51	0.52	0.52	0.52	0.0089	0.0040
Total ammonia	mg-N/L	2.9 - 136 ^(B)	0.013	0.010	0.010	0.059	0.010	0.010	0.020	0.010	0.059	0.022	0.0097
Un-ionized ammonia	mg-N/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-
Total phosphorus	mg-P/L	0.010	0.0035	0.0019	0.0018	0.0017	0.0021	0.0017	0.0022	0.0019	0.0035	0.00074	0.00033
Dissolved phosphorus	mg-P/L	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-
Orthophosphate	mg-P/L	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-
Total Nitrogen	mg-N/L	-	0.86	0.82	0.81	0.80	0.77	0.81	0.81	0.81	0.86	0.033	0.015
Total Kjeldahl nitrogen	mg-N/L	-	0.34	0.30	0.30	0.28	0.27	0.27	0.30	0.30	0.34	0.027	0.012
Chlorophyll <i>a</i> (0.45 µm) ^(C)	µg/L	-	1.85	2.01	2.34	2.30	2.15	1.8	2.1	2.2	2.3	0.20	0.091
Chlorophyll <i>a</i> (1.2 µm) ^(D)	µg/L	-	2.65	2.68	2.88	-	-	2.7	2.7	2.7	2.9	0.13	0.073
Total Metals													
Aluminum	µg/L	240 - 620 ^(A, C, D)	11	10	11	10	9.8	9.8	10	10	11	0.42	0.19
Arsenic	µg/L	10	0.28	0.28	0.29	0.28	0.27	0.27	0.28	0.28	0.29	0.0088	0.0039
Barium	µg/L	1,000	10	11	10	10	10	10	10	10	11	0.11	0.051
Cadmium	µg/L	0.055 - 0.11 ^(A)	0.0066	0.0059	<0.0050	<0.0050	0.0059	<0.0050	0.0047	0.0059	0.0066	0.0020	0.00090
Chromium	µg/L	5 ^(E)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.05	<0.10	<0.10	-	-
Cobalt	µg/L	0.78 - 0.85 ^(B)	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.0011	0.00051
Copper	µg/L	4.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.034	0.015
Iron	µg/L	390 - 500 ^(C, D)	22	20	22	21	21	20	21	21	22	0.78	0.35
Lead	µg/L	6.2 - 9.0 ^(A, D)	0.0070	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0034	<0.0050	0.0070	-	-
Manganese	µg/L	-	3.1	3.0	3.1	3.0	3.0	3.0	3.1	3.0	3.1	0.059	0.027
Mercury	µg/L	0.026	0.00053	0.00073	0.00063	0.00056	0.00070	0.00053	0.00063	0.00063	0.00073	0.00009	0.00004
Molybdenum	µg/L	73	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.025	<0.050	<0.050	-	-
Nickel	µg/L	25 - 69 ^(A)	5.3	5.3	5.3	5.2	5.2	5.2	5.3	5.3	5.3	0.066	0.030
Selenium	µg/L	1.0	<0.040	<0.040	<0.040	<0.040	0.042	<0.040	0.024	<0.040	0.042	-	-
Silver	µg/L	0.25	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025	<0.0050	<0.0050	-	-
Strontium	µg/L	2,500	32	32	33	32	32	32	32	32	33	0.28	0.12
Thallium	µg/L	0.80	0.0021	0.0025	0.0029	0.0023	0.0024	0.0021	0.0024	0.0024	0.0029	0.00030	0.00013
Uranium	µg/L	15	0.0082	0.0088	0.0079	0.0087	0.0088	0.0079	0.0085	0.0087	0.0088	0.00041	0.00018
Vanadium	µg/L	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.10	<0.20	<0.20	-	-
Zinc	µg/L	-	0.56	0.51	0.56	0.50	0.53	0.50	0.53	0.53	0.56	0.028	0.012
Dissolved Metals													
Aluminum	µg/L	-	6.6	6.6	6.8	6.3	6.3	6.3	6.5	6.6	6.8	0.20	0.091
Arsenic	µg/L	-	0.27	0.27	0.29	0.26	0.28	0.26	0.27	0.27	0.29	0.010	0.0045
Barium	µg/L	-	9.8	9.9	9.9	10	9.9	9.8	9.9	9.9	10	0.071	0.032
Cadmium	µg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025	<0.0050	<0.0050	-	-
Chromium	µg/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.05	<0.10	<0.10	-	-
Cobalt	µg/L	-	0.10	0.098	0.10	0.100	0.11	0.098	0.10	0.10	0.11	0.0027	0.0012
Copper	µg/L	-	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.022	0.0097
Iron	µg/L	-	3.8	3.9	4.0	4.1	3.9	3.8	3.9	3.9	4.1	0.11	0.051
Lead	µg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025	<0.0050	<0.0050	-	-
Manganese	µg/L	350 - 430 ^(A, C, F)	0.88	0.94	0.94	0.94	0.88	0.93	0.94	0.94	0.94	0.025	0.011
Mercury	µg/L	-	0.00050	0.00053	0.00036	0.00035	0.00046	0.00035	0.00044	0.00046	0.00053	0.00008	0.00004
Molybdenum	µg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.025	<0.050	<0.050	-	-
Nickel	µg/L	-	5.0	5.1	5.0	5.1	5.1	5.0	5.0	5.1	5.1	0.042	0.019
Selenium	µg/L	-	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.020	<0.040	<0.040	-	-
Silver	µg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025	<0.0050	<0.0050	-	-
Strontium	µg/L	-	32	32	32	32	32	32	32	32	32	0.15	0.068
Thallium	µg/L	-	0.0023	0.0021	0.0025	0.0025	0.0026	0.0021	0.0024	0.0025	0.0026	0.00020	0.000089
Uranium	µg/L	-	0.0072	0.0064	0.0069	0.0067	0.0069	0.0064	0.0068	0.0069	0.0072	0.00029	0.00013
Vanadium	µg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.10	<0.20	<0.20	-	-
Zinc	µg/L	11 - 52 ^(A, C, D)	0.46	0.46	0.50	0.46	0.45	0.45	0.47	0.46	0.50	0.019	0.0087
Radionuclides													
Radium-226	Bq/L	0.11	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0025	<0.0050	<0.0050	-	-

Table D-3: Water Quality Results Compared to AEMP Benchmarks and Summary Statistics for Samples Collected in Reference B Lake, 2025

Parameter	Unit	AEMP Benchmark	Stations					Summary Statistics						Stations					Summary Statistics					
			BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	April						BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	July					
			17/Apr/25	16/Apr/27	16/Apr/25	16/Apr/25	16/Apr/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	12/Jul/25	12/Jul/25	12/Jul/25	12/Jul/25	12/Jul/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error
Easting	m	-	442060	442027	441961	441983	441990	-	-	-	-	-	-	442060	442027	441961	441983	441990	-	-	-	-	-	-
Northing	m	-	7258569	7258592	7258708	7258654	7258699	-	-	-	-	-	-	7258569	7258592	7258708	7258654	7258699	-	-	-	-	-	-
Station depth	m	-	4.00	3.75	4.50	3.75	3.75	-	-	-	-	-	-	3.90	3.80	4.00	3.50	3.50	-	-	-	-	-	-
Field Measured																								
pH	-	6.5 - 9.0	6.2 ^(A)	6.3 ^(A)	6.4 ^(A)	6.4 ^(A)	6.5	6.2	6.4	6.4	6.5	0.1	0.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	0.0	0.0
Specific conductivity	µS/cm	-	70	69	67	68	68	67	68	68	70	1.1	0.49	36	36	36	36	36	36	36	36	36	0.053	0.024
Temperature	°C	-	2.1	2.7	2.4	2.9	2.3	2.1	2.5	2.4	2.9	0.32	0.14	12	12	12	12	12	12	12	12	12	0.0	0.0
Dissolved oxygen	mg/L	-	13	11	13	11	12	11	12	12	13	1.1	0.49	10	10	10	10	10	10	10	10	10	0.055	0.024
Dissolved oxygen	%	-	96	80	95	80	88	80	88	88	96	7.6	3.4	100	100	100	100	100	100	100	100	100	0.19	0.086
Turbidity	NTU	-	0.99	0.94	0.94	0.92	0.98	0.92	0.95	0.94	0.99	0.030	0.013	0.43	0.54	0.45	0.45	0.48	0.43	0.47	0.45	0.54	0.043	0.019
Conventional Parameters																								
pH	-	6.5 - 9.0	7.2	7.3	7.2	7.3	7.2	7.2	7.2	7.2	7.3	0.1	0.0	6.4 ^(A)	6.3 ^(A)	6.3 ^(A)	6.4 ^(A)	6.3 ^(A)	6.3	6.3	6.3	6.4	0.1	0.0
Specific conductivity	µS/cm	-	74	71	72	71	72	71	72	72	74	1.2	0.55	31	31	31	31	31	31	31	31	31	0.0	0.0
Hardness, as CaCO ₃	mg/L	-	30	30	31	30	31	30	30	30	31	0.27	0.12	13	13	14	13	13	13	13	13	14	0.089	0.040
Total alkalinity, as CaCO ₃	mg/L	-	21	18	22	21	22	18	21	21	22	1.8	0.83	8.5	7.9	8.3	8.4	8.2	7.9	8.3	8.3	8.5	0.23	0.10
Total dissolved solids (measured)	mg/L	500	52	48	48	48	44	44	48	48	52	2.8	1.3	24	20	24	24	20	20	22	24	24	2.2	0.98
Total dissolved solids (APHA 2005) ^(B)	mg/L	500	39	37	40	38	39	37	38	39	40	1.2	0.52	16	16	16	16	17	16	16	16	17	0.39	0.17
Total suspended solids	mg/L	8.0	<1.0	1.1	<1.0	1.8	1.2	<1.0	1.0	1.1	1.8	0.54	0.24	2.3	<1.0	<1.0	1.8	1.7	<1.0	1.4	1.7	2.3	0.82	0.37
Total organic carbon	mg/L	-	5.3	5.0	5.0	5.0	5.0	5.0	5.1	5.0	5.3	0.13	0.060	2.9	2.9	2.6	3.0	3.0	2.6	2.9	2.9	3.0	0.16	0.073
Dissolved organic carbon	mg/L	-	4.6	4.7	4.5	4.7	4.8	4.5	4.7	4.7	4.8	0.11	0.051	3.2	3.3	3.1	3.3	3.0	3.0	3.2	3.2	3.3	0.13	0.058
Turbidity	NTU	-	0.10	<0.10	0.13	<0.10	0.13	<0.10	0.092	0.10	0.13	0.040	0.018	0.11	0.12	0.11	<0.10	0.14	<0.10	0.11	0.11	0.14	0.034	0.015
Major Ions																								
Calcium	mg/L	-	5.6	5.6	5.6	5.5	5.7	5.5	5.6	5.6	5.7	0.074	0.033	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.015	0.0066
Chloride	mg/L	120	0.57	0.56	0.75	0.63	0.69	0.56	0.64	0.63	0.75	0.081	0.036	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.25	<0.50	<0.50	-	-
Fluoride	mg/L	0.12	0.023	0.025	0.024	0.024	0.026	0.023	0.024	0.024	0.026	0.0011	0.00051	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.000	0.000
Magnesium	mg/L	-	4.0	4.0	4.1	4.0	4.0	4.0	4.0	4.0	4.1	0.031	0.014	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0089	0.0040
Potassium	mg/L	-	0.78	0.79	0.79	0.78	0.76	0.76	0.78	0.78	0.79	0.010	0.0046	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.0018	0.00081
Sodium	mg/L	-	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0089	0.0040	0.61	0.60	0.61	0.61	0.61	0.60	0.61	0.61	0.61	0.0052	0.0023
Sulphate	mg/L	128 - 218 ^(B)	12	12	12	12	12	12	12	12	12	0.0	0.0	4.8	5.0	4.9	4.8	4.9	4.8	4.9	4.9	5.0	0.084	0.037
Reactive silica	mg/L	-	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.4	0.045	0.020	0.36	0.38	0.39	0.37	1.1	0.36	0.52	0.38	1.1	0.32	0.15
Total cyanide	mg/L	0.0050	<0.00050	0.0048	<0.00050	<0.00050	<0.00050	<0.00050	0.0012	<0.00050	0.0048	-	-	0.00052	0.00064	0.00059	0.00071	0.00063	0.00052	0.00062	0.00063	0.00071	0.000070	0.000031
Cyanide (free)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	0.00060	0.00062	0.00055	0.00067	0.00074	0.00055	0.00064	0.00062	0.00074	0.000072	0.000032
Cyanide (WAD)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.0005	0.00064	0.00065	0.00083	0.00076	<0.00050	0.00063	0.00065	0.00083	0.00022	0.00010
Nutrients																								
Nitrate, as N	mg-N/L	2.9	0.025	0.026	0.025	0.020	0.025	0.020	0.024	0.025	0.026	0.0024	0.0011	<0.003	<0.003	0.0040	<0.003	0.0048	<0.003	0.0027	<0.003	0.0048	-	-
Nitrite, as N	mg-N/L	0.060	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00050	<0.0010	<0.0010	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00050	<0.0010	<0.0010	-	-
Nitrate + nitrite	mg-N/L	-	0.025	0.026	0.025	0.020	0.025	0.020	0.024	0.025	0.026	0.0024	0.0011	<0.003	<0.003	0.0040	<0.003	0.0048	<0.003	0.0027	<0.003	0.0048	-	-
Total ammonia	mg-N/L	1.3 - 100 ^(B)	0.16	0.16	0.15	0.16	0.16	0.15	0.16	0.16	0.16	0.0045	0.0020	0.0077	0.0080	0.0063	0.067	0.018	0.0063	0.021	0.0080	0.067	0.026	0.012
Un-ionized ammonia	mg-N/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0005	-	-
Total phosphorus	mg-P/L	0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-	0.0014	0.0017	0.0020	0.0028	0.0024	0.0014	0.0021	0.0020	0.0028	0.00055	0.00025
Dissolved phosphorus	mg-P/L	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00050	<0.001	<0.001	-
Orthophosphate	mg-P/L	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00050	<0.001	<0.001	-
Total Nitrogen	mg-N/L	-	0.60	0.51	0.52	0.61	0.56	0.51	0.56	0.56	0.61	0.045	0.020	0.26	0.25	0.27	0.26	0.28	0.25	0.26	0.26	0.28	0.011	0.0051
Total Kjeldahl nitrogen	mg-N/L	-	0.57	0.48	0.49	0.59	0.53	0.48	0.53	0.53	0.59	0.048	0.022	0.26	0.25	0.26	0.26	0.28	0.25	0.26	0.26	0.28	0.011	0.0049
Chlorophyll <i>a</i> (0.45 µm) ^(D)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	1.16	1.57	1.53	1.50	1.33	1.2	1.4	1.5	1.6	0.17	0.076
Chlorophyll <i>a</i> (1.2 µm) ^(D)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals																								
Aluminum	µg/L	170 - 620 ^(C, A, D)	6.5	5.5	6.5	6.6	3.4	3.4	5.7	6.5	6.6	1.3	0.60	11	9.4	8.9	9.9	9.2	8.9	9.7	9.4	11	0.78	0.35
Arsenic	µg/L	10	0.31	0.31	0.30	0.32	0.32	0.30	0.31	0.31	0.32	0.0055	0.0025	0.16	0.17	0.17	0.16	0.17	0.16	0.16	0.17	0.17	0.0054	0.0024
Barium	µg/L	1,000	10	10	10	10	10	10	10	10	10	0.17	0.074	4.0	4.1	4.2	4.1							

Table D-3: Water Quality Results Compared to AEMP Benchr

Parameter	Unit	AEMP Benchmark	Stations					Summary Statistics							Stations					Summary Statistics						
			BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	August							BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	September						
			16/Aug/25	16/Aug/25	16/Aug/25	16/Aug/25	16/Aug/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error	11/Sep/25	11/Sep/25	11/Sep/25	11/Sep/25	11/Sep/25	Minimum	Mean	Median	Maximum	Standard Deviation	Standard Error		
Easting	m	-	442060	442027	441961	441983	441990	-	-	-	-	-	-	-	442060	442027	441961	441983	441990	-	-	-	-	-	-	
Northing	m	-	7258569	7258592	7258708	7258654	7258699	-	-	-	-	-	-	-	7258569	7258592	7258708	7258654	7258699	-	-	-	-	-	-	
Station depth	m	-	3.75	3.50	3.50	3.50	3.50	-	-	-	-	-	-	-	3.50	3.50	3.75	3.50	3.50	-	-	-	-	-	-	
Field Measured																										
pH	-	6.5 - 9.0	7.5	7.5	7.7	7.5	7.5	7.5	7.5	7.5	7.7	0.1	0.0	-	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.4	0.0	0.0	
Specific conductivity	µS/cm	-	32	32	32	32	32	32	32	32	32	0.080	0.036	-	31	31	32	32	32	31	32	32	32	0.33	0.15	
Temperature	°C	-	14	14	13	14	14	13	14	14	14	0.15	0.068	-	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	0.0	0.0	
Dissolved oxygen	mg/L	-	11	11	11	11	11	11	11	11	11	0.055	0.024	-	12	12	12	12	12	12	12	12	12	0.0	0.0	
Dissolved oxygen	%	-	105	105	104	105	104	104	105	105	105	0.57	0.26	-	101	101	101	101	101	101	101	101	101	0.16	0.073	
Turbidity	NTU	-	0.070	0.11	0.060	0.12	0.12	0.060	0.096	0.11	0.12	0.029	0.013	-	0.20	0.21	0.15	0.22	0.21	0.15	0.20	0.21	0.22	0.028	0.012	
Conventional Parameters																										
pH	-	6.5 - 9.0	6.5	6.5	6.4 ^(A)	6.4 ^(A)	6.4 ^(A)	6.4	6.4	6.4	6.5	0.1	0.0	-	6.1 ^(A)	6.0 ^(A)	6.2 ^(A)	6.1 ^(A)	6.1 ^(A)	6.0	6.1	6.1	6.2	0.1	0.0	
Specific conductivity	µS/cm	-	32	32	32	32	33	32	32	32	33	0.45	0.20	-	33	33	33	33	33	33	33	33	33	0.0	0.0	
Hardness, as CaCO ₃	mg/L	-	13	13	13	14	13	13	13	13	14	0.071	0.032	-	14	14	14	14	14	14	14	14	14	0.13	0.058	
Total alkalinity, as CaCO ₃	mg/L	-	8.6	8.3	8.5	8.6	8.5	8.3	8.5	8.5	8.6	0.13	0.060	-	9.1	9.1	8.9	8.9	9.1	8.9	9.0	9.1	9.1	0.11	0.047	
Total dissolved solids (measured)	mg/L	500	36	24	32	28	36	24	31	32	36	5.2	2.3	-	20	16	20	16	16	16	18	16	20	2.2	0.98	
Total dissolved solids (APHA 2005) ^(h)	mg/L	500	16	16	16	16	16	16	16	16	16	0.16	0.071	-	17	17	17	17	17	17	17	17	17	0.24	0.11	
Total suspended solids	mg/L	8.0	<1.0	<1.0	<1.0	1.9	<1.0	<1.0	0.78	<1.0	1.9	-	-	-	1.5	1.6	<1.0	1.1	1.2	<1.0	1.2	1.2	1.6	0.43	0.19	
Total organic carbon	mg/L	-	3.0	3.0	3.1	3.1	3.1	3.0	3.1	3.1	3.1	0.055	0.024	-	3.9	3.7	3.7	3.6	3.7	3.6	3.7	3.7	3.9	0.11	0.049	
Dissolved organic carbon	mg/L	-	3.6	3.4	3.4	3.3	3.5	3.3	3.4	3.4	3.6	0.11	0.051	-	3.4	3.7	3.2	3.2	3.3	3.2	3.4	3.3	3.7	0.21	0.093	
Turbidity	NTU	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.050	<0.10	<0.10	-	-	-	<0.10	0.13	0.13	0.13	0.13	<0.10	0.11	0.13	0.13	0.036	0.016	
Major Ions																										
Calcium	mg/L	-	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.0084	0.0037	-	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.5	0.033	0.015	
Chloride	mg/L	120	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.25	<0.50	<0.50	-	-	-	0.61	0.95	0.64	0.58	0.92	0.58	0.74	0.64	0.95	0.18	0.080	
Fluoride	mg/L	0.12	0.022	0.022	0.022	0.022	0.023	0.022	0.022	0.022	0.023	0.00045	0.00020	-	0.019	0.020	0.021	0.020	0.019	0.019	0.020	0.020	0.021	0.00084	0.00037	
Magnesium	mg/L	-	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.015	0.0066	-	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.0	0.024	0.011	
Potassium	mg/L	-	0.35	0.35	0.35	0.35	0.34	0.34	0.35	0.35	0.35	0.0019	0.00086	-	0.35	0.36	0.37	0.37	0.36	0.35	0.36	0.36	0.37	0.0048	0.0021	
Sodium	mg/L	-	0.62	0.62	0.62	0.63	0.62	0.62	0.62	0.62	0.63	0.0049	0.0022	-	0.68	0.69	0.69	0.68	0.70	0.68	0.69	0.69	0.70	0.0086	0.0038	
Sulphate	mg/L	128 - 218 ^(d)	4.9	4.9	4.8	4.7	4.6	4.6	4.8	4.8	4.9	0.13	0.058	-	5.1	5.0	5.0	5.0	5.1	5.0	5.0	5.0	5.1	0.055	0.024	
Reactive silica	mg/L	-	0.13	0.17	0.20	0.19	0.19	0.13	0.18	0.19	0.20	0.028	0.012	-	0.22	0.21	0.22	0.21	0.26	0.21	0.22	0.22	0.26	0.021	0.093	
Total cyanide	mg/L	0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	-	0.00067	0.00070	0.00063	0.00068	0.00067	0.00063	0.00067	0.00067	0.00070	0.000025	0.000011	
Cyanide (free)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	-	0.00068	0.00078	0.00054	0.00052	0.00056	0.00052	0.00062	0.00056	0.00078	0.00011	0.000050	
Cyanide (WAD)	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	
Nutrients																										
Nitrate, as N	mg-N/L	2.9	0.016	<0.0030	<0.0030	0.044	<0.0030	<0.0030	0.0129	<0.0030	0.0440	-	-	-	0.0031	<0.003	0.0031	0.0042	<0.003	<0.003	0.0027	0.0031	0.0042	0.0012	0.00052	
Nitrite, as N	mg-N/L	0.060	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00050	<0.0010	<0.0010	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00050	<0.0010	<0.0010	-	-	
Nitrate + nitrite	mg-N/L	-	0.016	<0.0030	<0.0030	0.044	<0.0030	<0.0030	0.0129	<0.0030	0.044	-	-	-	0.0031	<0.003	0.0031	0.0042	<0.003	<0.003	0.0027	0.0031	0.0042	0.0012	0.00052	
Total ammonia	mg-N/L	1.3 - 100 ^(b)	<0.0050	<0.0050	0.0052	<0.0050	<0.0050	<0.0050	0.0030	<0.0050	0.0052	-	-	-	<0.005	<0.005	0.048	0.018	<0.005	<0.005	0.015	<0.005	0.048	-	-	
Un-ionized ammonia	mg-N/L	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00025	<0.00050	<0.00050	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0005	-	-	
Total phosphorus	mg-P/L	0.010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	0.0007	<0.0010	0.0015	-	-	-	0.0020	0.0017	0.0020	0.0026	0.0017	0.0017	0.0020	0.0020	0.0026	0.00037	0.00016	
Dissolved phosphorus	mg-P/L	-	0.0017	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.00086	<0.0010	0.0017	-	-	-	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	0.00062	<0.001	0.0011	-	-	
Orthophosphate	mg-P/L	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00050	<0.001	<0.001	-	-	
Total Nitrogen	mg-N/L	-	0.25	0.26	0.24	0.26	0.26	0.24	0.25	0.26	0.26	0.0089	0.0040	-	0.26	0.30	0.26	0.26	0.26	0.26	0.27	0.26	0.30	0.018	0.0080	
Total Kjeldahl nitrogen	mg-N/L	-	0.23	0.26	0.24	0.22	0.26	0.22	0.24	0.24	0.26	0.018	0.0080	-	0.26	0.30	0.26	0.25	0.26	0.25	0.27	0.26	0.30	0.019	0.0087	
Chlorophyll <i>a</i> (0.45 µm) ^(g)	µg/L	-	0.59	0.73	0.62	0.59	0.64	0.59	0.63	0.62	0.73	0.058	0.026	-	1.76	1.84	1.62	1.63	1.54	1.5	1.7	1.6	1.8	0.12	0.054	
Chlorophyll <i>a</i> (1.2 µm) ^(g)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	2.30	2.22	-	-	2.1	2.2	2.2	2.3	0.10	0.06	
Total Metals																										
Aluminum	µg/L	170 - 620 ^(c, a, d)	5.8	5.7	5.3	5.5	5.3	5.3	5.5	5.5	5.8	0.22	0.100	-	5.8	3.5	3.4	3.3	3.1	3.1	3.8	3.4				

Table D-4: Water Quality Results Compared to for Samples Collected to Support the Hydrodynamic Water Quality Model and for Investigative Purposes, 2025

Parameter	Unit	April												July		August		September	
		GLCB-B	GLCB-M	GLCB-T	GLSE-B	GLSE-M	GLSE-T	GLTL-B	GLTL-M	GLTL-T	GLWB-B	GLWB-M	GLWB-T	BRP-31-3	BRP-31-4	BRP-31-3	BRP-31-4	BRP-31-3	BRP-31-4
		15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	17/Apr/25	17/Apr/25	17/Apr/25	8/Jul/25	8/Jul/25	14/Aug/25	12/Aug/25	13/Sep/25
Easting	m	433664	433664	433664	434308	434308	434308	434612	434612	434612	431335	431335	431335	432072	432000	432072	432000	432072	432000
Northing	m	7270900	7270900	7270900	7270033	7270033	7270033	7271485	7271485	7271485	7269961	7269961	7269961	7269863	7269860	7269863	7269860	7269863	7269860
Station depth	m	4.5	4.5	4.5	4.5	4.5	4.5	5.5	5.5	5.5	4.5	4.5	4.5	3.5	3.2	3.5	3.0	3.5	3.5
Field Measured																			
pH	-	6.2	6.2	6.2	5.9	6.0	6.0	6.0	6.1	6.2	6.0	6.1	6.1	6.7	6.3	6.9	7.2	7.1	7.0
Specific conductivity	µS/cm	146	149	155	161	163	163	176	166	172	219	221	221	87	86	124	120	145	145
Temperature	°C	2.1	1.4	0.40	1.9	1.2	0.28	2.9	2.3	0.43	0.83	0.25	0.050	15	15	13	12	8.5	8.4
Dissolved oxygen	mg/L	10	12	13	11	13	14	4.2	6.2	10	9.1	12	12	10	10	11	11	11	11
Dissolved oxygen	%	78	85	89	90	94	98	32	46	91	65	83	86	108	109	103	108	101	101
Turbidity	NTU	1.1	1.0	0.54	1.1	0.55	0.92	0.71	0.62	0.77	1.1	0.96	0.95	0.44	0.55	0.11	0.20	0.32	0.52
Conventional Parameters																			
pH	-	5.9	6.0	6.0	6.0	6.8	7.0	6.0	6.9	6.0	6.8	6.8	6.8	6.5	6.5	6.0	6.2	6.0	6.0
Specific conductivity	µS/cm	150	150	150	150	160	160	170	170	170	220	220	220	120	120	130	120	160	160
Hardness, as CaCO ₃	mg/L	59	60	60	62	61	63	65	66	66	89	88	92	43	43	46	50	59	59
Total alkalinity, as CaCO ₃	mg/L	8.7	8.8	9.0	10	8.5	8.7	12	9.9	12	7.3	8.4	8.2	3.8	3.1	4.7	4.4	4.9	5.2
Total dissolved solids (measured)	mg/L	100	96	84	96	140	80	160	140	120	140	140	150	76	68	60	52	84	48
Total dissolved solids (APHA 2005) ^(a)	mg/L	85	84	86	90	89	91	86	92	95	122	123	124	65	63	69	68	84	84
Total suspended solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	1.1
Total organic carbon	mg/L	5.4	4.8	5.6	5.4	5.4	5.4	5.8	5.6	5.7	5.9	5.9	6.3	4.6	4.7	3.9	4.6	4.9	4.6
Dissolved organic carbon	mg/L	5.4	5.2	4.8	5.4	5.7	5.5	6.0	5.6	6.2	6.3	6.3	5.8	4.7	4.1	3.3	4.7	4.3	4.6
Turbidity	NTU	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.13	0.12	<0.10	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	0.12	0.12
Major Ions																			
Calcium	mg/L	13	13	13	14	14	14	15	15	15	19	20	20	9.6	9.6	10	11	13	13
Chloride	mg/L	13	13	13	14	14	15	16	16	16	25	24	25	11	9.7	14	13	19	19
Fluoride	mg/L	0.029	0.020	0.021	0.031	0.032	0.023	0.020	0.026	0.021	0.027	0.028	0.027	0.026	0.025	0.011	0.015	0.021	0.022
Magnesium	mg/L	6.4	6.4	6.5	6.7	6.7	6.9	6.8	7.0	7.1	9.8	9.9	10	4.6	4.5	4.8	5.4	6.3	6.2
Potassium	mg/L	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.6	1.6	1.7	1.3	1.3	1.2	1.2	1.4	1.4
Sodium	mg/L	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.8	2.8	2.9	1.9	1.9	1.9	1.9	2.3	2.3
Sulphate	mg/L	34	34	35	36	36	36	37	35	36	44	45	45	25	25	27	26	31	31
Reactive silica	mg/L	2.8	2.8	2.9	2.9	2.9	2.9	3.1	2.9	2.9	3.7	3.8	3.7	1.2	1.2	0.57	0.63	0.63	0.63
Total cyanide	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	<0.00050	<0.00050	0.00156	0.00157	0.00055	0.00064	<0.00050	<0.00050
Cyanide (free)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00166	0.00177	0.00065	0.00055	<0.00050	<0.00050
Cyanide (WAD)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00161	0.00155	0.00057	0.00064	<0.00050	<0.00050
Nutrients																			
Nitrate, as N	mg-N/L	1.4	1.3	1.4	1.4	1.5	1.5	1.3	1.3	1.5	2.4	2.4	2.3	1.8	1.7	1.5	1.4	1.6	1.6
Nitrite, as N	mg-N/L	0.13	0.13	0.11	0.054	0.039	0.039	0.27	0.21	0.11	0.068	0.071	0.058	0.0070	0.0070	0.0063	0.0041	0.0040	0.0037
Nitrate + nitrite	mg-N/L	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.6	2.4	2.5	2.4	1.8	1.7	1.5	1.4	1.6	1.6
Total ammonia	mg-N/L	0.17	0.15	0.18	0.24	0.25	0.24	0.035	0.13	0.23	0.29	0.33	0.34	0.23	0.24	0.15	0.16	0.18	0.18
Un-ionized ammonia	mg-N/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00052	<0.0005	<0.0005
Total phosphorus	mg-P/L	0.0029	0.0022	0.0058	0.0025	0.0024	0.0031	0.0058	0.0018	0.0019	0.0031	0.0016	0.0014	<0.0010	<0.0010	<0.0010	0.0027	0.0014	0.0032
Dissolved phosphorus	mg-P/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010
Orthophosphate	mg-P/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
Total Nitrogen	mg-N/L	1.8	1.8	1.9	1.9	2	2	1.8	1.9	2	2.7	3.3	3	2.2	2.2	2	1.8	2	1.9
Total Kjeldahl nitrogen	mg-N/L	0.33	0.32	0.35	0.43	0.47	0.41	0.26	0.38	0.39	0.31	0.8	0.65	0.36	0.47	0.44	0.4	0.34	0.34
Chlorophyll <i>a</i> (0.45 µm) ^(b)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.86	0.92	0.80	0.86	1.1	1.3
Total Metals																			
Aluminum	µg/L	21	24	23	37	26	27	18	20	21	34	33	38	44	45	26	25	22	22
Arsenic	µg/L	0.35	0.36	0.35	0.36	0.38	0.41	0.37	0.37	0.38	0.39	0.39	0.42	0.39	0.37	0.34	0.33	0.35	0.35
Barium	µg/L	22	22	22	24	23	24	26	27	27	33	33	33	17	17	17	17	19	19
Cadmium	µg/L	0.016	0.016	0.017	0.018	0.018	0.022	0.015	0.017	0.015	0.053	0.053	0.056	0.023	0.024	0.018	0.021	0.022	0.025
Chromium	µg/L	0.16	0.23	0.15	0.20	0.17	0.23	0.16	0.21	0.16	0.18	0.19	0.24	0.19	0.19	0.14	0.12	<0.10</	

Table D-4: Water Quality Results Compared to for Samples Collected to Support the Hydrodynamic Water Quality Model and for Investigative Purposes, 2025

Parameter	Unit	April												July		August		September	
		GLCB-B	GLCB-M	GLCB-T	GLSE-B	GLSE-M	GLSE-T	GLTL-B	GLTL-M	GLTL-T	GLWB-B	GLWB-M	GLWB-T	BRP-31-3	BRP-31-4	BRP-31-3	BRP-31-4	BRP-31-3	BRP-31-4
		15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	15/Apr/25	17/Apr/25	17/Apr/25	17/Apr/25	8/Jul/25	8/Jul/25	14/Aug/25	12/Aug/25	13/Sep/25
Dissolved Metals																			
Aluminum	µg/L	17	16	17	17	18	18	14	16	16	29	29	31	32	33	13	17	13	14
Arsenic	µg/L	0.34	0.34	0.33	0.34	0.37	0.37	0.34	0.34	0.35	0.37	0.34	0.42	0.34	0.37	0.33	0.33	0.32	0.31
Barium	µg/L	22	22	22	24	24	24	27	27	27	33	33	33	16	17	16	17	18	19
Cadmium	µg/L	0.017	0.018	0.016	0.017	0.018	0.020	0.012	0.014	0.017	0.055	0.050	0.054	0.020	0.021	0.018	0.019	0.026	0.025
Chromium	µg/L	0.14	0.14	0.14	0.15	0.19	0.18	0.14	0.15	0.15	0.15	0.15	0.18	0.17	0.15	<0.10	0.11	0.10	<0.10
Cobalt	µg/L	0.20	0.20	0.20	0.21	0.19	0.17	0.16	0.18	0.19	0.93	0.93	0.98	0.77	0.77	0.49	0.92	1.1	1.1
Copper	µg/L	2.4	2.5	2.4	2.5	2.7	2.8	2.4	2.5	2.7	3.1	3.1	3.5	2.5	2.6	2.0	2.3	2.2	2.2
Iron	µg/L	8.2	8.0	7.9	12	12	13	9.2	9.7	9.9	9.7	10	11	6.9	7.1	4.8	11	5.7	5.2
Lead	µg/L	0.025	0.042	0.0065	0.0099	0.037	0.18	0.026	0.16	0.79	0.039	0.067	1.5	0.0032	0.0040	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	µg/L	6.1	6.4	6.2	7.9	5.8	4.5	4.5	5.0	5.1	22	22	22	12	12	5.9	13	16	17
Mercury	µg/L	0.00095	0.00263	0.00062	0.00172	0.00292	0.00122	0.00083	0.00070	0.00230	0.00087	0.00744	0.00114	0.00115	0.00130	0.00159	0.00138	0.00059	0.00068
Molybdenum	µg/L	0.025	0.029	0.026	0.027	0.027	0.032	0.020	0.021	0.022	0.022	0.023	0.029	0.030	0.032	<0.050	<0.050	<0.050	<0.050
Nickel	µg/L	12	12	12	12	12	12	10	11	11	19	19	20	8.3	8.3	7.3	8.1	9.6	9.5
Selenium	µg/L	0.060	0.056	0.062	0.059	0.055	0.054	0.051	0.054	0.057	0.082	0.071	0.077	0.075	0.074	0.048	0.062	<0.040	0.055
Silver	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050
Strontium	µg/L	59	60	61	63	63	64	67	68	72	102	103	104	48	49	59	57	74	73
Thallium	µg/L	0.0031	0.0031	0.0028	0.0026	0.0035	0.0037	0.0028	0.0031	0.0027	0.0049	0.0055	0.0052	0.0060	0.0053	0.0042	0.0047	0.0046	0.0049
Uranium	µg/L	0.011	0.010	0.010	0.010	0.012	0.010	0.0091	0.0097	0.010	0.013	0.013	0.014	0.014	0.014	0.0069	0.0084	0.0084	0.0081
Vanadium	µg/L	0.044	0.044	0.044	0.046	0.047	0.055	0.041	0.044	0.043	0.046	0.045	0.049	0.035	0.031	<0.20	<0.20	<0.20	<0.20
Zinc	µg/L	3.0	3.5	4.6	3.1	4.1	5.8	2.3	2.6	3.3	8.8	8.5	10	2.3	2.4	1.6	2.0	2.7	2.5
Radionuclides																			
Radium-226	Bq/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050

^(a) Total dissolved solids calculated by WSP using the Standard Method by APHA (2005): Total dissolved solids mg/L = Σ[Na⁺, K⁺, Ca²⁺, Mg²⁺, Cl⁻, F⁻, SO₄²⁻, 4.427 * NO₃⁻ (as nitrogen), 0.6 * total alkalinity (as CaCO₃), 1.266 * SiO₂].

^(b) Chlorophyll *a* concentration results shown as average of three replicates.

- no data; B = bottom, M = Middle, T = top; CaCO₃ = calcium carbonate; µS/cm = microsiemens per centimetre; NTU = nephelometric turbidity units; WAD = weak acid dissociable; mg-N/L = milligrams nitrogen per litre; mg-P/L = milligram phosphorus per litre.

Reference: APHA (American Public Health Association). 2005. Standard Methods for Examination of Water and Wastewater. Standard Methods of Water Analysis, American Public Health Association, New York, NY, USA.

Table D-5: Chlorophyll a Results per Replicate and Averages at Goose Lake and Reference B Lake, 2025

Location	Filter Size	Station ^(a)	Sample Date	Unit	Volume Filtered (L)	Chlorophyll a Concentration (µg/L)	Average Chlorophyll a Concentration (µg/L)
Goose Lake West Basin at Goose Lake Inflow	0.45 µm	BRP-29A-1A	8-Jul-25	µg/L	0.99	1.2	1.01
		BRP-29A-1B	8-Jul-25	µg/L	1.00	0.95	
		BRP-29A-1C	8-Jul-25	µg/L	0.60	<0.88	
		BRP-29A-2A	8-Jul-25	µg/L	1.00	0.77	0.64
		BRP-29A-2B	8-Jul-25	µg/L	1.00	0.63	
		BRP-29A-2C	8-Jul-25	µg/L	1.00	<0.53	
		BRP-29A-3A	8-Jul-25	µg/L	1.00	0.79	0.69
		BRP-29A-3B	8-Jul-25	µg/L	1.00	0.69	
		BRP-29A-3C	8-Jul-25	µg/L	1.00	0.58	
		BRP-29A-4A	8-Jul-25	µg/L	1.00	0.85	0.70
		BRP-29A-4B	8-Jul-25	µg/L	0.975	0.71	
		BRP-29A-4C	8-Jul-25	µg/L	1.00	0.54	
		BRP-29A-5A	9-Jul-25	µg/L	1.00	0.94	0.90
		BRP-29A-5B	9-Jul-25	µg/L	1.00	0.88	
		BRP-29A-5C	9-Jul-25	µg/L	1.00	0.89	
		BRP-29A-1A	12-Aug-25	µg/L	1.00	1	0.94
		BRP-29A-1B	12-Aug-25	µg/L	1.00	0.82	
		BRP-29A-1C	12-Aug-25	µg/L	1.00	1	
		BRP-29A-2A	12-Aug-25	µg/L	1.10	0.65	0.78
		BRP-29A-2B	12-Aug-25	µg/L	0.90	0.84	
		BRP-29A-2C	12-Aug-25	µg/L	1.00	0.86	
		BRP-29A-3A	12-Aug-25	µg/L	1.00	0.88	0.79
		BRP-29A-3B	12-Aug-25	µg/L	1.00	0.82	
		BRP-29A-3C	12-Aug-25	µg/L	1.00	0.66	
		BRP-29A-4A	12-Aug-25	µg/L	1.00	0.8	0.75
		BRP-29A-4B	12-Aug-25	µg/L	1.00	0.72	
		BRP-29A-4C	12-Aug-25	µg/L	0.90	0.73	
		BRP-29A-5A	12-Aug-25	µg/L	1.00	0.83	0.71
		BRP-29A-5B	12-Aug-25	µg/L	1.00	0.6	
		BRP-29A-5C	12-Aug-25	µg/L	1.00	0.71	
		BRP-29A-1A	10-Sep-25	µg/L	1.00	0.99	1.09
		BRP-29A-1B	10-Sep-25	µg/L	1.00	1.09	
		BRP-29A-1C	10-Sep-25	µg/L	1.00	1.19	
		BRP-29A-2A	10-Sep-25	µg/L	0.50	1.02	1.06
		BRP-29A-2B	10-Sep-25	µg/L	1.00	1.07	
		BRP-29A-2C	10-Sep-25	µg/L	1.00	1.08	
		BRP-29A-3A	10-Sep-25	µg/L	1.00	1.1	1.10
		BRP-29A-3B	10-Sep-25	µg/L	1.00	1.16	
		BRP-29A-3C	10-Sep-25	µg/L	1.00	1.05	
		BRP-29A-4A	13-Sep-25	µg/L	1.00	1.4	1.31
		BRP-29A-4B	13-Sep-25	µg/L	1.00	1.31	
		BRP-29A-4C	13-Sep-25	µg/L	1.00	1.22	
		BRP-29A-5A	13-Sep-25	µg/L	1.00	1.4	1.34
		BRP-29A-5B	13-Sep-25	µg/L	1.00	1.45	
		BRP-29A-5C	13-Sep-25	µg/L	1.00	1.17	
	1.2 µm	BRP-29A-1A	10-Sep-25	µg/L	1.00	1.74	1.25
		BRP-29A-1B	10-Sep-25	µg/L	1.00	1.18	
		BRP-29A-1C	10-Sep-25	µg/L	1.00	0.84	
		BRP-29A-2A	10-Sep-25	µg/L	0.50	1.68	1.65
		BRP-29A-2B	10-Sep-25	µg/L	1.00	1.53	
		BRP-29A-2C	10-Sep-25	µg/L	1.00	1.75	
		BRP-29A-3A	10-Sep-25	µg/L	1.00	1.56	1.63
		BRP-29A-3B	10-Sep-25	µg/L	1.00	1.74	
		BRP-29A-3C	10-Sep-25	µg/L	1.00	1.59	
Goose Lake West Basin at Echo Outflow	0.45 µm	BRP-31-3A	9-Jul-25	µg/L	1.00	0.9	0.86
		BRP-31-3B	9-Jul-25	µg/L	1.00	0.85	
		BRP-31-3C	9-Jul-25	µg/L	1.00	0.84	
		BRP-31-4A	9-Jul-25	µg/L	1.00	0.8	0.92
		BRP-31-4B	9-Jul-25	µg/L	1.00	1	
		BRP-31-4C	9-Jul-25	µg/L	1.00	0.97	
		BRP-31-3A	14-Aug-25	µg/L	1.00	0.83	0.80
		BRP-31-3B	14-Aug-25	µg/L	1.00	0.93	
		BRP-31-3C	14-Aug-25	µg/L	1.00	0.65	
		BRP-31-4A	12-Aug-25	µg/L	1.00	0.94	0.86
		BRP-31-4B	12-Aug-25	µg/L	1.00	<0.53	
		BRP-31-4C	12-Aug-25	µg/L	1.00	1.1	
		BRP-31-3A	13-Sep-25	µg/L	1.00	1.25	1.13
		BRP-31-3B	13-Sep-25	µg/L	1.00	1.15	
		BRP-31-3C	13-Sep-25	µg/L	1.00	1	
		BRP-31-4A	13-Sep-25	µg/L	1.00	1.26	1.27
		BRP-31-4B	13-Sep-25	µg/L	1.00	1.38	
		BRP-31-4C	13-Sep-25	µg/L	1.00	1.16	

Table D-5: Chlorophyll a Results per Replicate and Averages at Goose Lake and Reference B Lake, 2025

Location	Filter Size	Station ^(a)	Sample Date	Unit	Volume Filtered (L)	Chlorophyll a Concentration (µg/L)	Average Chlorophyll a Concentration (µg/L)
Goose Lake Central Basin	0.45 µm	BRP-32-1A	9-Jul-25	µg/L	1.00	0.86	0.79
		BRP-32-1B	9-Jul-25	µg/L	1.00	0.75	
		BRP-32-1C	9-Jul-25	µg/L	1.00	0.75	
		BRP-32-2A	9-Jul-25	µg/L	1.00	0.82	0.91
		BRP-32-2B	9-Jul-25	µg/L	1.00	0.91	
		BRP-32-2C	9-Jul-25	µg/L	1.00	1	
		BRP-32-3A	9-Jul-25	µg/L	1.00	0.87	0.89
		BRP-32-3B	9-Jul-25	µg/L	1.00	0.83	
		BRP-32-3C	9-Jul-25	µg/L	1.00	0.98	
		BRP-32-4A	11/Jul/25	µg/L	1.00	0.56	0.81
		BRP-32-4B	11/Jul/25	µg/L	1.00	0.77	
		BRP-32-4C	11/Jul/25	µg/L	1.00	1.1	
		BRP-32-5A	11/Jul/25	µg/L	1.00	1.1	0.99
		BRP-32-5B	11/Jul/25	µg/L	1.00	1.1	
		BRP-32-5C	11/Jul/25	µg/L	1.00	0.77	
		BRP-32-1A	13/Aug/25	µg/L	1.00	2.1	1.97
		BRP-32-1B	13/Aug/25	µg/L	1.00	2	
		BRP-32-1C	13/Aug/25	µg/L	1.00	1.8	
		BRP-32-2A	13/Aug/25	µg/L	1.00	2.1	2.03
		BRP-32-2B	13/Aug/25	µg/L	1.00	2	
		BRP-32-2C	13/Aug/25	µg/L	1.00	2	
		BRP-32-3A	13/Aug/25	µg/L	1.00	1.6	1.83
		BRP-32-3B	13/Aug/25	µg/L	1.00	1.8	
		BRP-32-3C	13/Aug/25	µg/L	1.00	2.1	
		BRP-32-4A	13/Aug/25	µg/L	1.00	1.9	1.97
		BRP-32-4B	13/Aug/25	µg/L	1.00	2	
		BRP-32-4C	13/Aug/25	µg/L	1.00	2	
		BRP-32-5A	13/Aug/25	µg/L	1.00	2	1.87
		BRP-32-5B	13/Aug/25	µg/L	1.00	1.7	
		BRP-32-5C	13/Aug/25	µg/L	1.00	1.9	
		BRP-32-1A	13/Sep/25	µg/L	1.00	2.13	1.85
		BRP-32-1B	13/Sep/25	µg/L	1.00	1.68	
		BRP-32-1C	13/Sep/25	µg/L	1.00	1.73	
		BRP-32-2A	14/Sep/25	µg/L	1.00	2.09	2.01
		BRP-32-2B	14/Sep/25	µg/L	1.00	2.04	
		BRP-32-2C	14/Sep/25	µg/L	1.00	1.91	
		BRP-32-3A	14/Sep/25	µg/L	1.00	2.21	2.34
		BRP-32-3B	14/Sep/25	µg/L	1.00	2.26	
		BRP-32-3C	14/Sep/25	µg/L	1.00	2.54	
		BRP-32-4A	14/Sep/25	µg/L	1.00	2.57	2.30
		BRP-32-4B	14/Sep/25	µg/L	1.00	2.19	
		BRP-32-4C	14/Sep/25	µg/L	1.00	2.13	
		BRP-32-5A	14/Sep/25	µg/L	1.00	2.28	2.15
		BRP-32-5B	14/Sep/25	µg/L	1.00	2	
		BRP-32-5C	14/Sep/25	µg/L	1.00	2.18	
	1.2 µm	BRP-32-1A-1.2	13/Sep/25	µg/L	1.00	2.64	2.65
		BRP-32-1B-1.2	13/Sep/25	µg/L	1.00	2.75	
		BRP-32-1C-1.2	13/Sep/25	µg/L	1.00	2.56	
		BRP-32-2A-1.2	14/Sep/25	µg/L	1.00	2.96	2.68
		BRP-32-2B-1.2	14/Sep/25	µg/L	1.00	2.8	
		BRP-32-2C-1.2	14/Sep/25	µg/L	1.00	2.28	
		BRP-32-3A-1.2	14/Sep/25	µg/L	1.00	2.72	2.88
		BRP-32-3B-1.2	14/Sep/25	µg/L	1.00	2.71	
		BRP-32-3C-1.2	14/Sep/25	µg/L	1.00	3.22	

Table D-5: Chlorophyll a Results per Replicate and Averages at Goose Lake and Reference B Lake, 2025

Location	Filter Size	Station ^(a)	Sample Date	Unit	Volume Filtered (L)	Chlorophyll a Concentration (µg/L)	Average Chlorophyll a Concentration (µg/L)
Reference B Lake	0.45 µm	BRP-38-1A	12/Jul/25	µg/L	1.00	0.88	1.16
		BRP-38-1B	12/Jul/25	µg/L	0.95	0.8	
		BRP-38-1C	12/Jul/25	µg/L	1.00	1.8	
		BRP-38-2A	12/Jul/25	µg/L	0.85	1.4	1.57
		BRP-38-2B	12/Jul/25	µg/L	0.75	1.6	
		BRP-38-2C	12/Jul/25	µg/L	0.70	1.7	
		BRP-38-3A	12/Jul/25	µg/L	0.50	1.6	1.53
		BRP-38-3B	12/Jul/25	µg/L	1.00	1.4	
		BRP-38-3C	12/Jul/25	µg/L	0.80	1.6	
		BRP-38-4A	12/Jul/25	µg/L	0.50	1.5	1.50
		BRP-38-4B	12/Jul/25	µg/L	0.50	1.4	
		BRP-38-4C	12/Jul/25	µg/L	0.50	1.6	
		BRP-38-5A	12/Jul/25	µg/L	0.50	1.6	1.33
		BRP-38-5B	12/Jul/25	µg/L	0.50	1.3	
		BRP-38-5C	12/Jul/25	µg/L	0.50	<1.1	
		BRP-38-1A	16/Aug/25	µg/L	1.00	<0.53	0.59
		BRP-38-1B	16/Aug/25	µg/L	1.00	0.56	
		BRP-38-1C	16/Aug/25	µg/L	1.00	0.67	
		BRP-38-2A	16/Aug/25	µg/L	1.00	0.74	0.73
		BRP-38-2B	16/Aug/25	µg/L	1.00	0.73	
		BRP-38-2C	16/Aug/25	µg/L	1.00	0.72	
		BRP-38-3A	16/Aug/25	µg/L	1.00	0.67	0.62
		BRP-38-3B	16/Aug/25	µg/L	1.00	0.66	
		BRP-38-3C	16/Aug/25	µg/L	1.00	<0.53	
		BRP-38-4A	16/Aug/25	µg/L	1.00	<0.53	0.59
		BRP-38-4B	16/Aug/25	µg/L	1.00	0.72	
		BRP-38-4C	16/Aug/25	µg/L	1.00	<0.53	
		BRP-38-5A	16/Aug/25	µg/L	1.00	<0.53	0.64
		BRP-38-5B	16/Aug/25	µg/L	1.00	0.85	
		BRP-38-5C	16/Aug/25	µg/L	1.00	<0.53	
		BRP-38-1A	11/Sep/25	µg/L	1.00	1.97	1.76
		BRP-38-1B	11/Sep/25	µg/L	1.00	1.64	
		BRP-38-1C	11/Sep/25	µg/L	1.00	1.68	
		BRP-38-2A	11/Sep/25	µg/L	1.00	1.93	1.84
		BRP-38-2B	11/Sep/25	µg/L	1.00	1.59	
		BRP-38-2C	11/Sep/25	µg/L	1.00	2.01	
		BRP-38-3A	11/Sep/25	µg/L	1.00	1.76	1.62
		BRP-38-3B	11/Sep/25	µg/L	0.50	1.43	
		BRP-38-3C	11/Sep/25	µg/L	0.50	1.68	
		BRP-38-4A	11/Sep/25	µg/L	0.50	1.61	1.63
		BRP-38-4B	11/Sep/25	µg/L	0.50	1.5	
		BRP-38-4C	11/Sep/25	µg/L	0.50	1.79	
		BRP-38-5A	11/Sep/25	µg/L	0.50	1.45	1.54
		BRP-38-5B	11/Sep/25	µg/L	0.50	1.41	
		BRP-38-5C	11/Sep/25	µg/L	0.50	1.77	
	1.2 µm	BRP-38-1A-1.2	11/Sep/25	µg/L	1.00	1.82	2.10
		BRP-38-1B-1.2	11/Sep/25	µg/L	1.00	2.18	
		BRP-38-1C-1.2	11/Sep/25	µg/L	1.00	2.3	
		BRP-38-2A-1.2	11/Sep/25	µg/L	1.00	2.22	2.30
		BRP-38-2B-1.2	11/Sep/25	µg/L	1.00	2.33	
		BRP-38-2C-1.2	11/Sep/25	µg/L	1.00	2.36	
		BRP-38-3A-1.2	11/Sep/25	µg/L	1.00	2.07	2.22
		BRP-38-3B-1.2	11/Sep/25	µg/L	0.50	2.36	
		BRP-38-3C-1.2	11/Sep/25	µg/L	0.50	2.22	

(a) A, B, C in the station name represents the replicate and 1.2 represents the 1.2 µm filter used.

Table D-6: Detailed Statistical Results of the Before-After Control-Impact Analysis, 2025

Parameter	Exposure Area	Sampling Month	Statistical Method	Model	Test Statistic	P-value	BACI Difference	Percent Effect
Calcium	West Bay	Apr	Censored Regression	Gumbel	-39	<0.001	-12	-744
Chloride	West Bay	Apr	Censored Regression	Weibull	-14	<0.001	-16	3,729
Dissolved Aluminum	West Bay	Apr	Censored Regression	Weibull	-6.8	<0.001	-2.9	558
Dissolved Barium	West Bay	Apr	Censored Regression	t	-18	<0.001	-20	-1,034
Dissolved Cadmium	West Bay	Apr	Semi-Parametric Regression	-	-2.3	0.028	nc	nc
Dissolved Cobalt	West Bay	Apr	Censored Regression	t	-7.2	<0.001	-0.60	2,688
Dissolved Manganese	West Bay	Apr	Censored Regression	Log-logistic	-11	<0.001	-21	636
Dissolved Mercury	West Bay	Apr	Censored Regression	Log-logistic	0.15	0.884	-0.00053	nc
Dissolved Molybdenum	West Bay	Apr	Semi-Parametric Regression	-	-4.2	<0.001	nc	nc
Dissolved Nickel	West Bay	Apr	Censored Regression	Weibull	-17	<0.001	-11	-3,775
Dissolved Selenium	West Bay	Apr	Censored Regression	Log-normal	-12	<0.001	-0.050	2,143
Dissolved Strontium	West Bay	Apr	Censored Regression	Gumbel	-48	<0.001	-69	-2,314
Dissolved Thallium	West Bay	Apr	Censored Regression	Gumbel	-135	<0.001	-0.0035	5,862
Dissolved Vanadium	West Bay	Apr	Censored Regression	Weibull	-49	<0.001	-0.015	1,260
Dissolved Zinc	West Bay	Apr	Censored Regression	t	-59	<0.001	-6.8	2,686
Magnesium	West Bay	Apr	Censored Regression	Gumbel	-32	<0.001	-5.7	-651
Nitrate	West Bay	Apr	Censored Regression	t	-45	<0.001	-2.2	-16,553
Nitrite	West Bay	Apr	Semi-Parametric Regression	-	-9.8	<0.001	nc	nc
Potassium	West Bay	Apr	Censored Regression	t	-78	<0.001	-0.89	-496
Reactive Silica	West Bay	Apr	Censored Regression	Gumbel	-9.7	<0.001	-0.96	572
Sulphate	West Bay	Apr	Censored Regression	t	-26	<0.001	-28	-738
Total Aluminum	West Bay	Apr	Censored Regression	Weibull	2.4	0.018	-9.4	-278
Total Ammonia	West Bay	Apr	Censored Regression	Weibull	-21	<0.001	-0.23	-369
Total Arsenic	West Bay	Apr	Censored Regression	t	-2.0	0.056	-0.097	-260
Total Barium	West Bay	Apr	Censored Regression	Log-logistic	-11	<0.001	-20	-945
Total Cadmium	West Bay	Apr	Censored Regression	Log-logistic	-21	<0.001	-0.036	-4,124
Total Cobalt	West Bay	Apr	Censored Regression	t	-8.3	<0.001	-0.53	-281
Total Copper	West Bay	Apr	Censored Regression	Log-logistic	-0.56	0.579	-0.61	nc
Total Dissolved Solids (APHA 2005)	West Bay	Apr	Censored Regression	Log-normal	-34	<0.001	-76	-810
Total Molybdenum	West Bay	Apr	Semi-Parametric Regression	-	-2.7	0.009	nc	nc
Calculated Total Nitrogen	West Bay	Apr	Censored Regression	t	-112	<0.001	-2.4	-1,203
Total Nickel	West Bay	Apr	Censored Regression	Weibull	-12	<0.001	-11	-3,746
Total Phosphorus	West Bay	Apr	Semi-Parametric Regression	-	-2.5	0.017	nc	nc
Total Selenium	West Bay	Apr	Censored Regression	Weibull	-34	<0.001	-0.053	-2,088
Total Strontium	West Bay	Apr	Censored Regression	Weibull	-20	<0.001	-68	-2,551
Total Thallium	West Bay	Apr	Censored Regression	Gumbel	-44	<0.001	-0.0034	21,914
Total Zinc	West Bay	Apr	Censored Regression	t	-27	<0.001	-4.5	-312
Calcium	Central Basin	Apr	Censored Regression	t	-19	<0.001	-6.6	-406
Chloride	Central Basin	Apr	Censored Regression	Log-logistic	-17	<0.001	-11	2,904
Dissolved Aluminum	Central Basin	Apr	Censored Regression	Log-logistic	-2.5	0.016	-7.6	7,827
Dissolved Barium	Central Basin	Apr	Censored Regression	Gumbel	-39	<0.001	-11	-624
Dissolved Cadmium	Central Basin	Apr	Semi-Parametric Regression	-	-4.6	<0.001	nc	nc
Dissolved Cobalt	Central Basin	Apr	Censored Regression	t	-64	<0.001	-0.17	2,914
Dissolved Manganese	Central Basin	Apr	Censored Regression	Log-logistic	-15	<0.001	-8.8	258
Dissolved Mercury	Central Basin	Apr	Censored Regression	Log-logistic	0.38	0.707	-0.00025	nc
Dissolved Molybdenum	Central Basin	Apr	Semi-Parametric Regression	-	-4.5	<0.001	nc	nc
Dissolved Nickel	Central Basin	Apr	Censored Regression	Log-logistic	-4.5	<0.001	-5.4	-1,411
Dissolved Selenium	Central Basin	Apr	Censored Regression	Gaussian	-9.3	<0.001	-0.026	1,117
Dissolved Strontium	Central Basin	Apr	Censored Regression	t	-20	<0.001	-35	-1,108
Dissolved Thallium	Central Basin	Apr	Semi-Parametric Regression	-	-4.1	<0.001	nc	nc
Dissolved Vanadium	Central Basin	Apr	Censored Regression	Log-logistic	-1.6	0.127	-0.014	nc
Dissolved Zinc	Central Basin	Apr	Censored Regression	t	-7.8	<0.001	-2.3	837
Magnesium	Central Basin	Apr	Censored Regression	Gumbel	-17	<0.001	-3.4	-381
Nitrate	Central Basin	Apr	Censored Regression	t	-133	<0.001	-1.3	-7,600
Nitrite	Central Basin	Apr	Semi-Parametric Regression	-	-47	<0.001	nc	nc
Potassium	Central Basin	Apr	Censored Regression	t	-23	<0.001	-0.50	-277
Reactive Silica	Central Basin	Apr	Censored Regression	t	-4.6	<0.001	-1.9	1,691
Sulphate	Central Basin	Apr	Censored Regression	Gumbel	-15	<0.001	-17	-569
Total Aluminum	Central Basin	Apr	Censored Regression	Log-normal	3.4	0.001	-8.1	-223
Total Ammonia	Central Basin	Apr	Censored Regression	Gumbel	-8.8	<0.001	-0.071	-113
Total Arsenic	Central Basin	Apr	Censored Regression	t	-0.87	0.386	-0.026	nc
Total Barium	Central Basin	Apr	Censored Regression	Gumbel	-29	<0.001	-10	-504
Total Cadmium	Central Basin	Apr	Censored Regression	Log-logistic	-6.3	<0.001	-0.0092	-1,038
Total Cobalt	Central Basin	Apr	Censored Regression	t	1.0	0.308	0.016	nc
Total Copper	Central Basin	Apr	Censored Regression	Log-logistic	0.24	0.811	-0.14	nc
Total Dissolved Solids (APHA 2005)	Central Basin	Apr	Censored Regression	Gumbel	-28	<0.001	-40	-450
Total Molybdenum	Central Basin	Apr	Semi-Parametric Regression	-	-4.2	<0.001	nc	nc
Total Nickel	Central Basin	Apr	Censored Regression	Log-logistic	-3.9	<0.001	-5.3	-1,195
Total Nitrogen	Central Basin	Apr	Semi-Parametric Regression	-	-8.5	<0.001	nc	nc
Total Phosphorus	Central Basin	Apr	Semi-Parametric Regression	-	-2.8	0.008	nc	nc
Total Selenium	Central Basin	Apr	Censored Regression	Gaussian	-7.4	<0.001	-0.018	-590
Total Strontium	Central Basin	Apr	Censored Regression	t	-14	<0.001	-34	-1,140
Total Thallium	Central Basin	Apr	Censored Regression	Gumbel	-4.9	<0.001	-0.00062	1,892
Total Zinc	Central Basin	Apr	Censored Regression	t	-2.5	0.018	-0.75	-52
Calcium	West Bay	Jul	Censored Regression	Log-logistic	-6.2	<0.001	-5.1	-754
Chloride	West Bay	Jul	Semi-Parametric Regression	-	-4.5	<0.001	nc	nc
Chlorophyll a	West Bay	Jul	Censored Regression	Log-normal	48	<0.001	0.70	70
Dissolved Aluminum	West Bay	Jul	Censored Regression	Log-logistic	-4.5	<0.001	-21	-1,046
Dissolved Arsenic	West Bay	Jul	Censored Regression	t	-12	<0.001	-0.12	791
Dissolved Barium	West Bay	Jul	Censored Regression	Log-logistic	-10	<0.001	-8.0	-844
Dissolved Cadmium	West Bay	Jul	Semi-Parametric Regression	-	-2.2	0.033	nc	nc
Dissolved Chromium	West Bay	Jul	Semi-Parametric Regression	-	-2.9	0.005	nc	nc
Dissolved Cobalt	West Bay	Jul	Censored Regression	Log-logistic	-6.0	<0.001	-0.66	5,629
Dissolved Copper	West Bay	Jul	Censored Regression	t	-18	<0.001	-1.1	-1,257
Dissolved Manganese	West Bay	Jul	Censored Regression	Weibull	-6.9	<0.001	-9.0	2,302
Dissolved Mercury	West Bay	Jul	Semi-Parametric Regression	-	-1.9	0.059	nc	nc
Dissolved Molybdenum	West Bay	Jul	Semi-Parametric Regression	-	-2.9	0.005	nc	nc
Dissolved Nickel	West Bay	Jul	Censored Regression	Log-normal	-7.0	<0.001	-4.2	-1,211
Dissolved Selenium	West Bay	Jul	Semi-Parametric Regression	-	-4.7	<0.001	nc	nc
Dissolved Strontium	West Bay	Jul	Censored Regression	Log-logistic	-7.2	<0.001	-28	-2,041
Dissolved Thallium	West Bay	Jul	Semi-Parametric Regression	-	-1.8	0.083	nc	nc
Dissolved Uranium	West Bay	Jul	Semi-Parametric Regression	-	-2.5	0.016	nc	nc
Dissolved Zinc	West Bay	Jul	Semi-Parametric Regression	-	-4.8	<0.001	nc	nc
Magnesium	West Bay	Jul	Censored Regression	t	-14	<0.001	-2.0	-402
Nitrate	West Bay	Jul	Semi-Parametric Regression	-	-3.4	0.001	nc	nc
Nitrite	West Bay	Jul	Semi-Parametric Regression	-	-3.7	<0.001	nc	nc
Potassium	West Bay	Jul	Censored Regression	t	-67	<0.001	-0.85	-4,731
Reactive Silica	West Bay	Jul	Censored Regression	t	-13	<0.001	-0.71	269
Sodium	West Bay	Jul	Censored Regression	t	-33	<0.001	-1.1	-13,696
Sulphate	West Bay	Jul	Censored Regression	t	-42	<0.001	-16	-1,280
Total Aluminum	West Bay	Jul	Censored Regression	t	-39	<0.001	-24	-432
Total Ammonia	West Bay	Jul	Semi-Parametric Regression	-	-0.36	0.722	nc	nc
Total Arsenic	West Bay	Jul	Censored Regression	Log-logistic	-12	<0.001	-0.13	4,487
Total Barium	West Bay	Jul	Censored Regression	Log-logistic	-9.4	<0.001	-7.9	-704
Total Cadmium	West Bay	Jul	Semi-Parametric Regression	-	-2.1	0.040	nc	nc
Total Chromium	West Bay	Jul	Semi-Parametric Regression	-	-0.90	0.369	nc	nc

Table D-6: Detailed Statistical Results of the Before-After Control-Impact Analysis, 2025

Parameter	Exposure Area	Sampling Month	Statistical Method	Model	Test Statistic	P-value	BACI Difference	Percent Effect
Total Cobalt	West Bay	Jul	Censored Regression	Log-logistic	-5.0	<0.001	-0.60	-2,450
Total Copper	West Bay	Jul	Censored Regression	t	-19	<0.001	-1.1	-643
Total Dissolved Solids (APHA 2005)	West Bay	Jul	Censored Regression	t	-58	<0.001	-40	-1,368
Total Manganese	West Bay	Jul	Censored Regression	Log-logistic	-7.6	<0.001	-8.5	-677
Total Mercury	West Bay	Jul	Semi-Parametric Regression	-	3.3	0.001	nc	nc
Total Molybdenum	West Bay	Jul	Semi-Parametric Regression	-	-7.7	<0.001	nc	nc
Total Nickel	West Bay	Jul	Censored Regression	Log-normal	-4.0	<0.001	-4.3	-947
Total Nitrogen	West Bay	Jul	Censored Regression	t	-340	<0.001	-2.0	-9,386
Total Phosphorus	West Bay	Jul	Semi-Parametric Regression	-	0.89	0.375	nc	nc
Total Selenium	West Bay	Jul	Semi-Parametric Regression	-	-5.3	<0.001	nc	nc
Total Strontium	West Bay	Jul	Censored Regression	Log-logistic	-6.6	<0.001	-28	-2,027
Total Thallium	West Bay	Jul	Semi-Parametric Regression	-	-0.64	0.526	nc	nc
Total Uranium	West Bay	Jul	Semi-Parametric Regression	-	-1.0	0.310	nc	nc
Total Vanadium	West Bay	Jul	Semi-Parametric Regression	-	-0.54	0.591	nc	nc
Total Zinc	West Bay	Jul	Censored Regression	Log-normal	-17	<0.001	-1.8	440
Calcium	Central Basin	Jul	Censored Regression	Log-normal	-5.6	<0.001	-2.4	-344
Chloride	Central Basin	Jul	Semi-Parametric Regression	-	-4.8	<0.001	nc	nc
Chlorophyll a	Central Basin	Jul	Censored Regression	Weibull	9.8	<0.001	0.68	70
Dissolved Aluminum	Central Basin	Jul	Censored Regression	Log-logistic	-3.2	0.002	-8.6	-428
Dissolved Arsenic	Central Basin	Jul	Censored Regression	t	-9.8	<0.001	-0.043	280
Dissolved Barium	Central Basin	Jul	Censored Regression	Log-logistic	-7.5	<0.001	-4.0	-420
Dissolved Cadmium	Central Basin	Jul	Semi-Parametric Regression	-	-3.3	0.001	nc	nc
Dissolved Chromium	Central Basin	Jul	Semi-Parametric Regression	-	-3.0	0.004	nc	nc
Dissolved Cobalt	Central Basin	Jul	Censored Regression	Log-normal	-5.5	<0.001	-0.094	704
Dissolved Copper	Central Basin	Jul	Censored Regression	t	-4.6	<0.001	-0.37	-444
Dissolved Manganese	Central Basin	Jul	Censored Regression	Weibull	-13	<0.001	-1.9	472
Dissolved Mercury	Central Basin	Jul	Semi-Parametric Regression	-	-1.7	0.100	nc	nc
Dissolved Nickel	Central Basin	Jul	Censored Regression	Log-normal	-12	<0.001	-2.9	-827
Dissolved Selenium	Central Basin	Jul	Semi-Parametric Regression	-	-3.5	<0.001	nc	nc
Dissolved Strontium	Central Basin	Jul	Censored Regression	Log-logistic	-6.4	<0.001	-11	-808
Dissolved Thallium	Central Basin	Jul	Semi-Parametric Regression	-	-4.6	<0.001	nc	nc
Dissolved Uranium	Central Basin	Jul	Semi-Parametric Regression	-	-4.9	<0.001	nc	nc
Dissolved Zinc	Central Basin	Jul	Semi-Parametric Regression	-	-3.9	<0.001	nc	nc
Magnesium	Central Basin	Jul	Censored Regression	Gaussian	-18	<0.001	-1.2	-248
Nitrate	Central Basin	Jul	Semi-Parametric Regression	-	-5.8	<0.001	nc	nc
Nitrite	Central Basin	Jul	Semi-Parametric Regression	-	-6.9	<0.001	nc	nc
Potassium	Central Basin	Jul	Censored Regression	Log-logistic	-16	<0.001	-0.26	-1,410
Reactive Silica	Central Basin	Jul	Censored Regression	t	-67	<0.001	-0.92	332
Sodium	Central Basin	Jul	Censored Regression	t	-18	<0.001	-0.42	-4,583
Sulphate	Central Basin	Jul	Censored Regression	Gumbel	-66	<0.001	-9.5	-1,329
Total Aluminum	Central Basin	Jul	Censored Regression	Log-logistic	-3.9	<0.001	-13	-244
Total Ammonia	Central Basin	Jul	Semi-Parametric Regression	-	-1.9	0.059	nc	nc
Total Arsenic	Central Basin	Jul	Censored Regression	Gaussian	-11	<0.001	-0.052	1,415
Total Barium	Central Basin	Jul	Censored Regression	Log-logistic	-6.7	<0.001	-4.0	-360
Total Cadmium	Central Basin	Jul	Semi-Parametric Regression	-	-4.6	<0.001	nc	nc
Total Chromium	Central Basin	Jul	Semi-Parametric Regression	-	-0.77	0.441	nc	nc
Total Cobalt	Central Basin	Jul	Censored Regression	Weibull	-12	<0.001	-0.13	-533
Total Copper	Central Basin	Jul	Censored Regression	t	-18	<0.001	-0.45	-271
Total Dissolved Solids (APHA 2005)	Central Basin	Jul	Censored Regression	Weibull	-21	<0.001	-20	-886
Total Manganese	Central Basin	Jul	Censored Regression	t	-7.5	<0.001	-0.86	-73
Total Mercury	Central Basin	Jul	Semi-Parametric Regression	-	5.9	<0.001	nc	nc
Total Molybdenum	Central Basin	Jul	Semi-Parametric Regression	-	-8.6	<0.001	nc	nc
Total Nickel	Central Basin	Jul	Censored Regression	Log-normal	-11	<0.001	-3.0	-648
Total Nitrogen	Central Basin	Jul	Censored Regression	t	-68	<0.001	-0.64	-2,993
Total Phosphorus	Central Basin	Jul	Semi-Parametric Regression	-	-0.051	0.960	nc	nc
Total Selenium	Central Basin	Jul	Semi-Parametric Regression	-	-2.2	0.030	nc	nc
Total Strontium	Central Basin	Jul	Censored Regression	Log-logistic	-6.5	<0.001	-11	-810
Total Thallium	Central Basin	Jul	Semi-Parametric Regression	-	-2.6	0.010	nc	nc
Total Uranium	Central Basin	Jul	Semi-Parametric Regression	-	-1.9	0.060	nc	nc
Total Vanadium	Central Basin	Jul	Semi-Parametric Regression	-	-0.42	0.675	nc	nc
Total Zinc	Central Basin	Jul	Censored Regression	Weibull	-29	<0.001	-0.79	156
Calcium	West Bay	Aug	Censored Regression	Log-logistic	-9.8	<0.001	-8.7	-1,319
Chloride	West Bay	Aug	Semi-Parametric Regression	-	-4.5	<0.001	nc	nc
Chlorophyll a	West Bay	Aug	Censored Regression	Log-normal	-7.0	<0.001	-0.100	-46
Dissolved Aluminum	West Bay	Aug	Censored Regression	Log-logistic	-7.4	<0.001	-13	10,585
Dissolved Arsenic	West Bay	Aug	Censored Regression	t	-7.6	<0.001	-0.079	-13,478
Dissolved Barium	West Bay	Aug	Censored Regression	Log-logistic	-17	<0.001	-11	-2,578
Dissolved Cadmium	West Bay	Aug	Semi-Parametric Regression	-	-2.4	0.018	nc	nc
Dissolved Chromium	West Bay	Aug	Semi-Parametric Regression	-	1.0	0.298	nc	nc
Dissolved Cobalt	West Bay	Aug	Censored Regression	Log-logistic	-7.3	<0.001	-1.3	13,645
Dissolved Copper	West Bay	Aug	Censored Regression	t	-16	<0.001	-1.1	-1,042
Dissolved Manganese	West Bay	Aug	Censored Regression	Weibull	-13	<0.001	-20	3,765
Dissolved Mercury	West Bay	Aug	Semi-Parametric Regression	-	0.59	0.560	nc	nc
Dissolved Nickel	West Bay	Aug	Censored Regression	Log-normal	-14	<0.001	-6.1	-3,216
Dissolved Selenium	West Bay	Aug	Semi-Parametric Regression	-	-2.7	0.009	nc	nc
Dissolved Strontium	West Bay	Aug	Censored Regression	Log-logistic	-11	<0.001	-50	-2,852
Dissolved Thallium	West Bay	Aug	Semi-Parametric Regression	-	-3.9	<0.001	nc	nc
Dissolved Uranium	West Bay	Aug	Semi-Parametric Regression	-	-4.2	<0.001	nc	nc
Dissolved Zinc	West Bay	Aug	Semi-Parametric Regression	-	-5.0	<0.001	nc	nc
Magnesium	West Bay	Aug	Censored Regression	t	-25	<0.001	-3.6	-702
Nitrate	West Bay	Aug	Semi-Parametric Regression	-	-1.6	0.115	nc	nc
Nitrite	West Bay	Aug	Semi-Parametric Regression	-	-3.3	0.002	nc	nc
Potassium	West Bay	Aug	Censored Regression	t	-83	<0.001	-0.94	-2,824
Reactive Silica	West Bay	Aug	Censored Regression	Log-logistic	-18	<0.001	-0.51	110
Sodium	West Bay	Aug	Censored Regression	t	-43	<0.001	-1.4	-5,838
Sulphate	West Bay	Aug	Censored Regression	t	-55	<0.001	-20	-1,812
Total Aluminum	West Bay	Aug	Censored Regression	t	-26	<0.001	-15	-1,144
Total ammonia	West Bay	Aug	Semi-Parametric Regression	-	-3.1	0.003	nc	nc
Total Arsenic	West Bay	Aug	Censored Regression	t	-13	<0.001	-0.085	5,872
Total Barium	West Bay	Aug	Censored Regression	Log-logistic	-16	<0.001	-11	-2,573
Total Cadmium	West Bay	Aug	Semi-Parametric Regression	-	-5.2	<0.001	nc	nc
Total Chromium	West Bay	Aug	Semi-Parametric Regression	-	-0.55	0.582	nc	nc
Total Cobalt	West Bay	Aug	Censored Regression	Log-logistic	-7.4	<0.001	-1.2	-2,826
Total Copper	West Bay	Aug	Censored Regression	t	-18	<0.001	-1.0	-743
Total Dissolved Solids (APHA 2005)	West Bay	Aug	Censored Regression	t	-84	<0.001	-58	-2,227
Total Manganese	West Bay	Aug	Censored Regression	t	-141	<0.001	-18	-680
Total Mercury	West Bay	Aug	Semi-Parametric Regression	-	1.9	0.057	nc	nc
Total Molybdenum	West Bay	Aug	Semi-Parametric Regression	-	1.5	0.151	nc	nc
Total Nickel	West Bay	Aug	Censored Regression	Log-normal	-9.7	<0.001	-6.2	-2,974
Total Nitrogen	West Bay	Aug	Censored Regression	t	-1,853	<0.001	-2.3	-19,102
Total Phosphorus	West Bay	Aug	Semi-Parametric Regression	-	0.038	0.970	nc	nc
Total Selenium	West Bay	Aug	Semi-Parametric Regression	-	-3.7	<0.001	nc	nc
Total Strontium	West Bay	Aug	Censored Regression	Log-logistic	-10.0	<0.001	-51	-2,771
Total Thallium	West Bay	Aug	Semi-Parametric Regression	-	-4.6	<0.001	nc	nc
Total Uranium	West Bay	Aug	Semi-Parametric Regression	-	-2.9	0.006	nc	nc
Total Vanadium	West Bay	Aug	Semi-Parametric Regression	-	2.2	0.033	nc	nc

Table D-6: Detailed Statistical Results of the Before-After Control-Impact Analysis, 2025

Parameter	Exposure Area	Sampling Month	Statistical Method	Model	Test Statistic	P-value	BACI Difference	Percent Effect
Total Zinc	West Bay	Aug	Censored Regression	Log-normal	-28	<0.001	-2.2	434
Calcium	Central Basin	Aug	Censored Regression	Log-normal	-6.7	<0.001	-2.8	-419
Chloride	Central Basin	Aug	Semi-Parametric Regression	-	-4.8	<0.001	nc	nc
Chlorophyll a	Central Basin	Aug	Censored Regression	Weibull	-15	<0.001	-1.2	-815
Dissolved Aluminum	Central Basin	Aug	Censored Regression	Log-logistic	-7.3	<0.001	-4.5	3,649
Dissolved Arsenic	Central Basin	Aug	Censored Regression	t	-8.1	<0.001	-0.035	-4,545
Dissolved Barium	Central Basin	Aug	Censored Regression	Log-logistic	-9.6	<0.001	-4.1	-935
Dissolved Cadmium	Central Basin	Aug	Semi-Parametric Regression	-	-0.23	0.820	nc	nc
Dissolved Chromium	Central Basin	Aug	Semi-Parametric Regression	-	0.95	0.346	nc	nc
Dissolved Cobalt	Central Basin	Aug	Censored Regression	Log-normal	-4.7	<0.001	-0.078	684
Dissolved Copper	Central Basin	Aug	Censored Regression	t	-5.5	<0.001	-0.45	-445
Dissolved Manganese	Central Basin	Aug	Censored Regression	Weibull	-17	<0.001	-0.78	141
Dissolved Mercury	Central Basin	Aug	Semi-Parametric Regression	-	0.28	0.781	nc	nc
Dissolved Nickel	Central Basin	Aug	Censored Regression	Log-normal	-13	<0.001	-2.4	-1,257
Dissolved Selenium	Central Basin	Aug	Semi-Parametric Regression	-	-1.4	0.152	nc	nc
Dissolved Strontium	Central Basin	Aug	Censored Regression	Log-logistic	-6.3	<0.001	-12	-672
Dissolved Thallium	Central Basin	Aug	Semi-Parametric Regression	-	-3.3	0.001	nc	nc
Dissolved Uranium	Central Basin	Aug	Semi-Parametric Regression	-	-5.2	<0.001	nc	nc
Dissolved Zinc	Central Basin	Aug	Semi-Parametric Regression	-	-3.0	0.004	nc	nc
Magnesium	Central Basin	Aug	Censored Regression	Gaussian	-23	<0.001	-1.6	-297
Nitrate	Central Basin	Aug	Semi-Parametric Regression	-	-3.9	<0.001	nc	nc
Nitrite	Central Basin	Aug	Semi-Parametric Regression	-	-3.7	<0.001	nc	nc
Potassium	Central Basin	Aug	Censored Regression	Log-logistic	-16	<0.001	-0.27	-815
Reactive Silica	Central Basin	Aug	Censored Regression	Weibull	-17	<0.001	-0.41	82
Sodium	Central Basin	Aug	Censored Regression	t	-20	<0.001	-0.48	-1,920
Sulphate	Central Basin	Aug	Censored Regression	Gumbel	-74	<0.001	-11	-1,708
Total Aluminum	Central Basin	Aug	Censored Regression	Log-logistic	-3.7	<0.001	-4.7	-357
Total Ammonia	Central Basin	Aug	Semi-Parametric Regression	-	-4.5	<0.001	nc	nc
Total Arsenic	Central Basin	Aug	Censored Regression	Gaussian	-12	<0.001	-0.056	2,473
Total Barium	Central Basin	Aug	Censored Regression	Log-logistic	-9.4	<0.001	-4.4	-997
Total Cadmium	Central Basin	Aug	Semi-Parametric Regression	-	-3.7	<0.001	nc	nc
Total Chromium	Central Basin	Aug	Semi-Parametric Regression	-	-0.88	0.381	nc	nc
Total Cobalt	Central Basin	Aug	Censored Regression	Weibull	-1.3	0.213	-0.063	nc
Total Copper	Central Basin	Aug	Censored Regression	t	-22	<0.001	-0.51	-366
Total Dissolved Solids (APHA 2005)	Central Basin	Aug	Censored Regression	Weibull	-23	<0.001	-20	-1,091
Total Manganese	Central Basin	Aug	Censored Regression	t	16	<0.001	2.0	76
Total Mercury	Central Basin	Aug	Semi-Parametric Regression	-	4.5	<0.001	nc	nc
Total Molybdenum	Central Basin	Aug	Semi-Parametric Regression	-	-0.30	0.763	nc	nc
Total Nickel	Central Basin	Aug	Censored Regression	Log-normal	-17	<0.001	-2.7	-1,275
Total Nitrogen	Central Basin	Aug	Censored Regression	t	-66	<0.001	-0.59	-5,107
Total Phosphorus	Central Basin	Aug	Semi-Parametric Regression	-	-0.23	0.820	nc	nc
Total Selenium	Central Basin	Aug	Semi-Parametric Regression	-	-0.84	0.403	nc	nc
Total Strontium	Central Basin	Aug	Censored Regression	Log-logistic	-6.7	<0.001	-13	-694
Total Thallium	Central Basin	Aug	Semi-Parametric Regression	-	-5.3	<0.001	nc	nc
Total Uranium	Central Basin	Aug	Semi-Parametric Regression	-	-6.0	<0.001	nc	nc
Total Vanadium	Central Basin	Aug	Semi-Parametric Regression	-	1.1	0.294	nc	nc
Total Zinc	Central Basin	Aug	Censored Regression	Weibull	-29	<0.001	-0.37	61
Calcium	West Bay	Sep	Censored Regression	Log-logistic	-9.3	<0.001	-8.9	-1,074
Chloride	West Bay	Sep	Semi-Parametric Regression	-	0.67	0.502	nc	nc
Chlorophyll a	West Bay	Sep	Censored Regression	Log-normal	35	<0.001	0.45	40
Dissolved Aluminum	West Bay	Sep	Censored Regression	Log-logistic	-4.3	<0.001	-3.6	795
Dissolved Arsenic	West Bay	Sep	Censored Regression	t	-7.2	<0.001	-0.074	-5,059
Dissolved Barium	West Bay	Sep	Censored Regression	Log-logistic	-18	<0.001	-10	-5,712
Dissolved Cadmium	West Bay	Sep	Semi-Parametric Regression	-	-2.3	0.025	nc	nc
Dissolved Chromium	West Bay	Sep	Semi-Parametric Regression	-	1.0	0.310	nc	nc
Dissolved Cobalt	West Bay	Sep	Censored Regression	Log-logistic	-6.0	<0.001	-0.93	11,333
Dissolved Copper	West Bay	Sep	Censored Regression	t	-9.0	<0.001	-0.63	-678
Dissolved Manganese	West Bay	Sep	Censored Regression	Weibull	-8.6	<0.001	-15	3,523
Dissolved Mercury	West Bay	Sep	Semi-Parametric Regression	-	-0.81	0.418	nc	nc
Dissolved Nickel	West Bay	Sep	Censored Regression	Log-normal	-13	<0.001	-5.5	-2,909
Dissolved Selenium	West Bay	Sep	Semi-Parametric Regression	-	-1.7	0.091	nc	nc
Dissolved Strontium	West Bay	Sep	Censored Regression	Log-logistic	-11	<0.001	-50	-3,238
Dissolved Thallium	West Bay	Sep	Semi-Parametric Regression	-	-3.9	<0.001	nc	nc
Dissolved Uranium	West Bay	Sep	Semi-Parametric Regression	-	-4.4	<0.001	nc	nc
Dissolved Zinc	West Bay	Sep	Semi-Parametric Regression	-	-4.8	<0.001	nc	nc
Magnesium	West Bay	Sep	Censored Regression	t	-23	<0.001	-3.4	-564
Nitrate	West Bay	Sep	Semi-Parametric Regression	-	-2.5	0.016	nc	nc
Nitrite	West Bay	Sep	Semi-Parametric Regression	-	-3.3	0.002	nc	nc
Potassium	West Bay	Sep	Censored Regression	Log-logistic	-23	<0.001	-0.91	-1,915
Reactive Silica	West Bay	Sep	Censored Regression	Log-logistic	-11	<0.001	-0.26	61
Sodium	West Bay	Sep	Censored Regression	t	-36	<0.001	-1.4	-1,584
Sulphate	West Bay	Sep	Censored Regression	t	-49	<0.001	-19	-1,412
Total Aluminum	West Bay	Sep	Censored Regression	t	-11	<0.001	-6.5	1,302
Total Ammonia	West Bay	Sep	Semi-Parametric Regression	-	-1.6	0.109	nc	nc
Total Arsenic	West Bay	Sep	Censored Regression	Log-logistic	-7.4	<0.001	-0.082	-1,079
Total Barium	West Bay	Sep	Censored Regression	Log-logistic	-17	<0.001	-11	-3,334
Total Cadmium	West Bay	Sep	Semi-Parametric Regression	-	-4.3	<0.001	nc	nc
Total Chromium	West Bay	Sep	Semi-Parametric Regression	-	1.7	0.092	nc	nc
Total Cobalt	West Bay	Sep	Censored Regression	Log-logistic	-10	<0.001	-0.93	-18,000
Total Copper	West Bay	Sep	Censored Regression	t	-12	<0.001	-0.70	-576
Total Dissolved Solids (APHA 2005)	West Bay	Sep	Censored Regression	Log-logistic	-14	<0.001	-54	-1,430
Total Manganese	West Bay	Sep	Censored Regression	Log-logistic	-17	<0.001	-14	-11,761
Total Mercury	West Bay	Sep	Semi-Parametric Regression	-	-1.4	0.172	nc	nc
Total Molybdenum	West Bay	Sep	Semi-Parametric Regression	-	1.5	0.151	nc	nc
Total Nickel	West Bay	Sep	Censored Regression	Log-normal	-9.7	<0.001	-5.7	-3,499
Total Nitrogen	West Bay	Sep	Censored Regression	Log-logistic	-410	<0.001	-1.9	-6,946
Total Phosphorus	West Bay	Sep	Semi-Parametric Regression	-	-0.36	0.724	nc	nc
Total Selenium	West Bay	Sep	Semi-Parametric Regression	-	-3.4	0.001	nc	nc
Total Strontium	West Bay	Sep	Censored Regression	Log-logistic	-10	<0.001	-52	-2,775
Total Thallium	West Bay	Sep	Semi-Parametric Regression	-	-4.7	<0.001	nc	nc
Total Uranium	West Bay	Sep	Semi-Parametric Regression	-	-4.5	<0.001	nc	nc
Total Vanadium	West Bay	Sep	Semi-Parametric Regression	-	2.2	0.033	nc	nc
Total Zinc	West Bay	Sep	Censored Regression	Log-normal	-18	<0.001	-1.8	415
Calcium	Central Basin	Sep	Censored Regression	Log-normal	-6.9	<0.001	-3.2	-382
Chloride	Central Basin	Sep	Semi-Parametric Regression	-	0.017	0.986	nc	nc
Chlorophyll a	Central Basin	Sep	Censored Regression	Log-normal	-3.05	0.004	-0.47	-41
Dissolved Aluminum	Central Basin	Sep	Censored Regression	Log-logistic	-2.2	0.030	0.12	-25
Dissolved Arsenic	Central Basin	Sep	Censored Regression	t	-14	<0.001	-0.059	-3,429
Dissolved Barium	Central Basin	Sep	Censored Regression	Log-logistic	-11	<0.001	-4.4	-2,406
Dissolved Cadmium	Central Basin	Sep	Semi-Parametric Regression	-	0.95	0.347	nc	nc
Dissolved Chromium	Central Basin	Sep	Semi-Parametric Regression	-	1.4	0.163	nc	nc
Dissolved Cobalt	Central Basin	Sep	Censored Regression	Log-normal	-4.1	<0.001	-0.066	673
Dissolved Copper	Central Basin	Sep	Censored Regression	t	-3.5	<0.001	-0.29	-310
Dissolved Manganese	Central Basin	Sep	Censored Regression	Weibull	-6.8	<0.001	-0.24	55
Dissolved Mercury	Central Basin	Sep	Semi-Parametric Regression	-	-1.1	0.287	nc	nc
Dissolved Nickel	Central Basin	Sep	Censored Regression	Log-normal	-11	<0.001	-2.0	-1,064

Table D-6: Detailed Statistical Results of the Before-After Control-Impact Analysis, 2025

Parameter	Exposure Area	Sampling Month	Statistical Method	Model	Test Statistic	P-value	BACI Difference	Percent Effect
Dissolved Selenium	Central Basin	Sep	Semi-Parametric Regression	-	-1.1	0.294	nc	nc
Dissolved Strontium	Central Basin	Sep	Censored Regression	Log-logistic	-9.2	<0.001	-17	-1,104
Dissolved Thallium	Central Basin	Sep	Semi-Parametric Regression	-	-4.6	<0.001	nc	nc
Dissolved Uranium	Central Basin	Sep	Semi-Parametric Regression	-	-5.4	<0.001	nc	nc
Dissolved Zinc	Central Basin	Sep	Semi-Parametric Regression	-	-2.8	0.006	nc	nc
Magnesium	Central Basin	Sep	Censored Regression	Gaussian	-24	<0.001	-1.6	-272
Nitrate	Central Basin	Sep	Semi-Parametric Regression	-	-4.7	<0.001	nc	nc
Nitrite	Central Basin	Sep	Semi-Parametric Regression	-	-6.9	<0.001	nc	nc
Potassium	Central Basin	Sep	Censored Regression	Log-logistic	-19	<0.001	-0.35	-744
Reactive Silica	Central Basin	Sep	Censored Regression	Gumbel	-15	<0.001	-0.21	46
Sodium	Central Basin	Sep	Censored Regression	t	-25	<0.001	-0.60	-676
Sulphate	Central Basin	Sep	Censored Regression	Gumbel	-79	<0.001	-11	-1,299
Total Aluminum	Central Basin	Sep	Censored Regression	Log-logistic	-2.6	0.011	-0.32	55
Total Ammonia	Central Basin	Sep	Semi-Parametric Regression	-	-2.7	0.009	nc	nc
Total Arsenic	Central Basin	Sep	Censored Regression	Gaussian	-12	<0.001	-0.056	-862
Total Barium	Central Basin	Sep	Censored Regression	Log-logistic	-10	<0.001	-4.7	-1,371
Total Cadmium	Central Basin	Sep	Semi-Parametric Regression	-	-1.2	0.234	nc	nc
Total Chromium	Central Basin	Sep	Semi-Parametric Regression	-	1.4	0.162	nc	nc
Total Cobalt	Central Basin	Sep	Censored Regression	Log-logistic	-22	<0.001	-0.090	-1,988
Total Copper	Central Basin	Sep	Censored Regression	t	-15	<0.001	-0.36	-296
Total Dissolved Solids (APHA 2005)	Central Basin	Sep	Censored Regression	Weibull	-23	<0.001	-23	-738
Total Manganese	Central Basin	Sep	Censored Regression	t	-3.7	<0.001	-0.40	-2,468
Total Mercury	Central Basin	Sep	Semi-Parametric Regression	-	1.6	0.104	nc	nc
Total Molybdenum	Central Basin	Sep	Semi-Parametric Regression	-	-0.30	0.763	nc	nc
Total Nickel	Central Basin	Sep	Censored Regression	Log-normal	-15	<0.001	-2.2	-1,343
Total Nitrogen	Central Basin	Sep	Censored Regression	t	-71	<0.001	-0.58	-2,389
Total Phosphorus	Central Basin	Sep	Semi-Parametric Regression	-	-0.085	0.933	nc	nc
Total Selenium	Central Basin	Sep	Semi-Parametric Regression	-	-1.3	0.199	nc	nc
Total Strontium	Central Basin	Sep	Censored Regression	Log-logistic	-8.7	<0.001	-17	-901
Total Thallium	Central Basin	Sep	Semi-Parametric Regression	-	-4.7	<0.001	nc	nc
Total Uranium	Central Basin	Sep	Semi-Parametric Regression	-	-6.8	<0.001	nc	nc
Total Vanadium	Central Basin	Sep	Semi-Parametric Regression	-	1.1	0.294	nc	nc
Total Zinc	Central Basin	Sep	Censored Regression	Log-normal	-80	<0.001	-0.23	56

Table D-7: Median Concentrations in Goose Lake West Bay and Central Basin Compared to 80% of the Benchmark, 2025

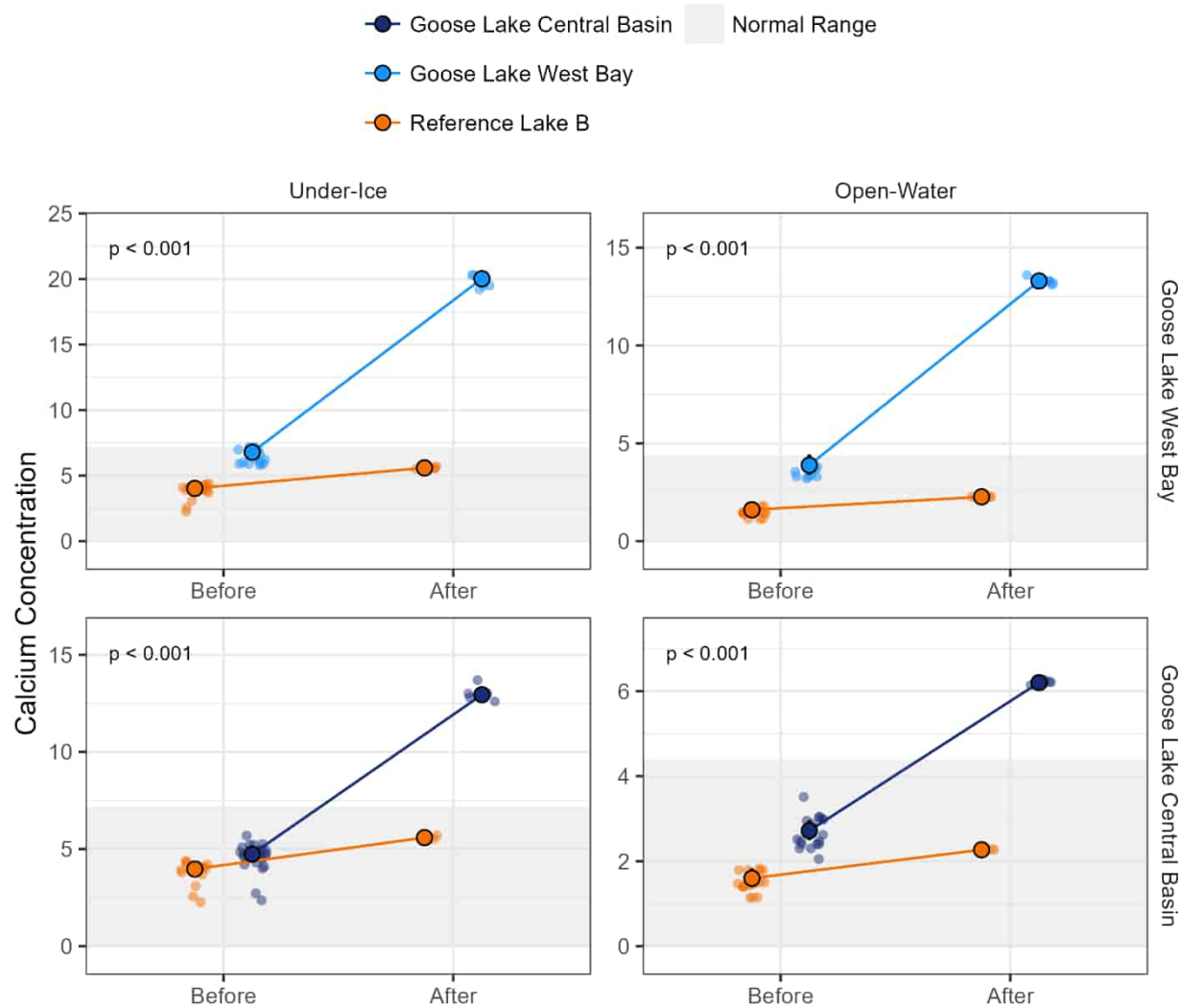
Parameter	Unit	80% of the Benchmark for BRP-29A Data				BRP-29A Median Concentrations				80% of the Benchmark for BRP-32 Data				BRP-32 Median Concentrations			
		Apr	Jul	Aug	Sep	Apr	Jul	Aug	Sep	Apr	Jul	Aug	Sep	Apr	Jul	Aug	Sep
Conventional Parameters																	
Total dissolved solids	mg/L	400				123	66	83	81	400				85	40	41	44
Total suspended solids	mg/L	6.4				<1.0	<1.0	<1.0	1.3	6.4				<1.0	<1.0	<1.0	<1.0
Major Ions																	
Chloride	mg/L	96				24	11	18	18	96				14	5.4	5.4	6.1
Fluoride	mg/L	0.096				0.027	0.027	0.014	0.023	0.096				0.026	0.025	0.014	0.022
Sulphate	mg/L	247	174	174	174	46	25	30	29	174	102	174	174	33	17	18	19
Total cyanide	mg/L	0.0040				<0.00050	0.0022	0.0011	0.00076	0.0040				<0.00050	<0.00050	<0.00050	<0.00050
Nutrients																	
Nitrate, as N	mg-N/L	2.3				2.4	1.9	1.9	1.5	2.3				1.3	0.54	0.50	0.52
Nitrite, as N	mg-N/L	0.048				0.068	0.0067	0.0046	0.0038	0.048				0.13	0.0018	0.0011	0.0018
Total ammonia	mg-N/L	120	12	12	9.8	0.33	0.25	0.29	0.16	87	2.9	5.6	4.7	0.16	0.029	0.014	0.010
Total phosphorus	mg-P/L	0.0080				<0.0010	<0.0010	0.0013	0.0015	0.0080				0.0014	<0.0010	0.0025	0.0019
Total Metals																	
Aluminum	µg/L	256	232	264	320	38	45	33	22	208	336	296	368	22	27	17	10
Arsenic	µg/L	8.0				0.42	0.39	0.33	0.34	8.0				0.36	0.26	0.27	0.28
Barium	µg/L	800				34	17	20	19	800				22	11	10	10
Cadmium	µg/L	0.12	0.063	0.081	0.081	0.052	0.025	0.033	0.023	0.086	0.044	0.047	0.050	0.017	0.0076	0.0060	0.0059
Chromium	µg/L	4.0				0.20	0.21	0.13	<0.10	4.0				0.15	0.15	0.12	<0.10
Cobalt	µg/L	0.78	0.62	0.65	0.65	1.1	0.97	1.6	1.2	0.67	0.62	0.62	0.62	0.27	0.26	0.21	0.20
Copper	µg/L	3.4				3.3	2.9	2.8	2.4	3.4				2.4	1.9	2.0	1.8
Iron	µg/L	400	352	328	336	27	34	26	31	352	320	336	344	16	35	25	21
Lead	µg/L	8.1	6.0	6.1	6.1	0.11	0.014	0.0088	0.0076	6.9	5.1	5.4	5.4	0.36	0.0092	<0.005	<0.005
Mercury	µg/L	0.0208				0.00124	0.00197	0.00156	0.00131	0.0208				0.00092	0.00153	0.00133	0.00063
Molybdenum	µg/L	58				0.027	0.032	<0.050	<0.050	58				0.027	0.017	<0.050	<0.050
Nickel	µg/L	70	20	20	20	20	8.8	11	9.5	54	20	20	20	12	6.3	5.7	5.3
Selenium	µg/L	0.80				0.091	0.054	0.084	0.059	0.80				0.056	0.024	<0.040	<0.040
Silver	µg/L	0.20				<0.0020	0.0036	<0.0050	<0.0050	0.20				<0.0020	0.0035	<0.0050	<0.0050
Strontium	µg/L	2,000				104	50	74	73	2,000				61	26	28	32
Thallium	µg/L	0.64				0.0055	0.0055	0.0062	0.0057	0.64				0.0031	0.0030	0.0028	0.0024
Uranium	µg/L	12				0.015	0.016	0.012	0.011	12				0.012	0.012	0.010	0.0087
Vanadium	µg/L	96				0.060	0.070	<0.20	<0.20	96				0.050	0.068	<0.20	<0.20
Dissolved Metals																	
Manganese	µg/L	384	264	392	392	22	14	24	15	320	304	304	304	7.1	2.6	1.3	0.94
Zinc	µg/L	58	24	29	24	9.8	2.4	2.9	2.5	39	9.3	12	11	3.8	1.0	0.48	0.46
Radionuclides																	
Radium-226	Bq/L	0.088				-	-	<0.005	<0.005	0.088				-	-	<0.005	<0.005

Note: Grey bolded values represent median concentrations greater than 80% of the benchmark.

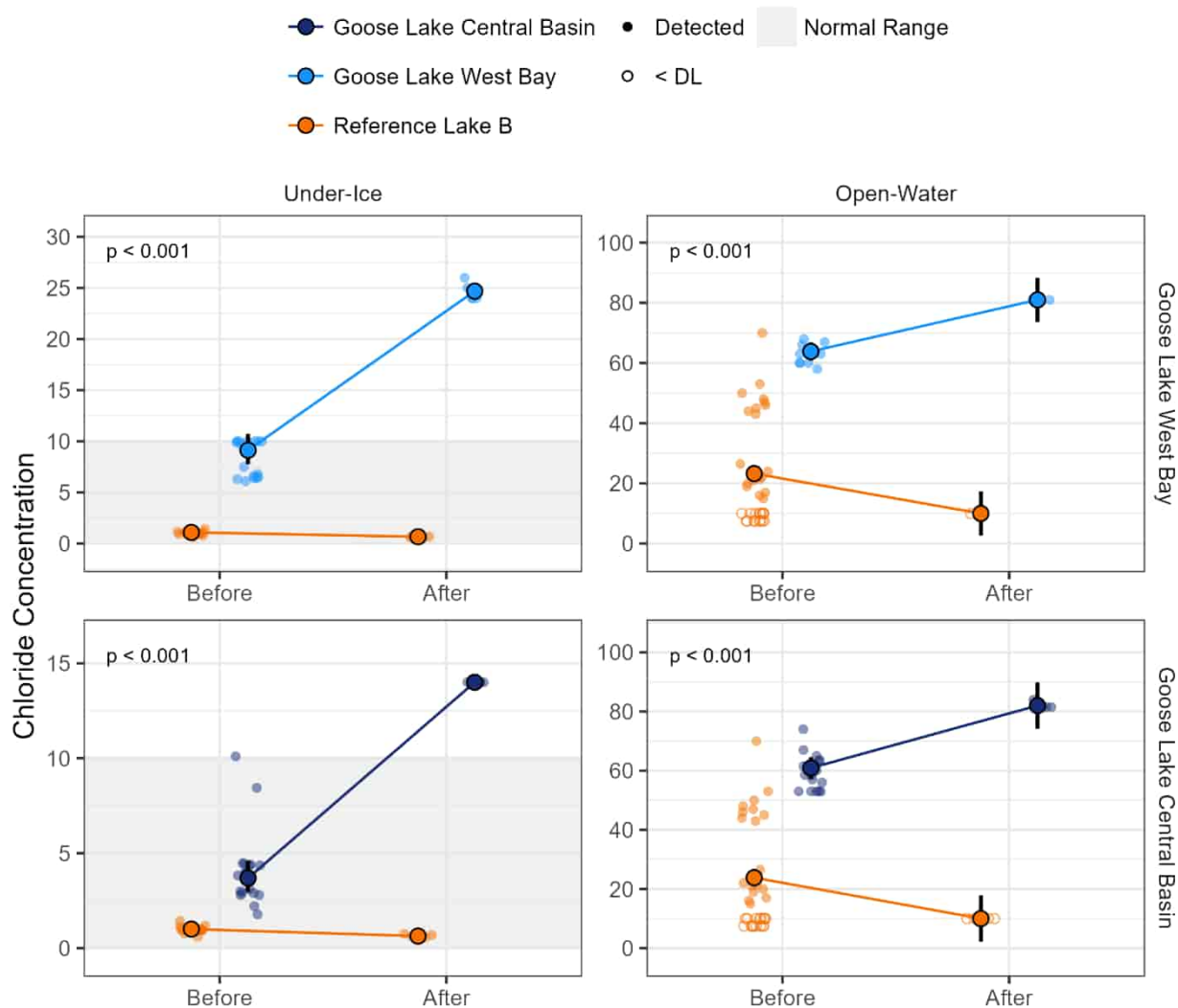
The following figures plots present the information used in the Before-After Control-Impact analysis. The following notes applies to all plots:

Under-ice plots present April results and open-water plots present August results. Open circles represent concentrations below the detection limit and are shown at the detection limit. Vertical black bars represent the 90% confidence interval for the mean. For semi-parametric analyses, y-axes represent rank scale; normal ranges are therefore not shown on plots using a rank scale y-axis (refer to Table D-5 for the statistical method used for each analysis). Because y-axes vary between concentrations measured and rank scale, units are not shown. Time series plots showing concentrations are presented in Appendix E. Where insufficient data prevented statistical analysis, lines connecting the Before and After periods and *P*-values are not shown. Only plots for parameters of interest (POIs) in under-ice or open-water conditions are shown; not all statistical results shown are relevant (e.g., if a parameter was only a POI in open-water conditions, plots for under-ice conditions are shown despite not being required). Chlorophyll *a* was not analyzed in under-ice samples.

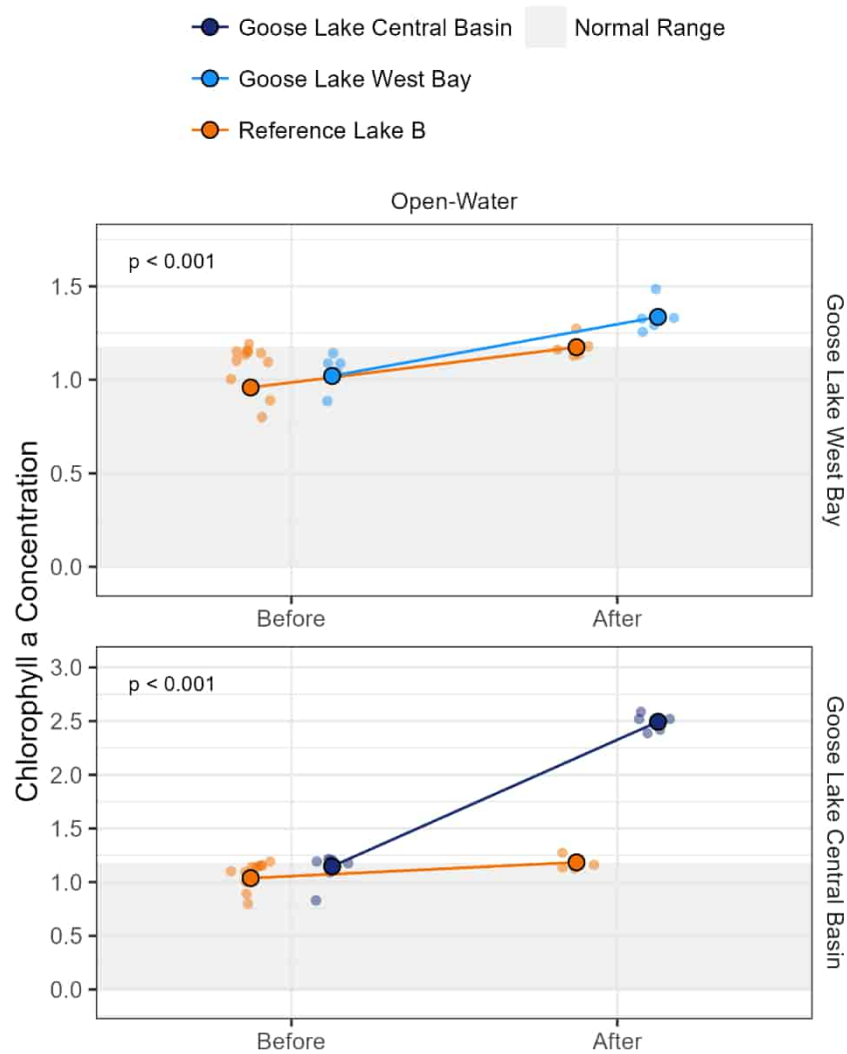
1 CALCIUM



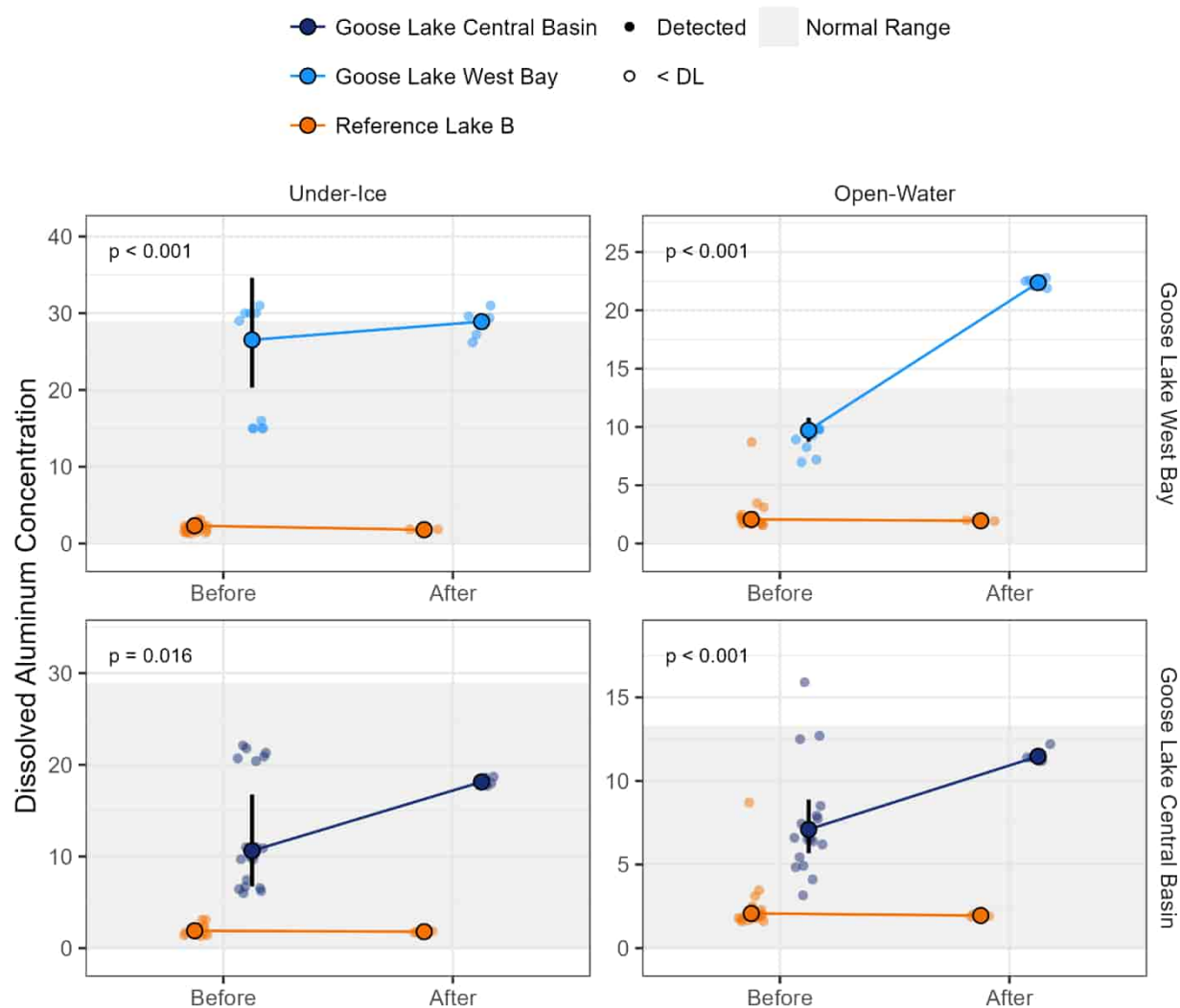
2 CHLORIDE



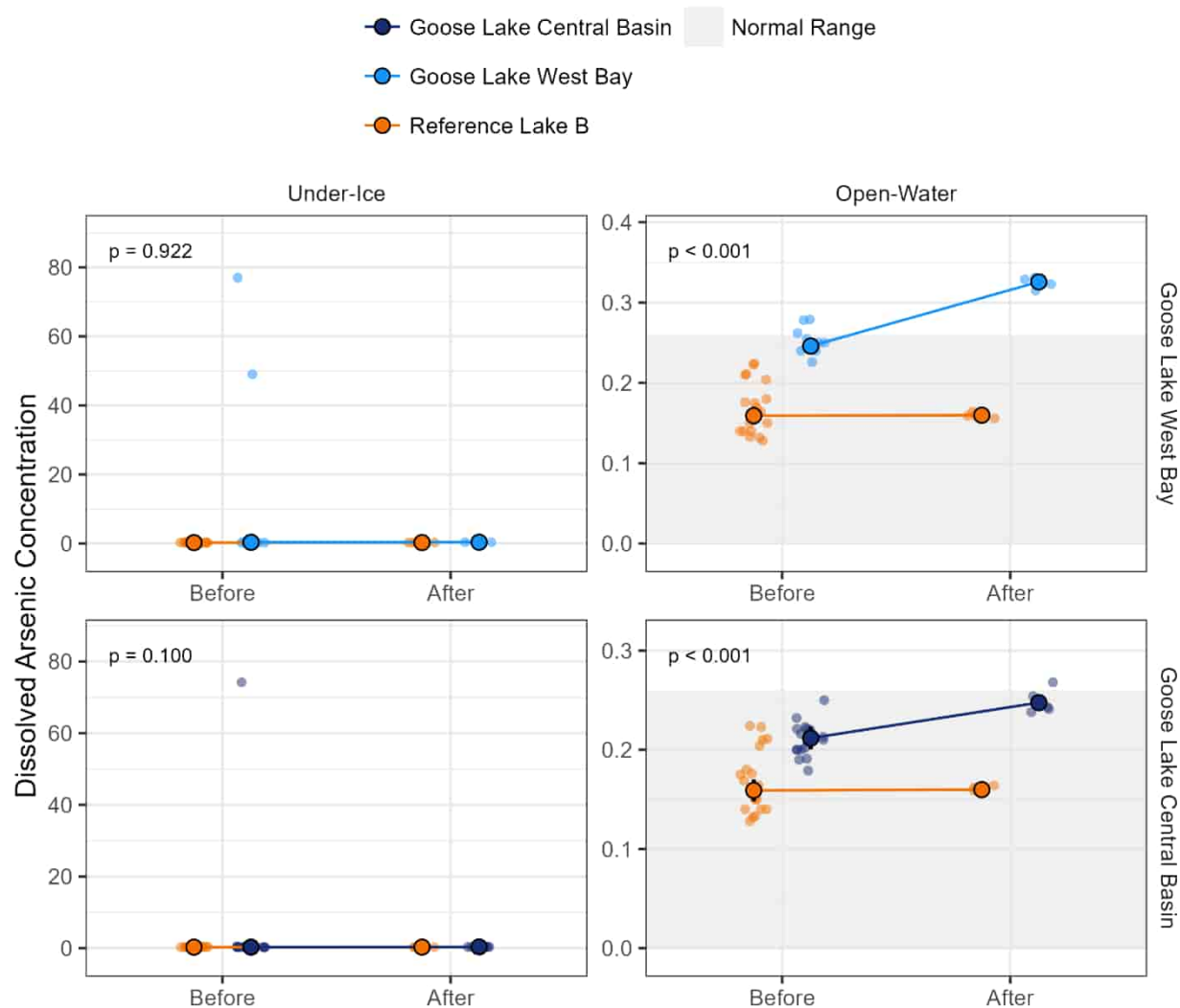
3 CHLOROPHYLL A



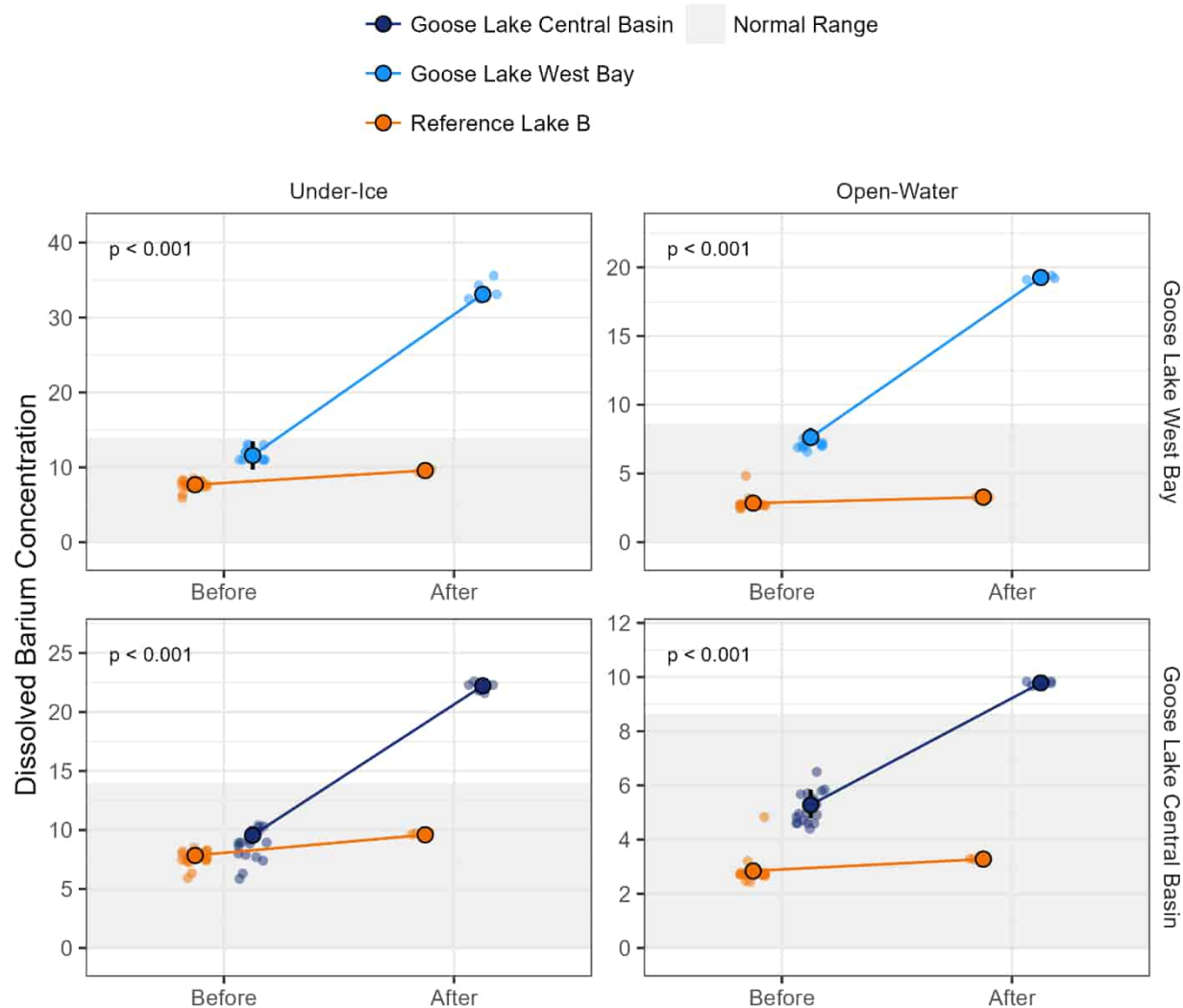
4 DISSOLVED ALUMINUM



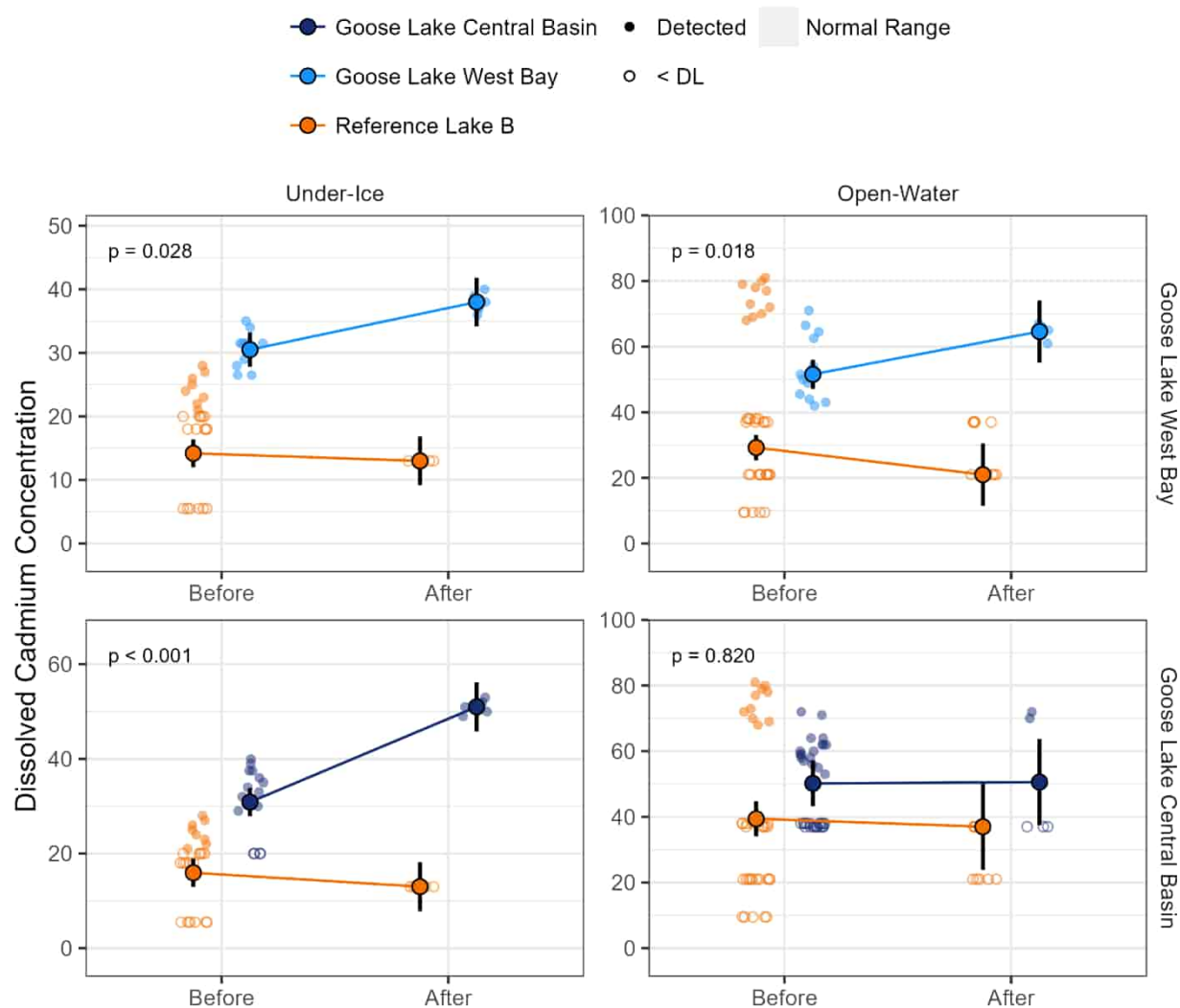
5 DISSOLVED ARSENIC



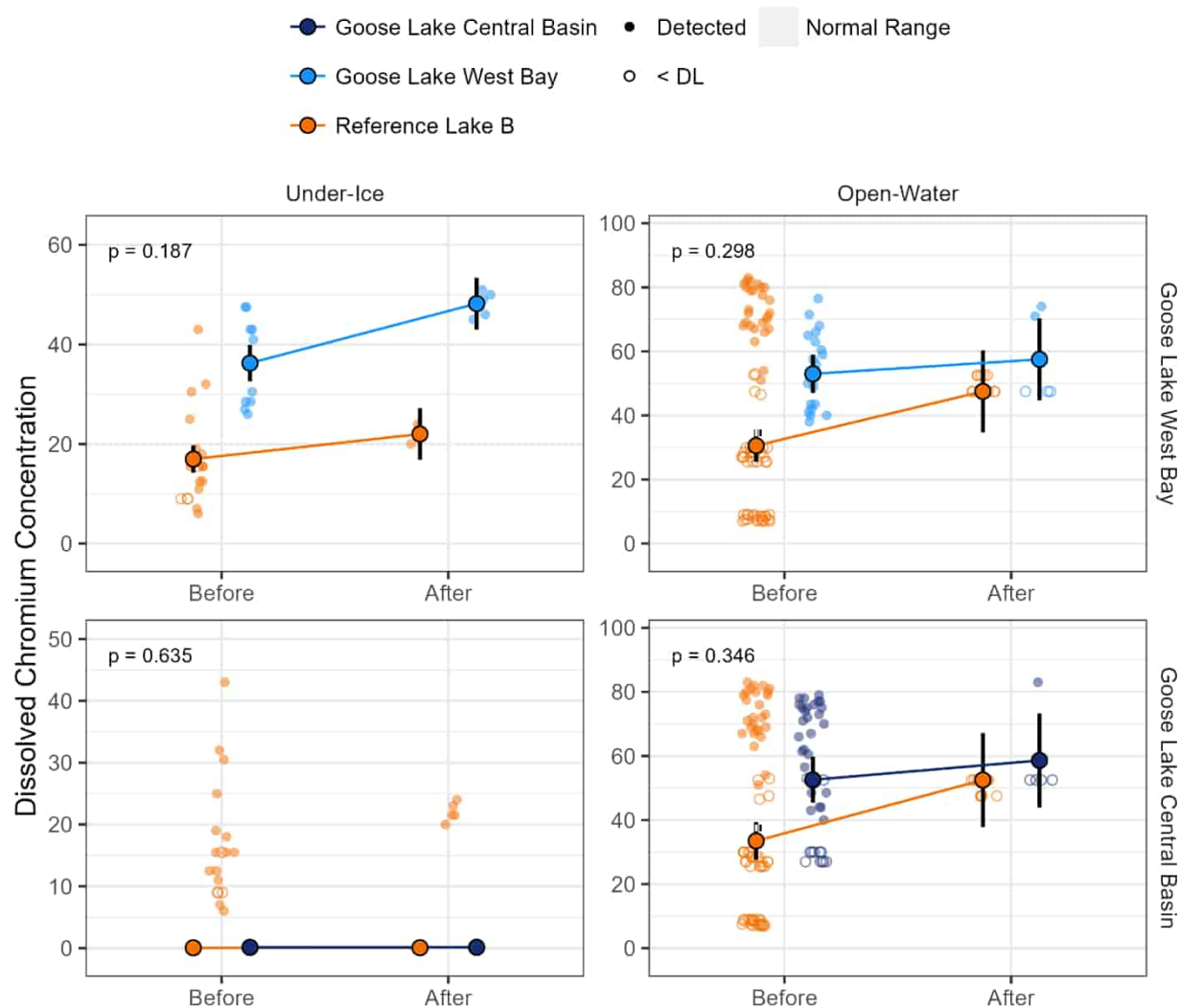
6 DISSOLVED BARIUM



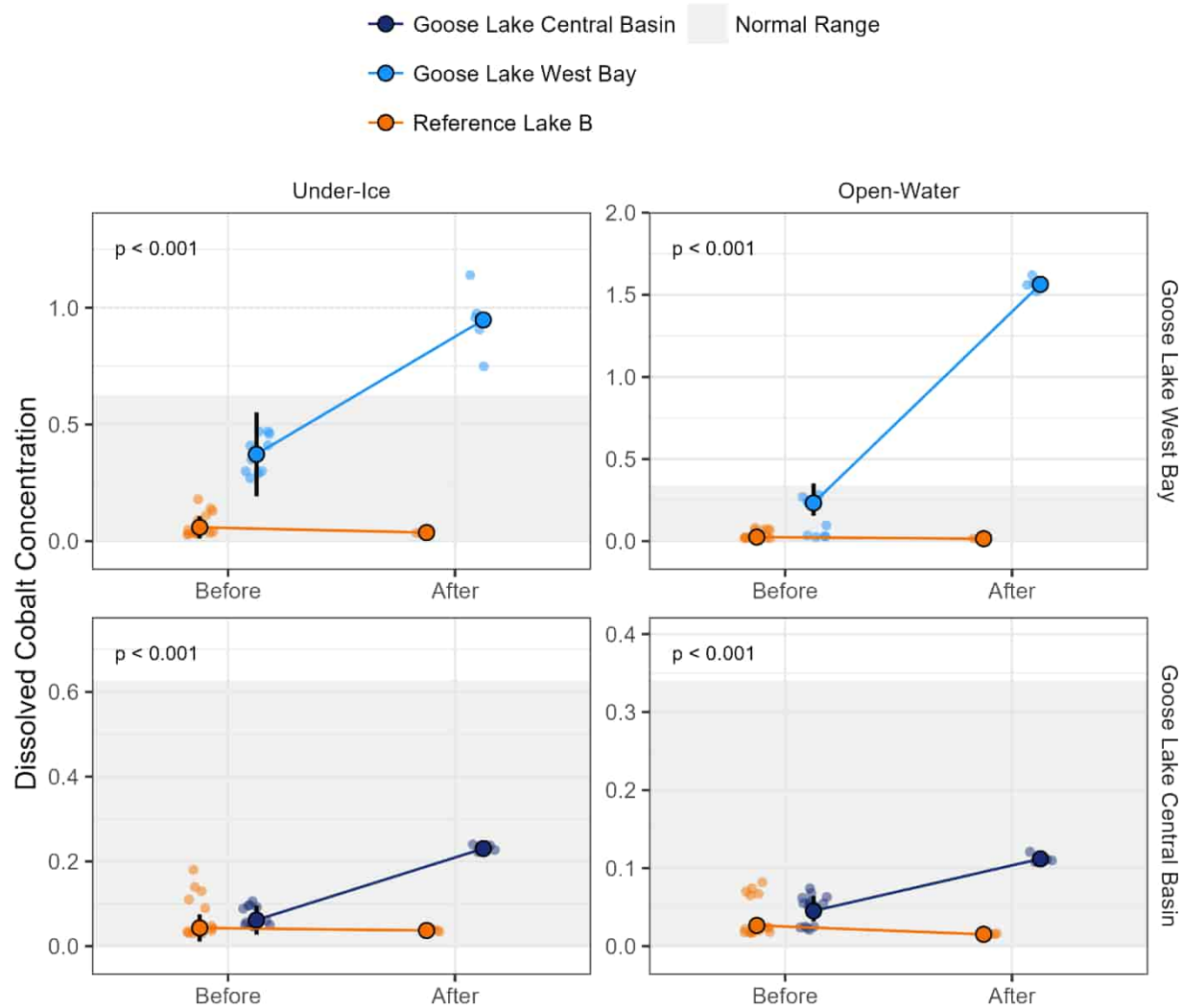
7 DISSOLVED CADMIUM



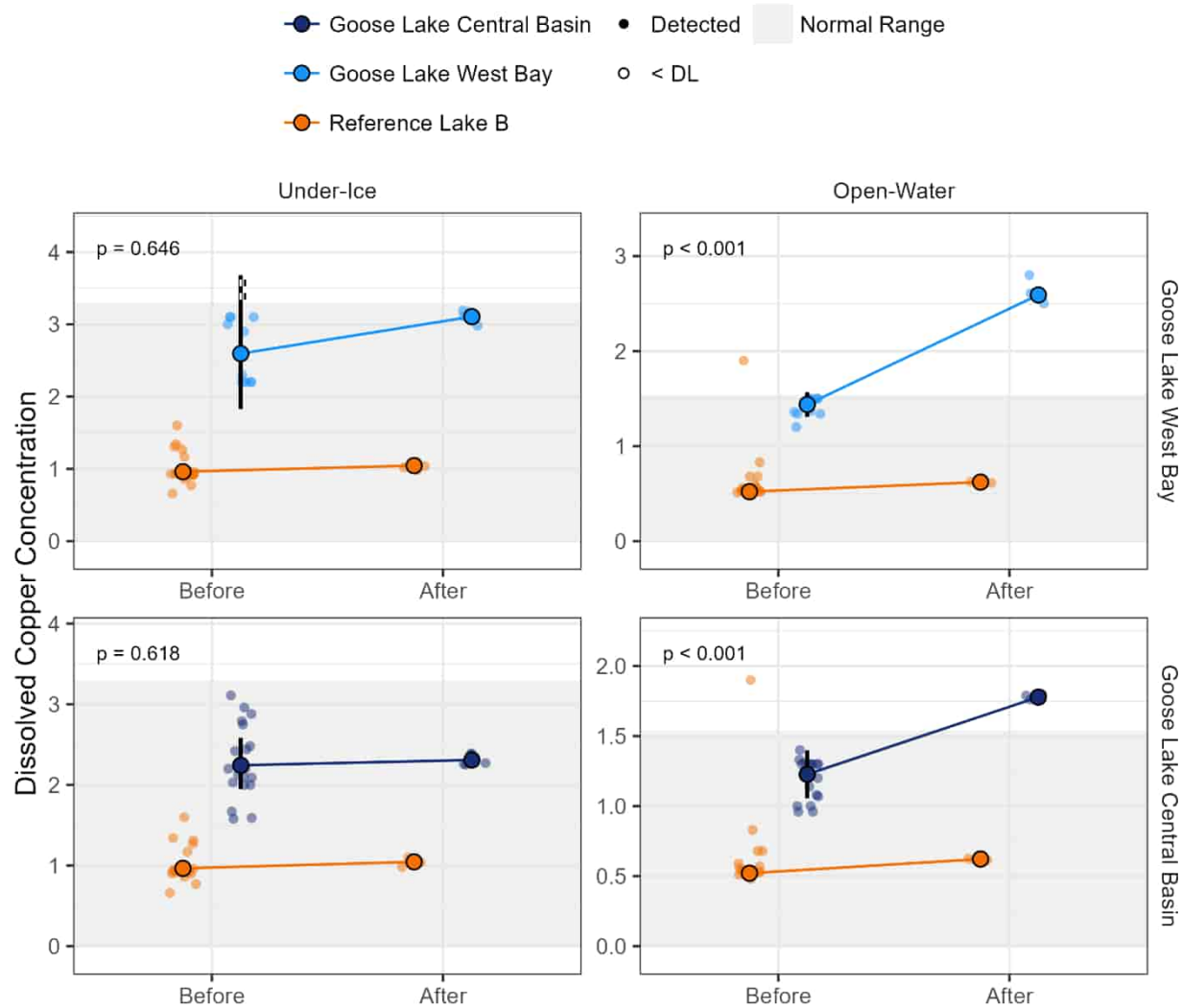
8 DISSOLVED CHROMIUM



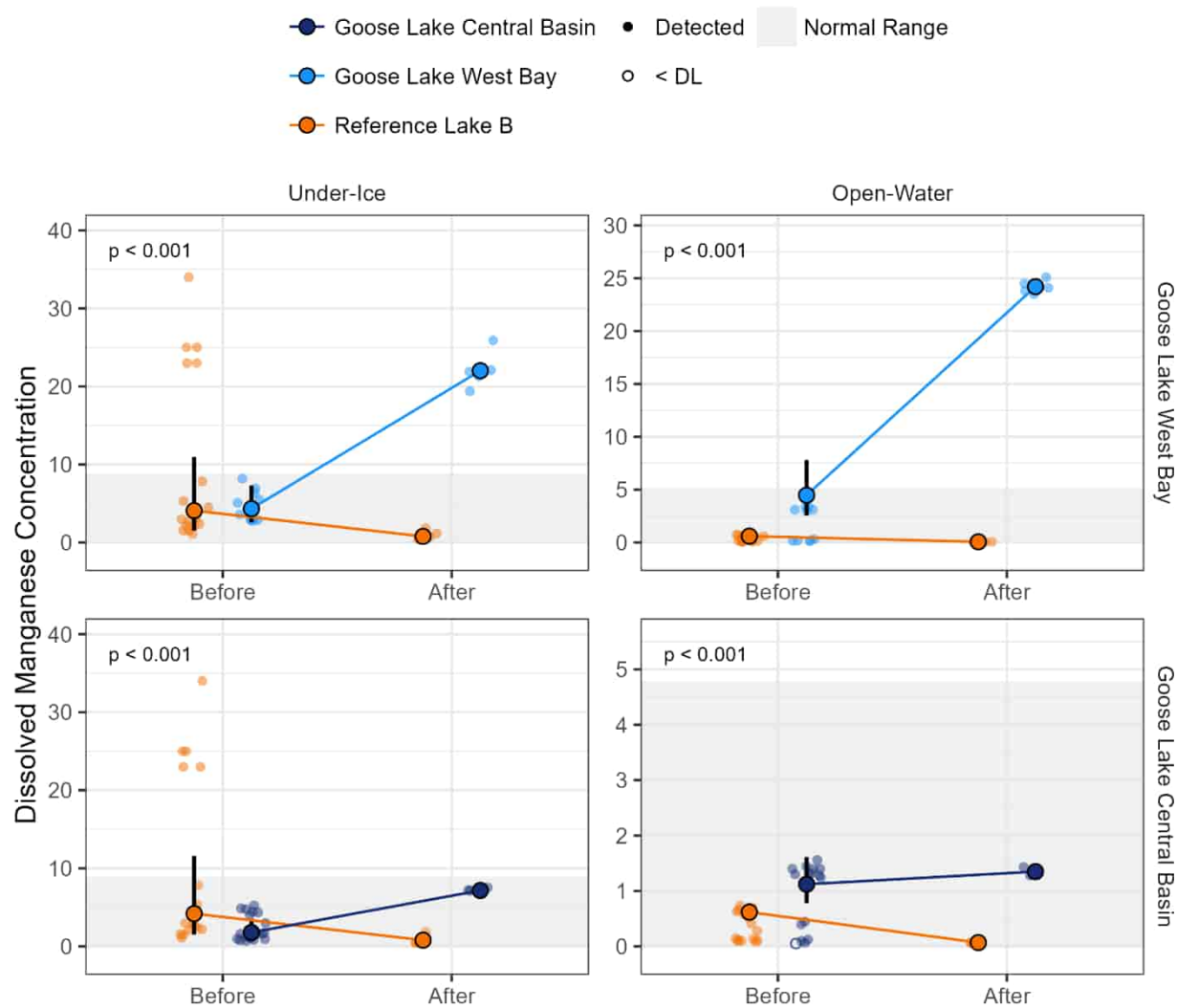
9 DISSOLVED COBALT



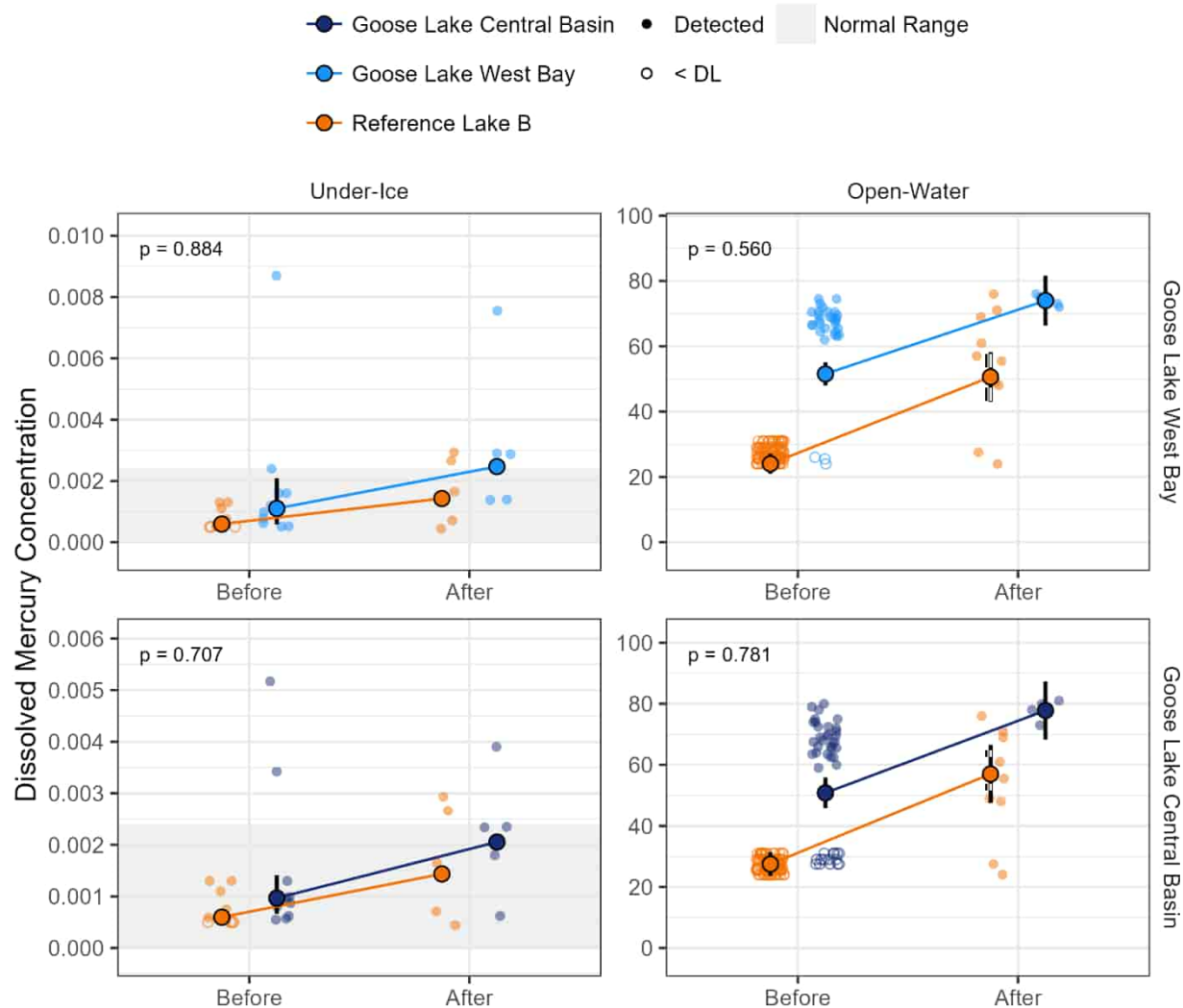
10 DISSOLVED COPPER



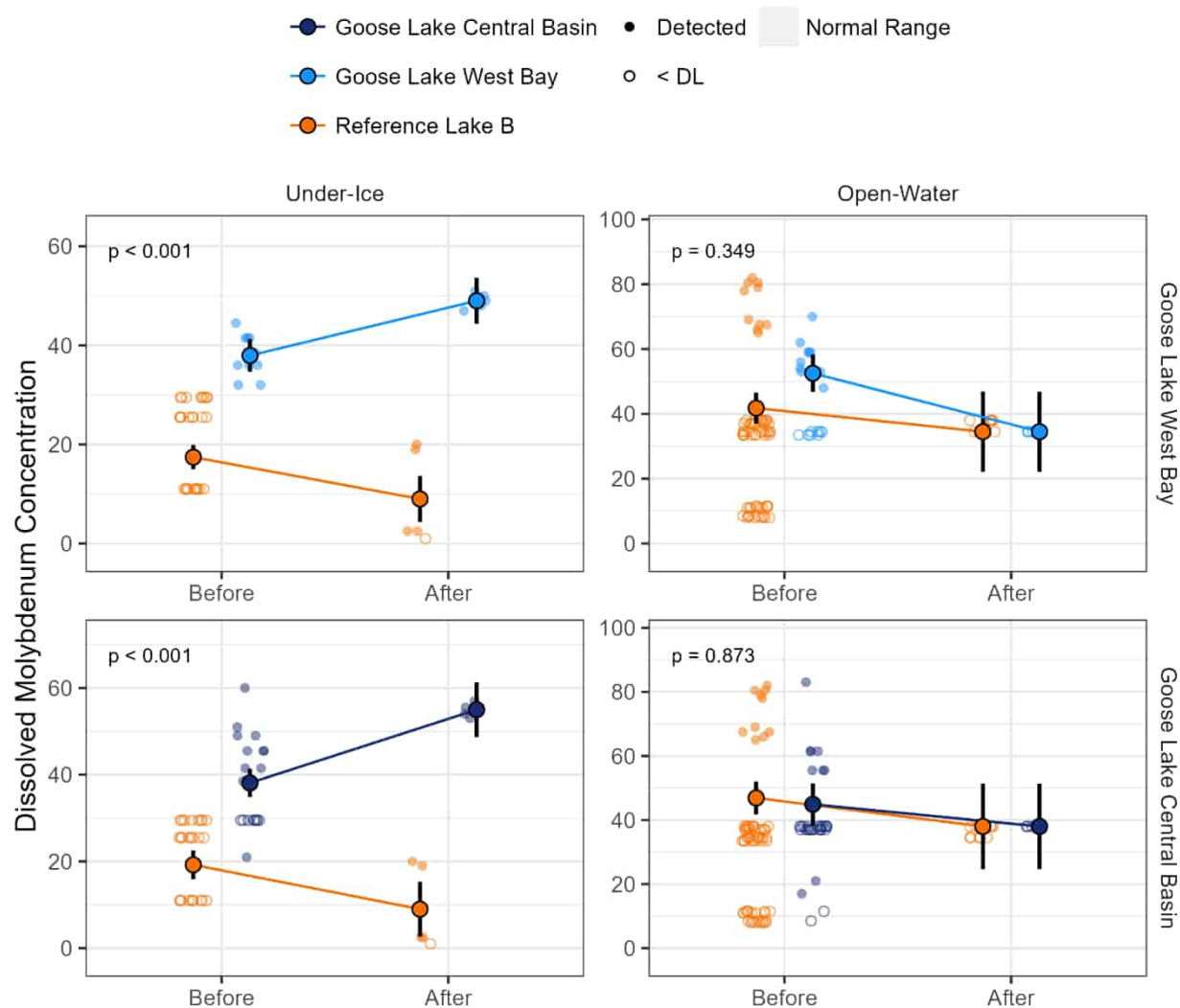
11 DISSOLVED MANGANESE



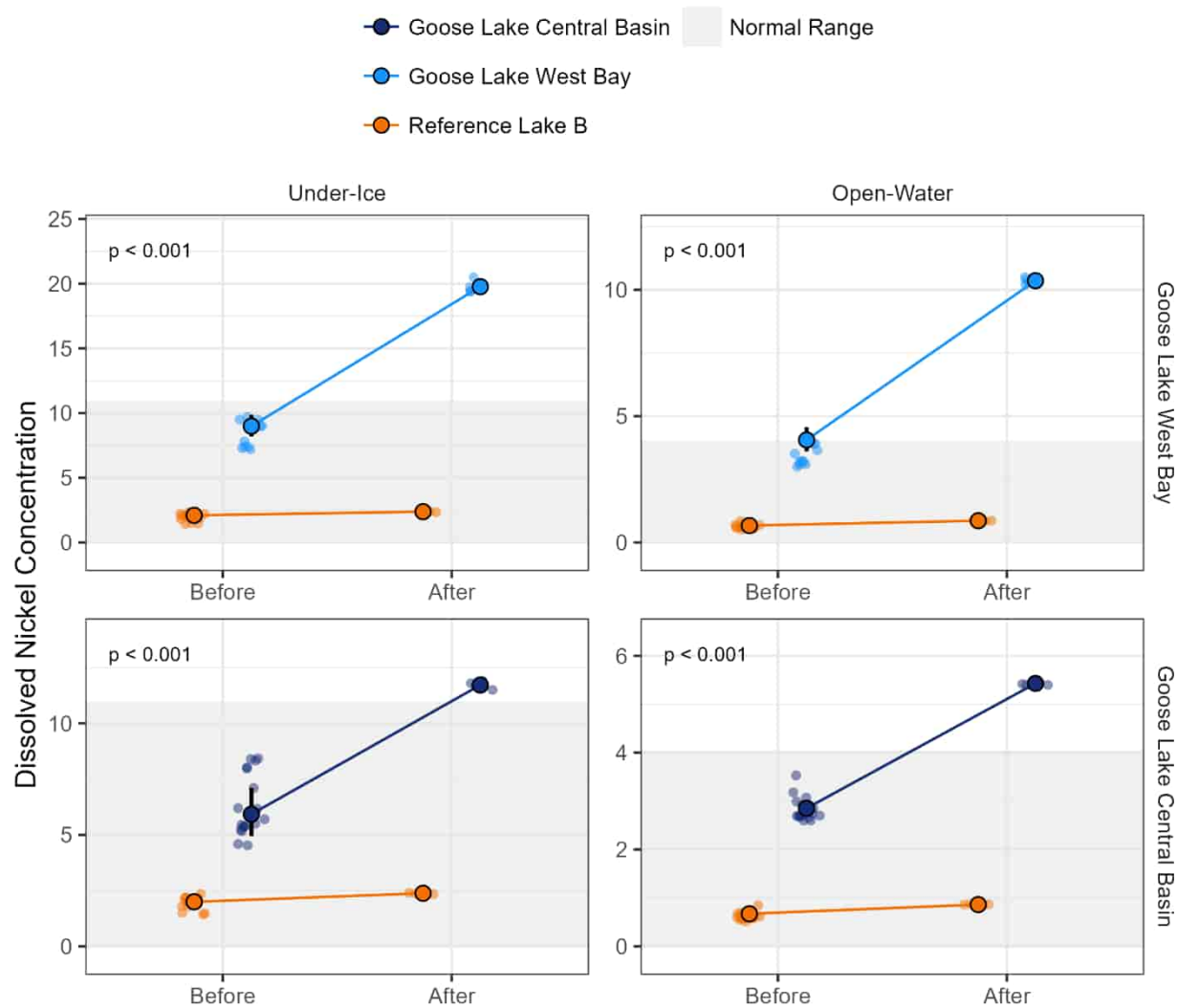
12 DISSOLVED MERCURY



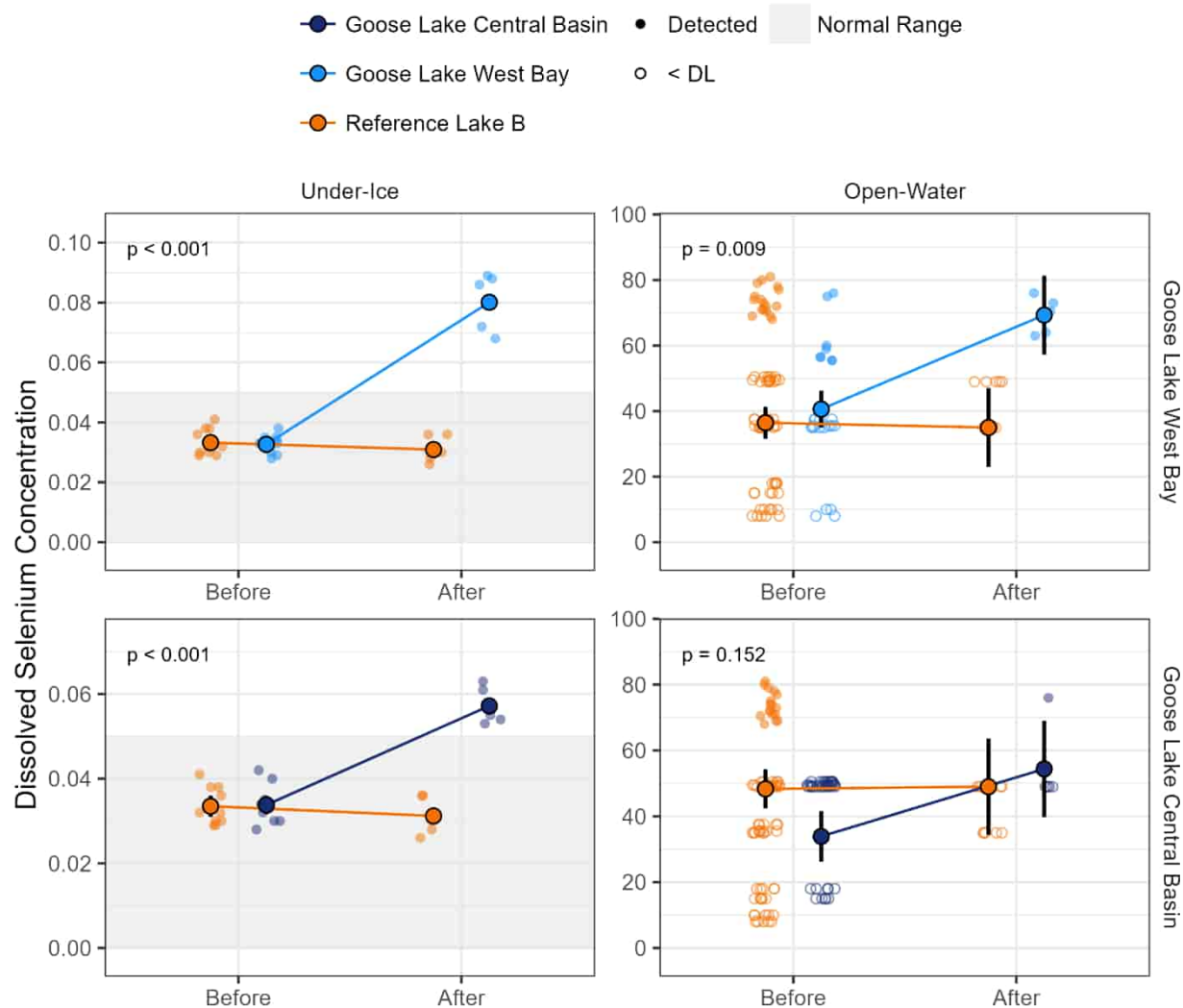
13 DISSOLVED MOLYBDENUM



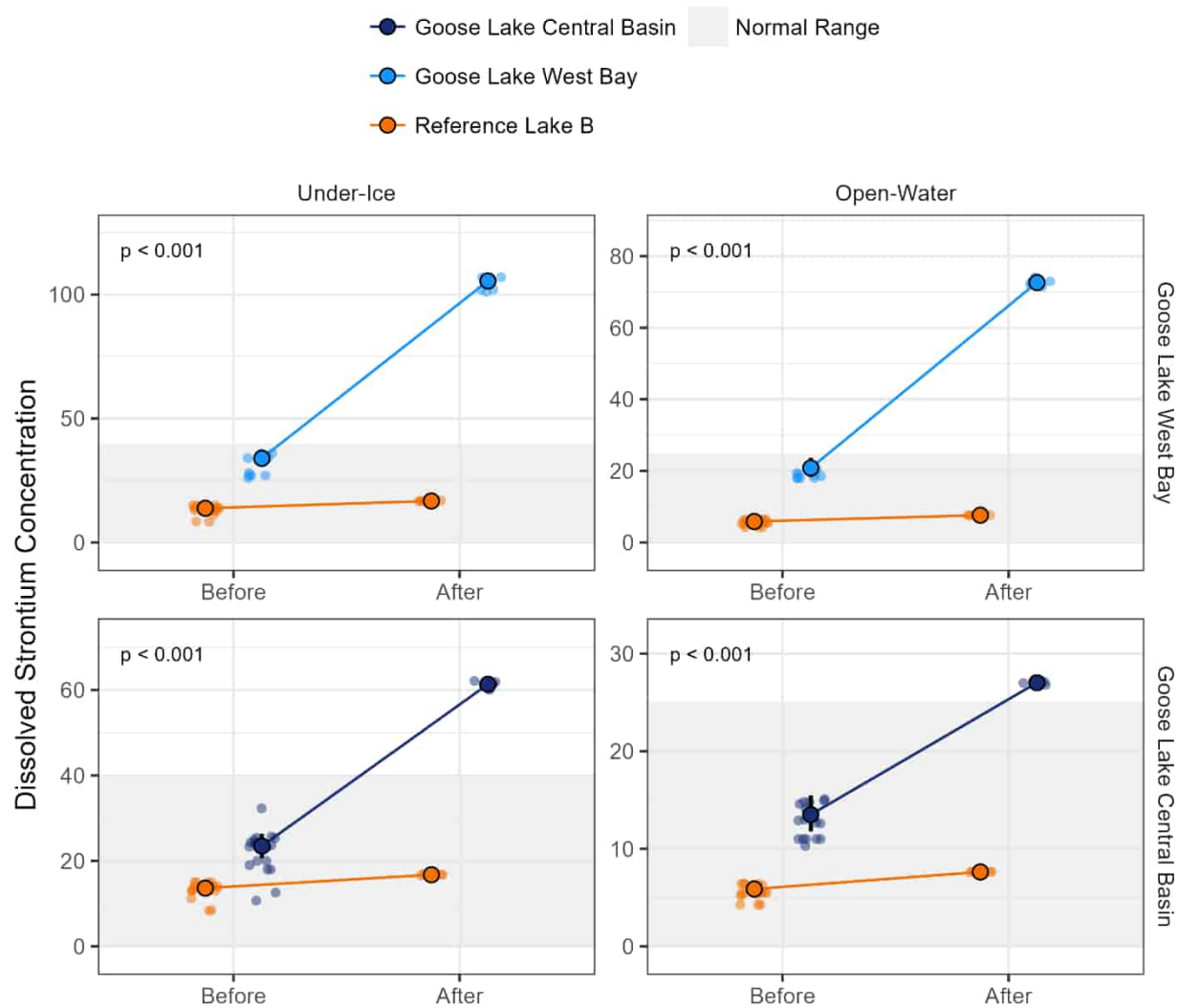
14 DISSOLVED NICKEL



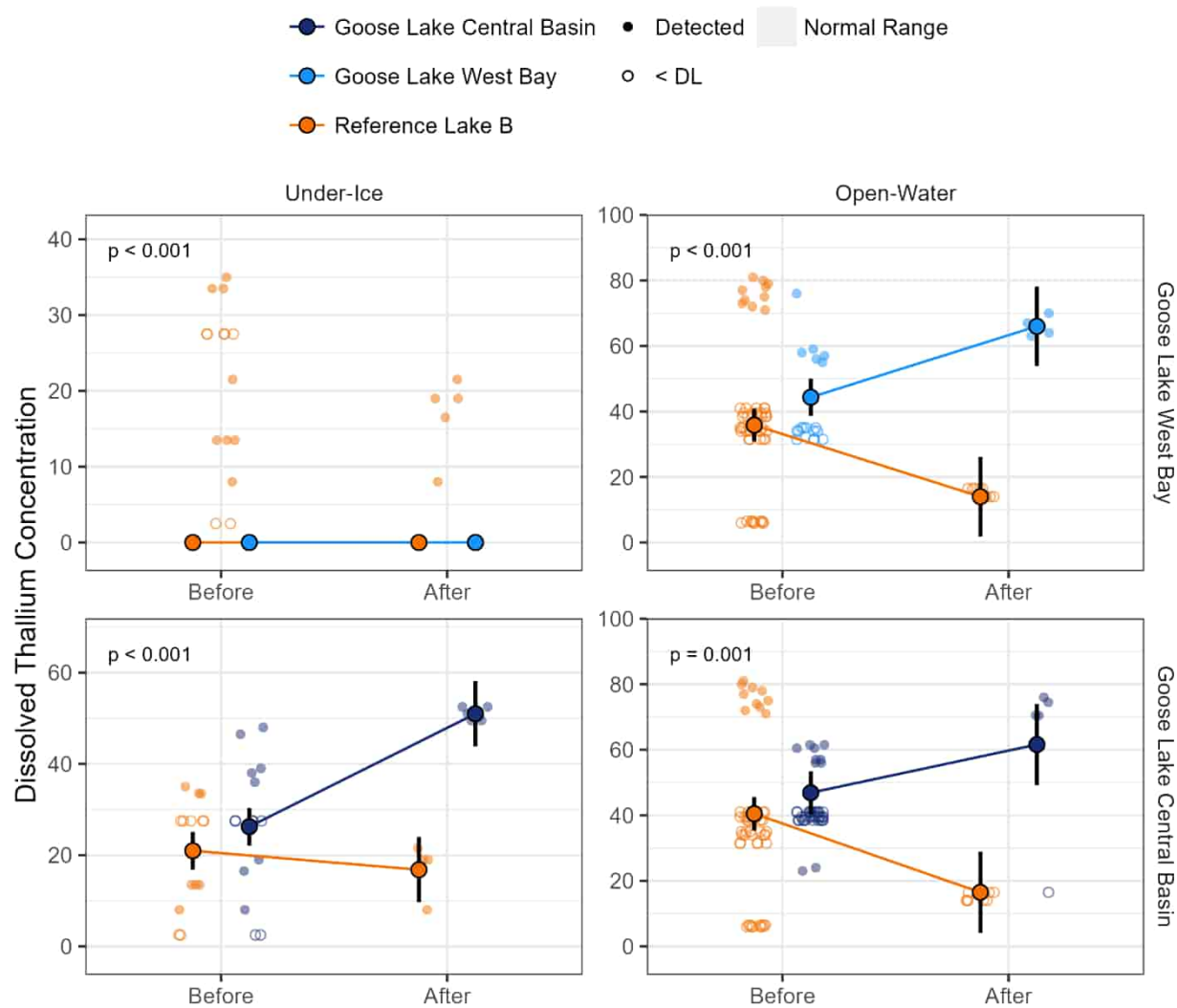
15 DISSOLVED SELENIUM



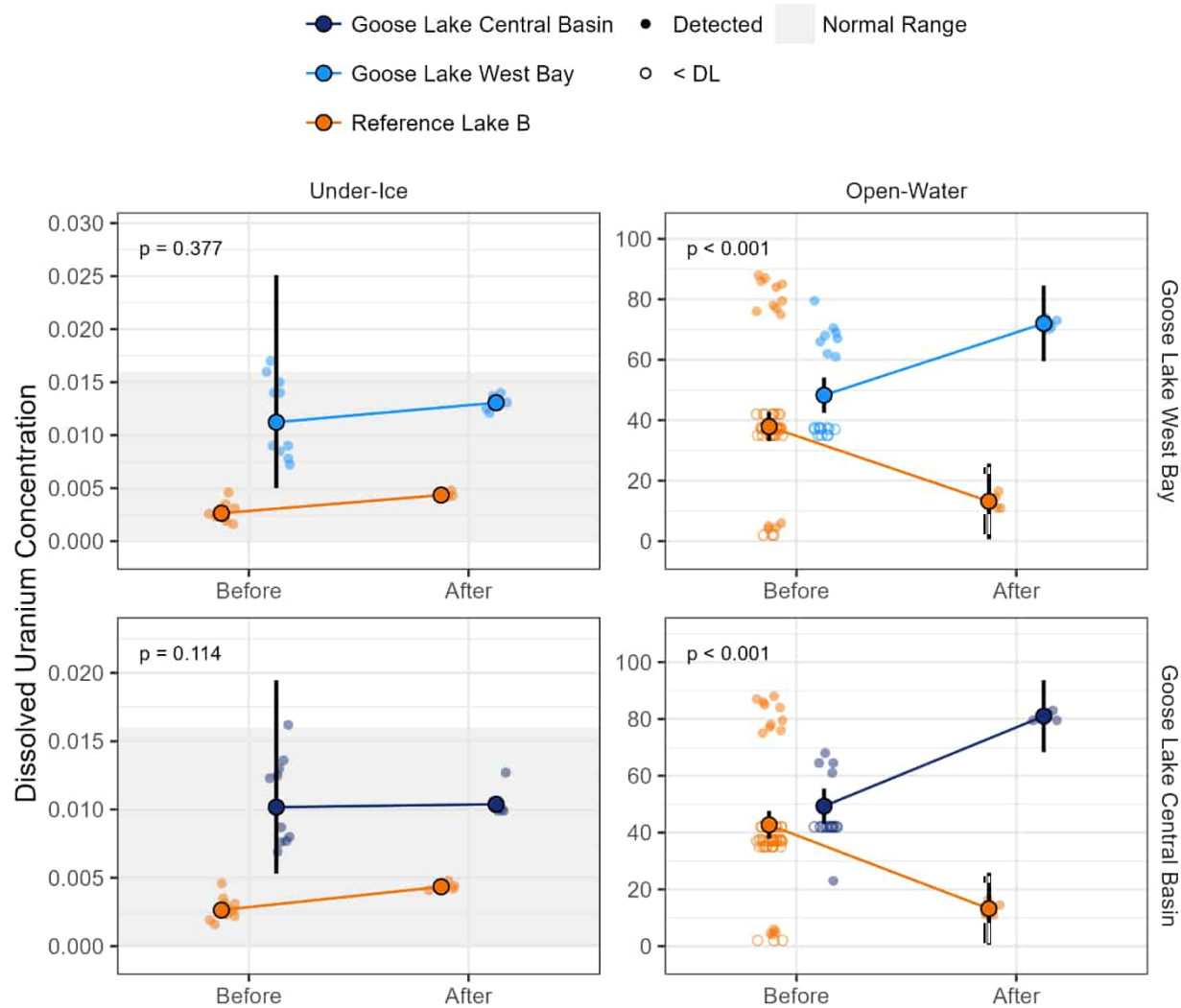
16 DISSOLVED STRONTIUM



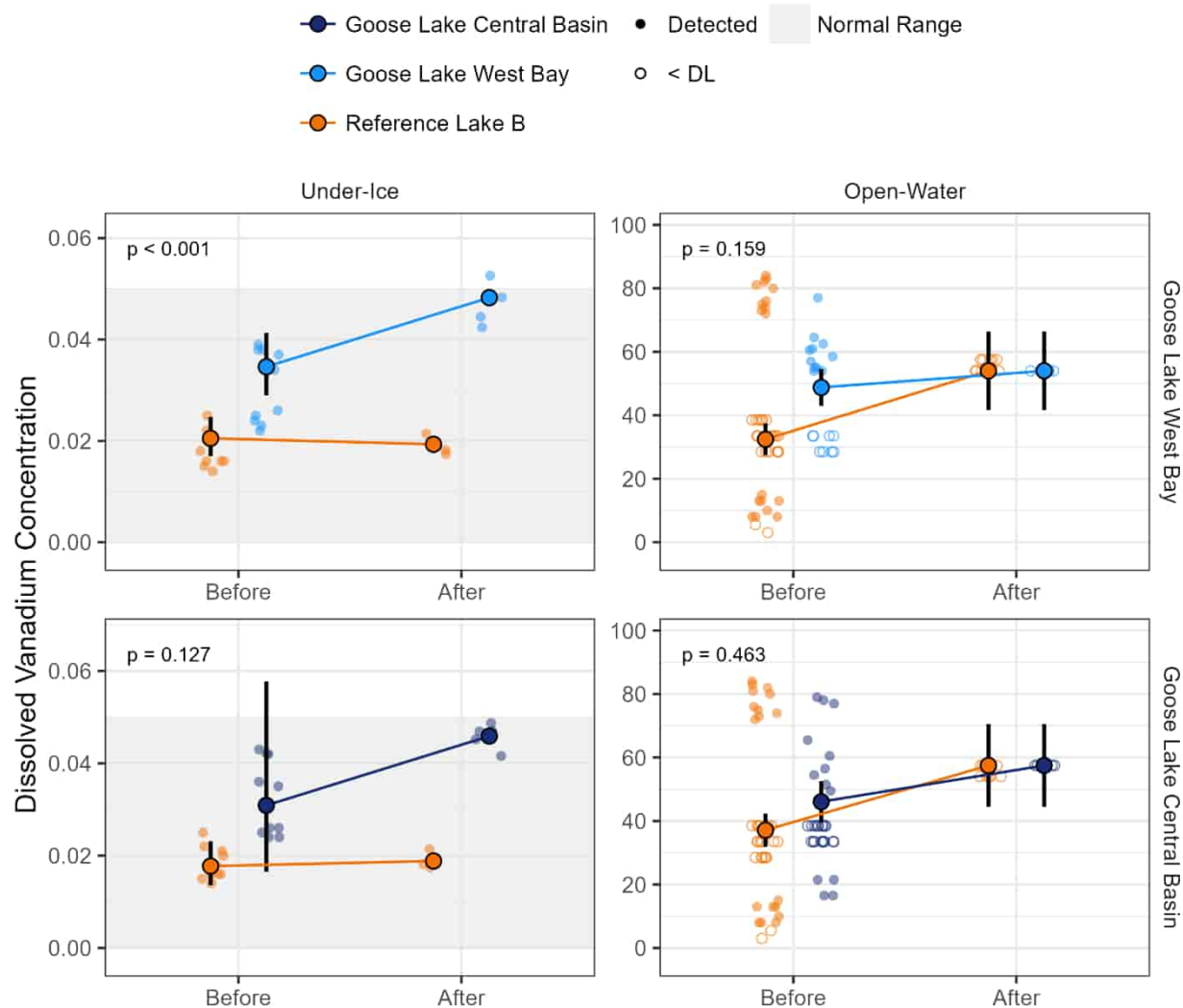
17 DISSOLVED THALLIUM



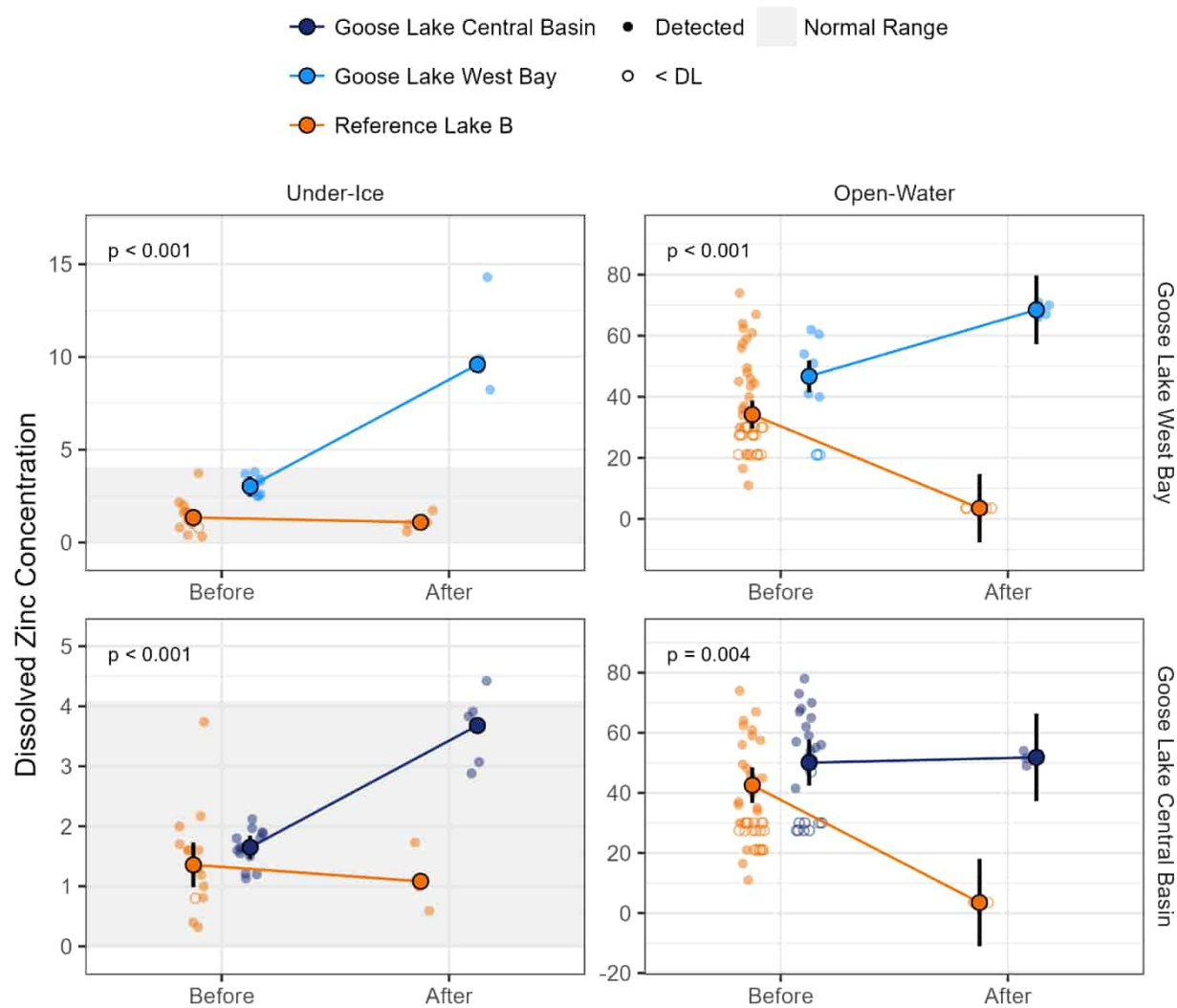
18 DISSOLVED URANIUM



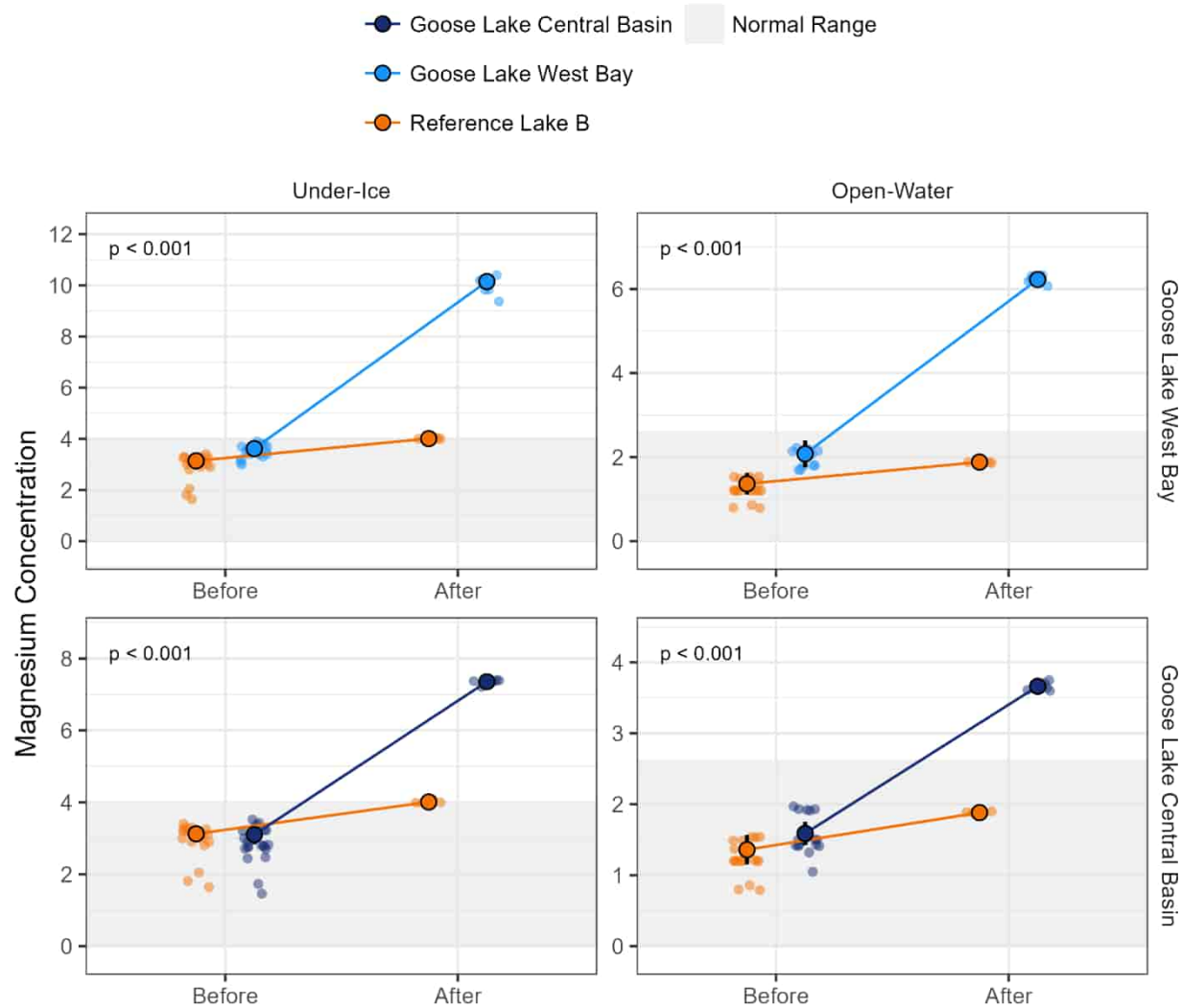
19 DISSOLVED VANADIUM



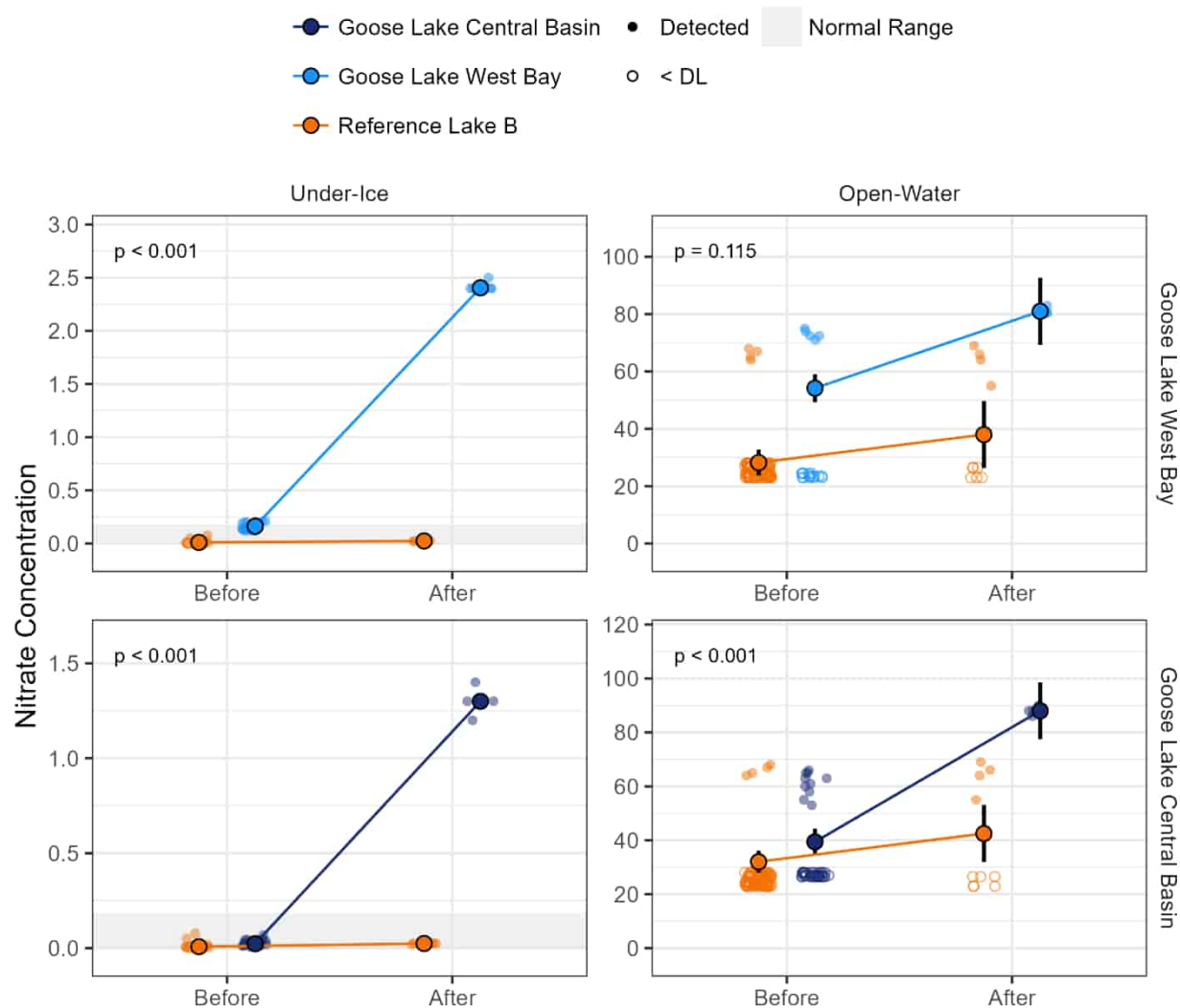
20 DISSOLVED ZINC



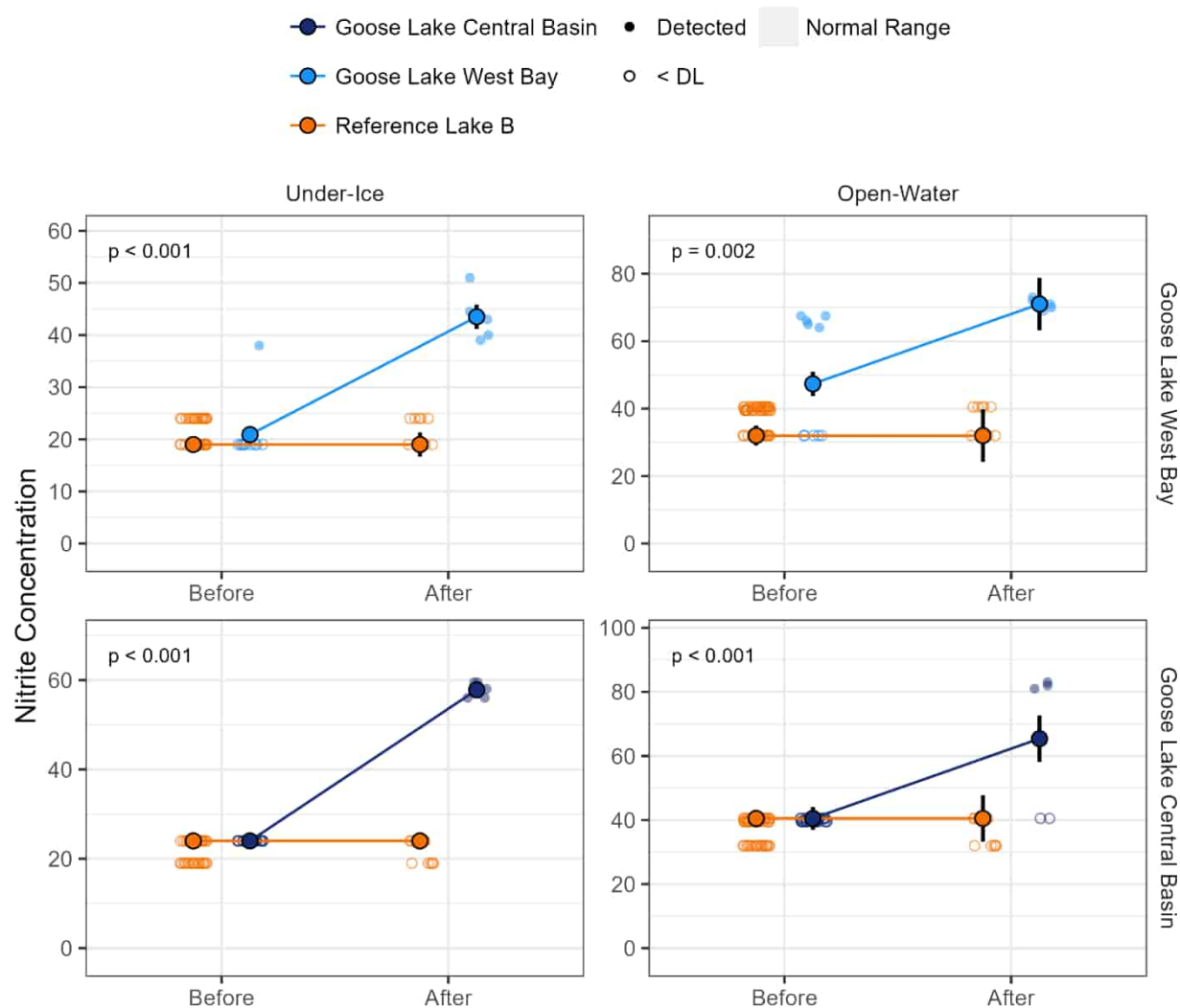
21 MAGNESIUM



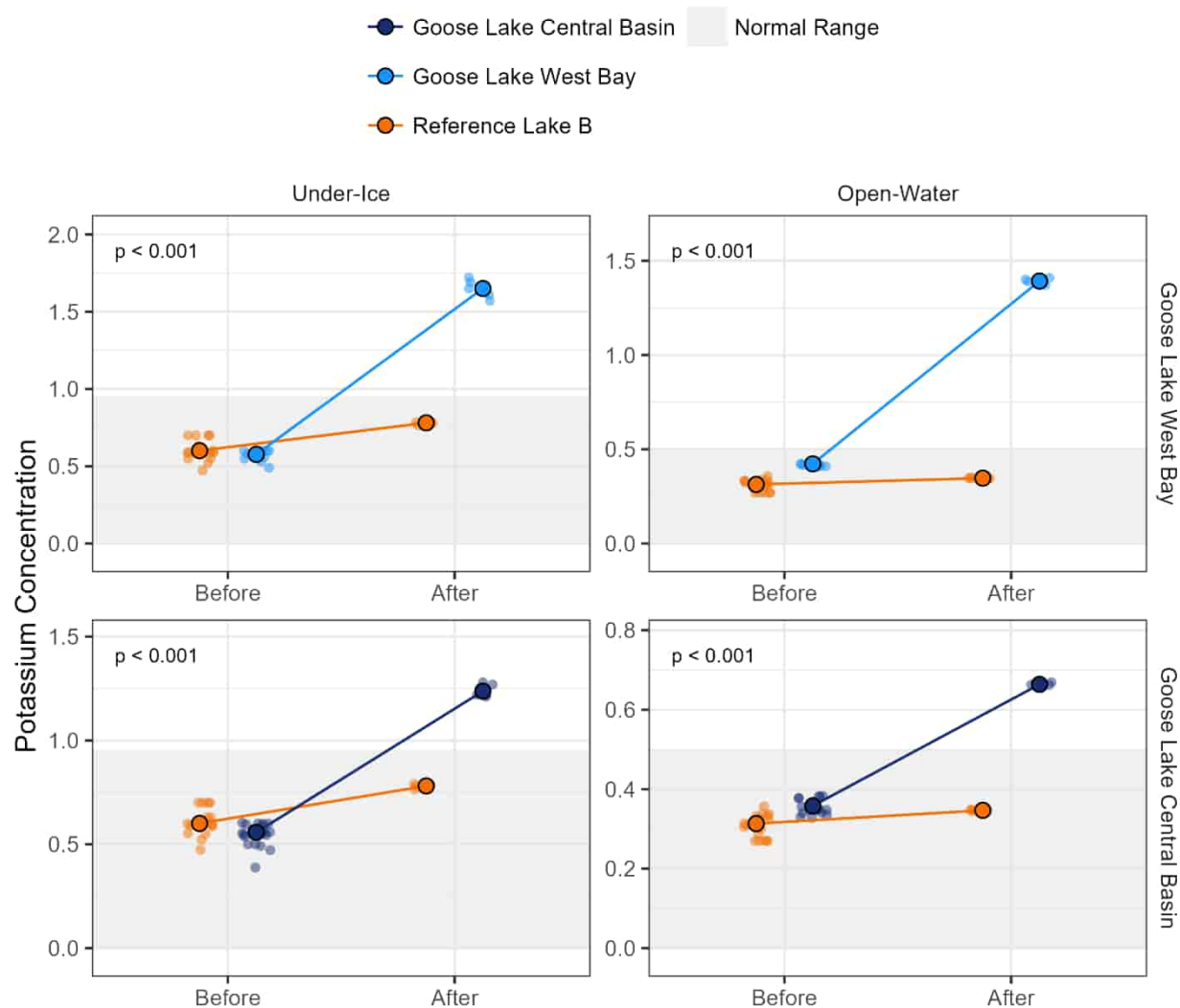
22 NITRATE



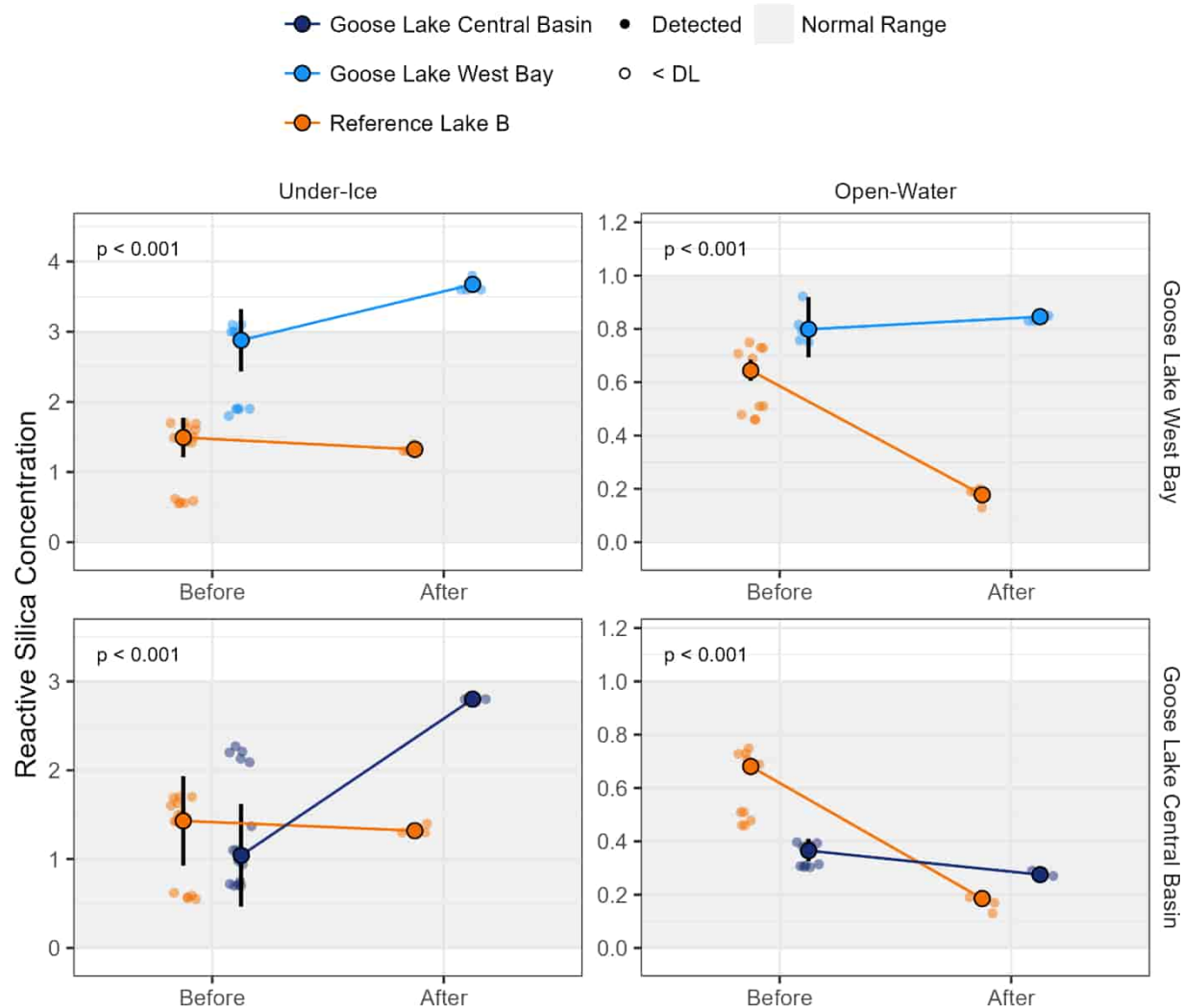
23 NITRITE



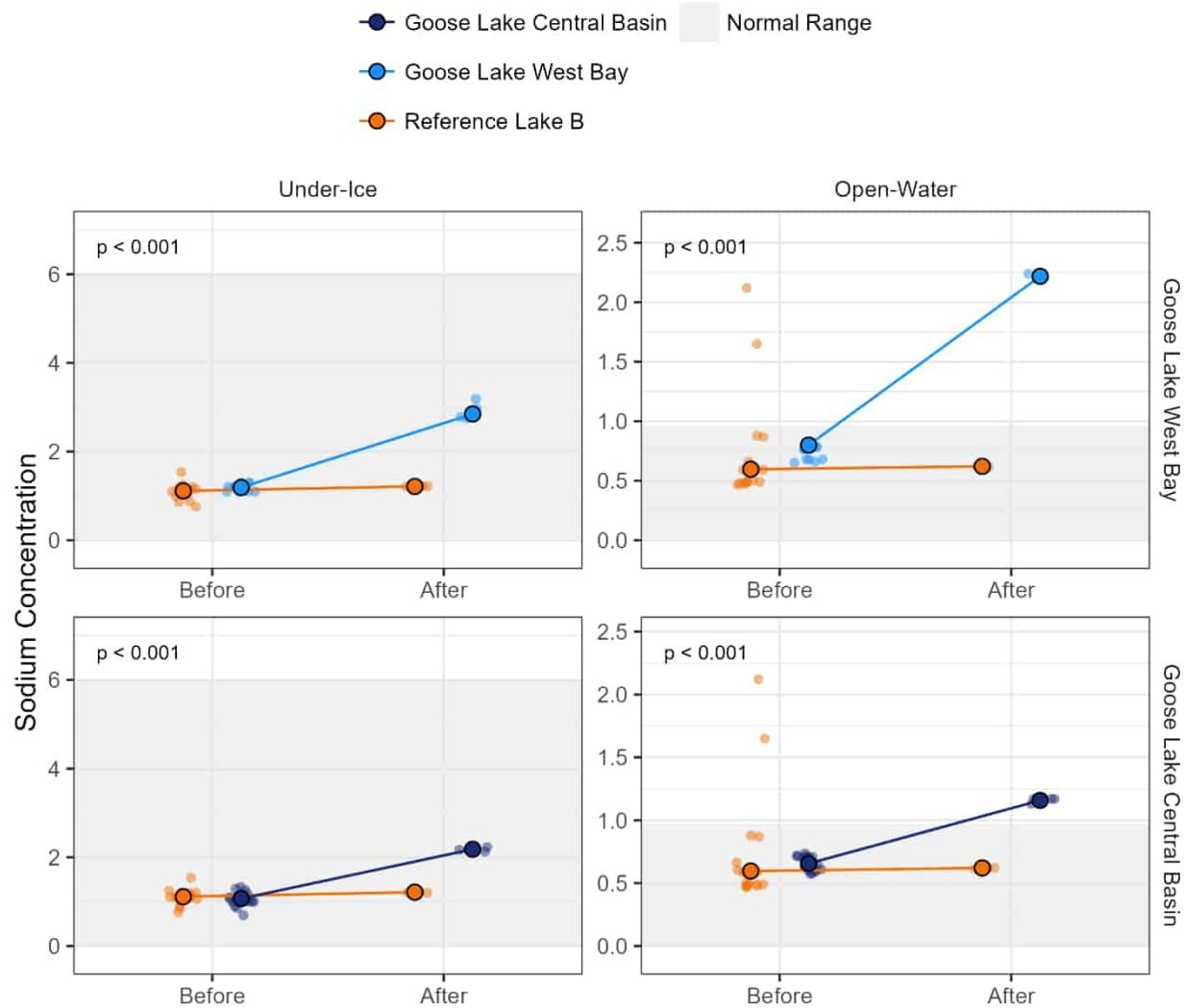
24 NITRATE



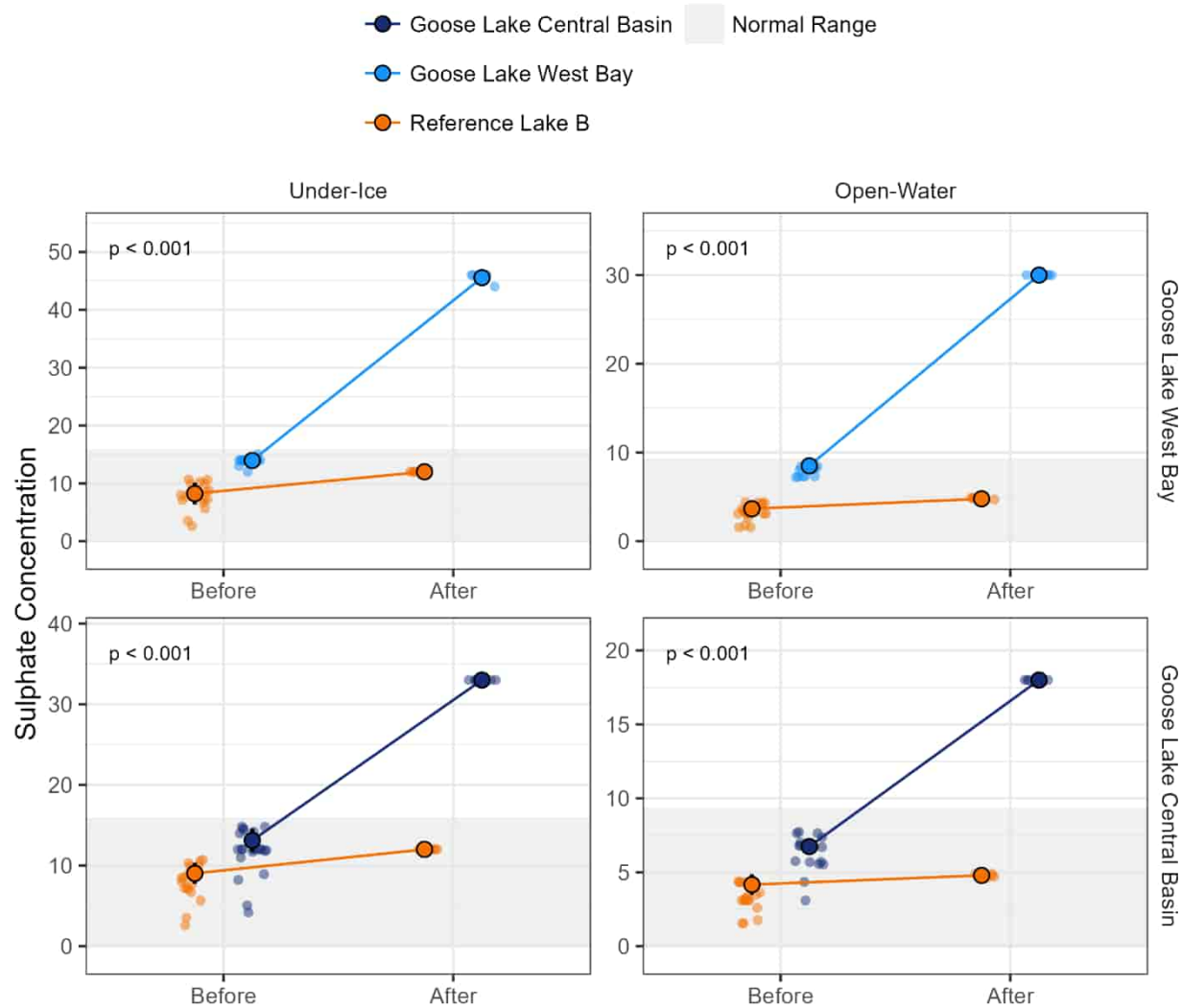
25 REACTIVE SILICA



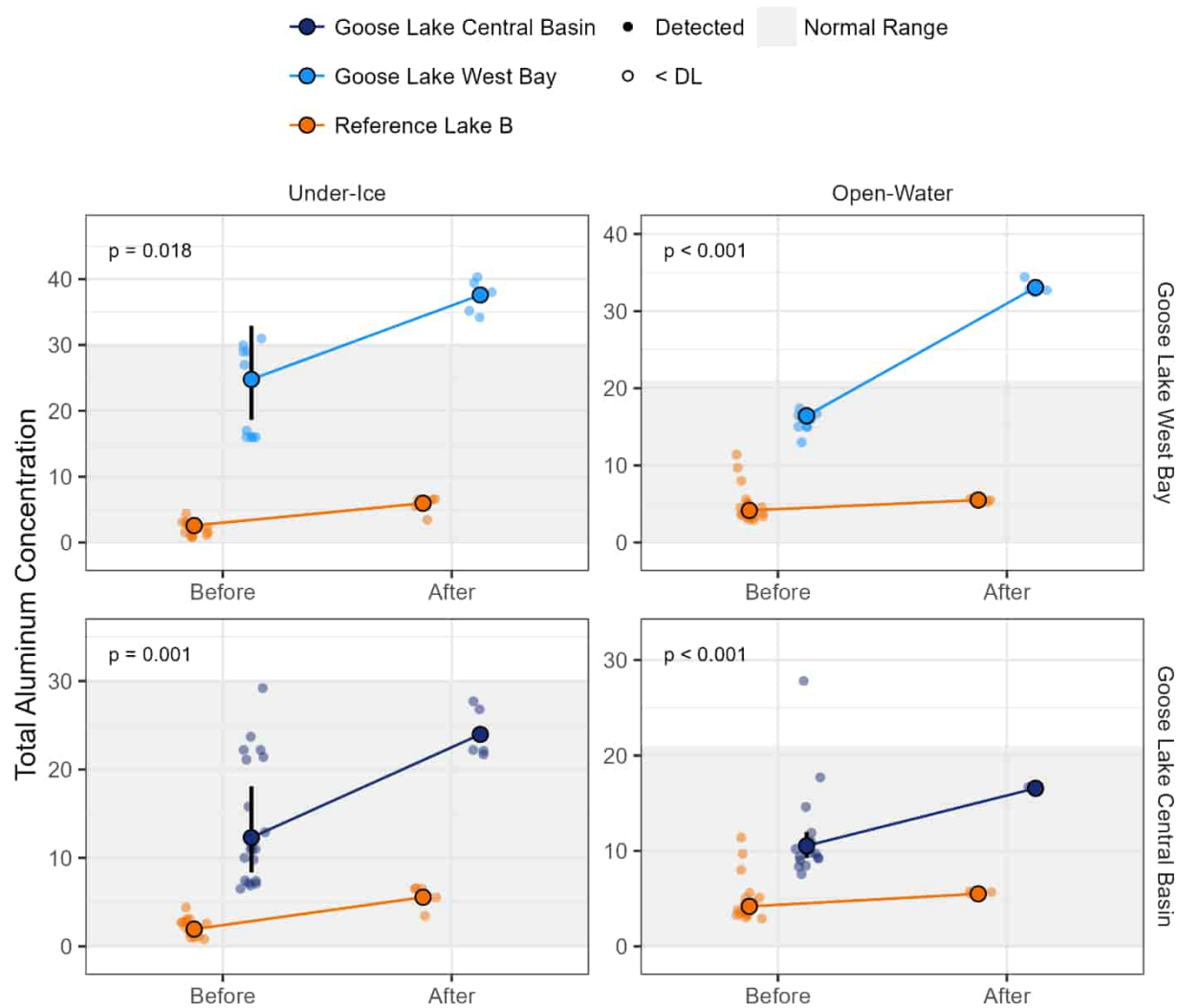
26 SODIUM



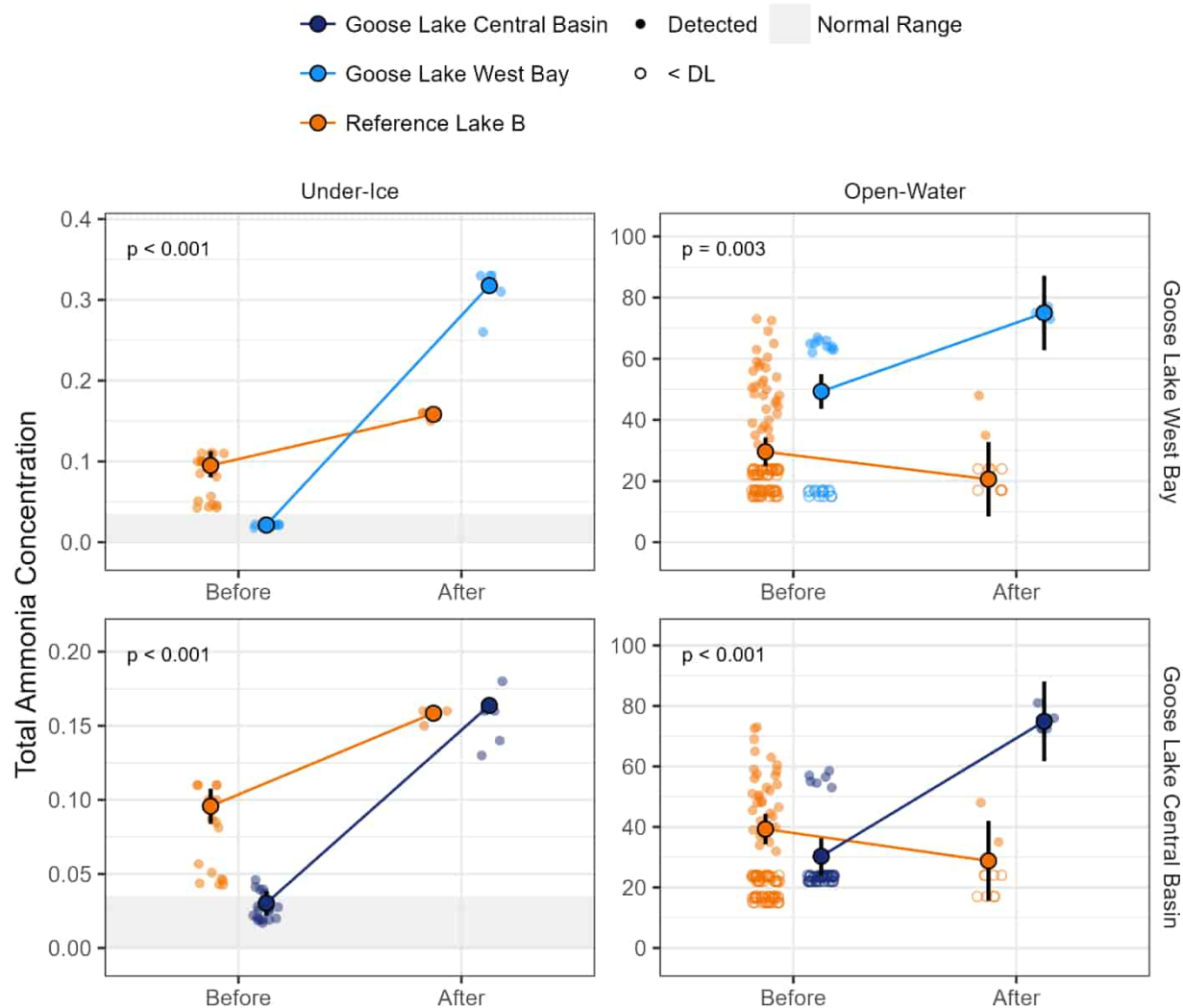
27 SULPHATE



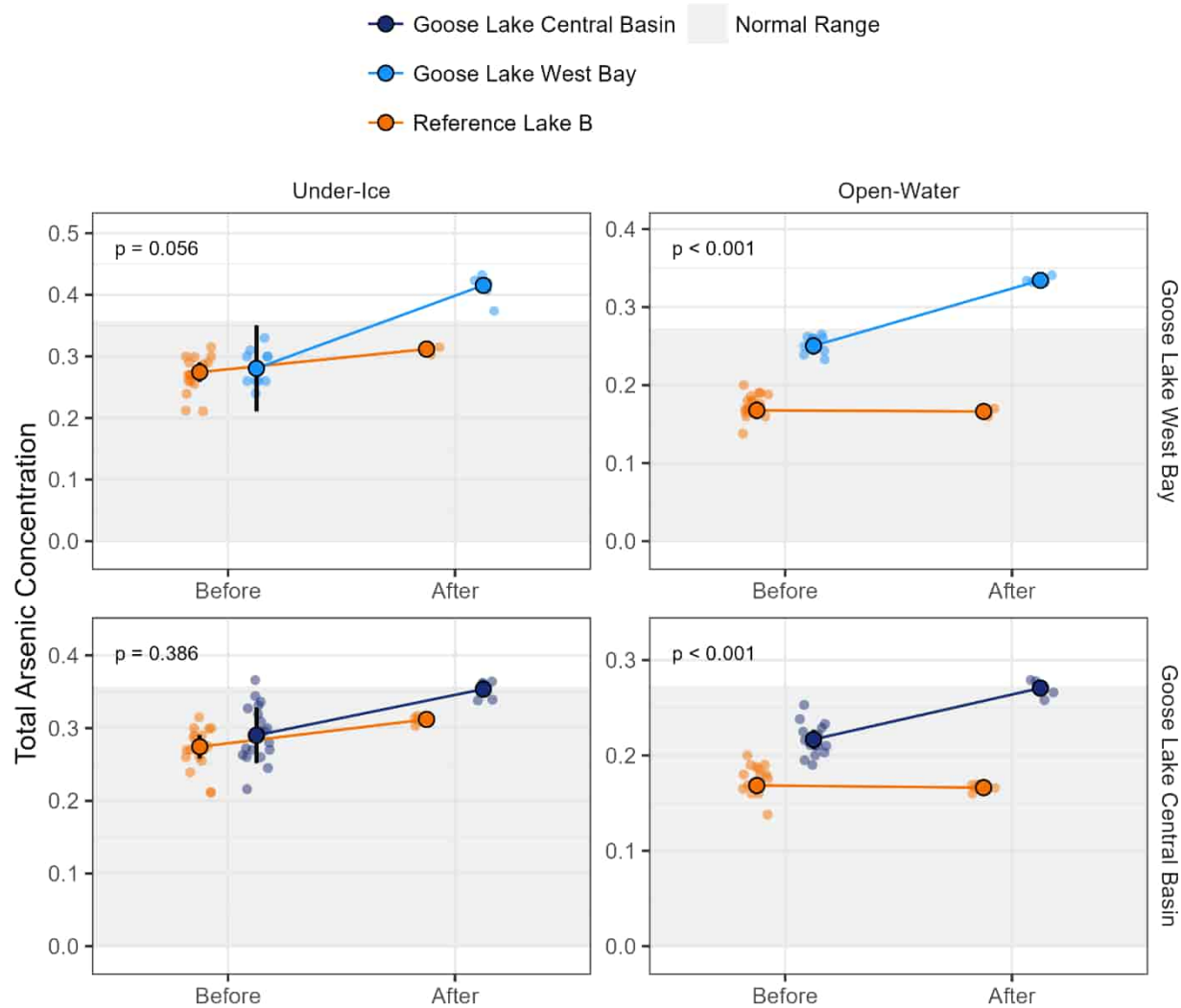
28 TOTAL ALUMINUM



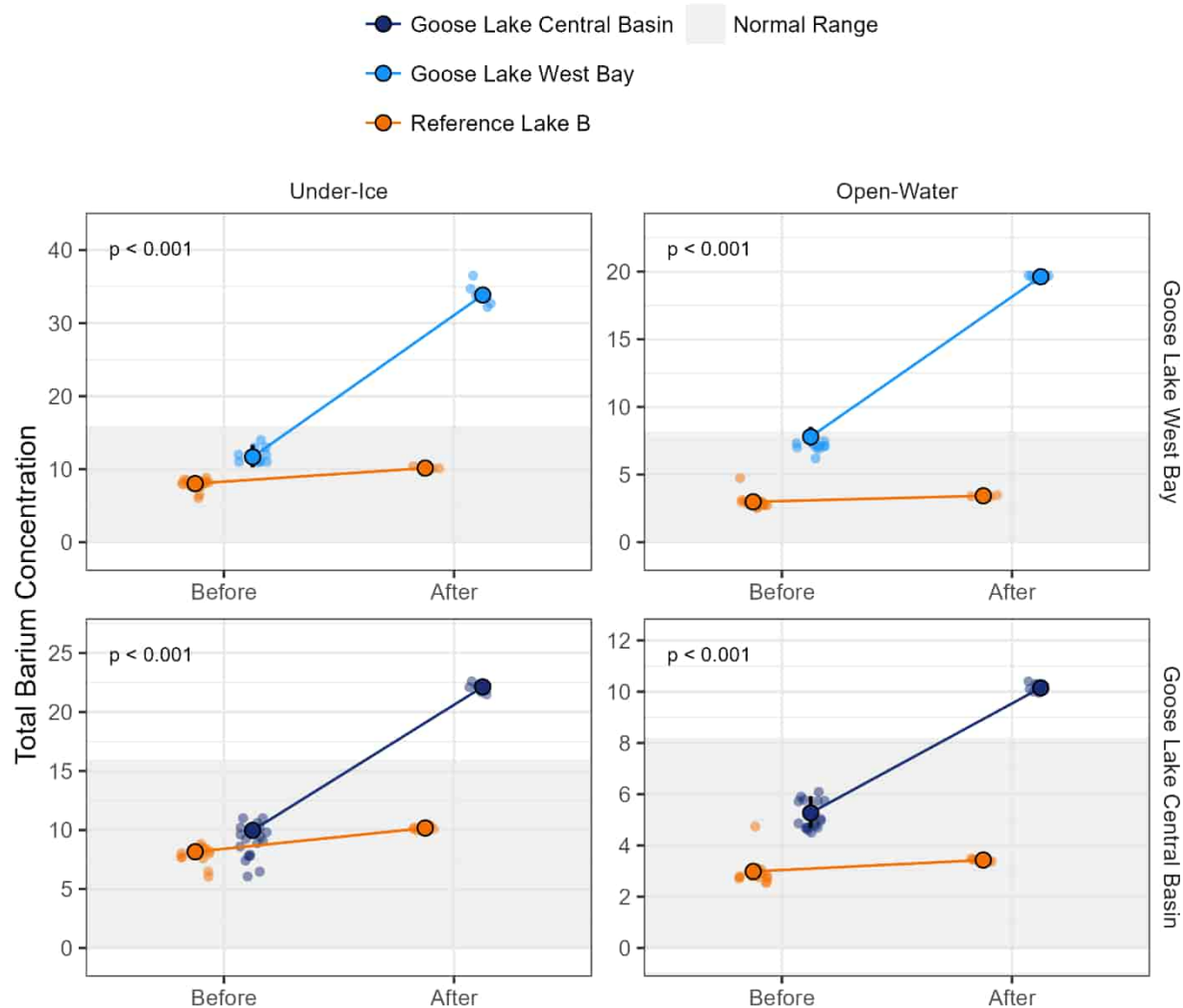
29 TOTAL AMMONIA



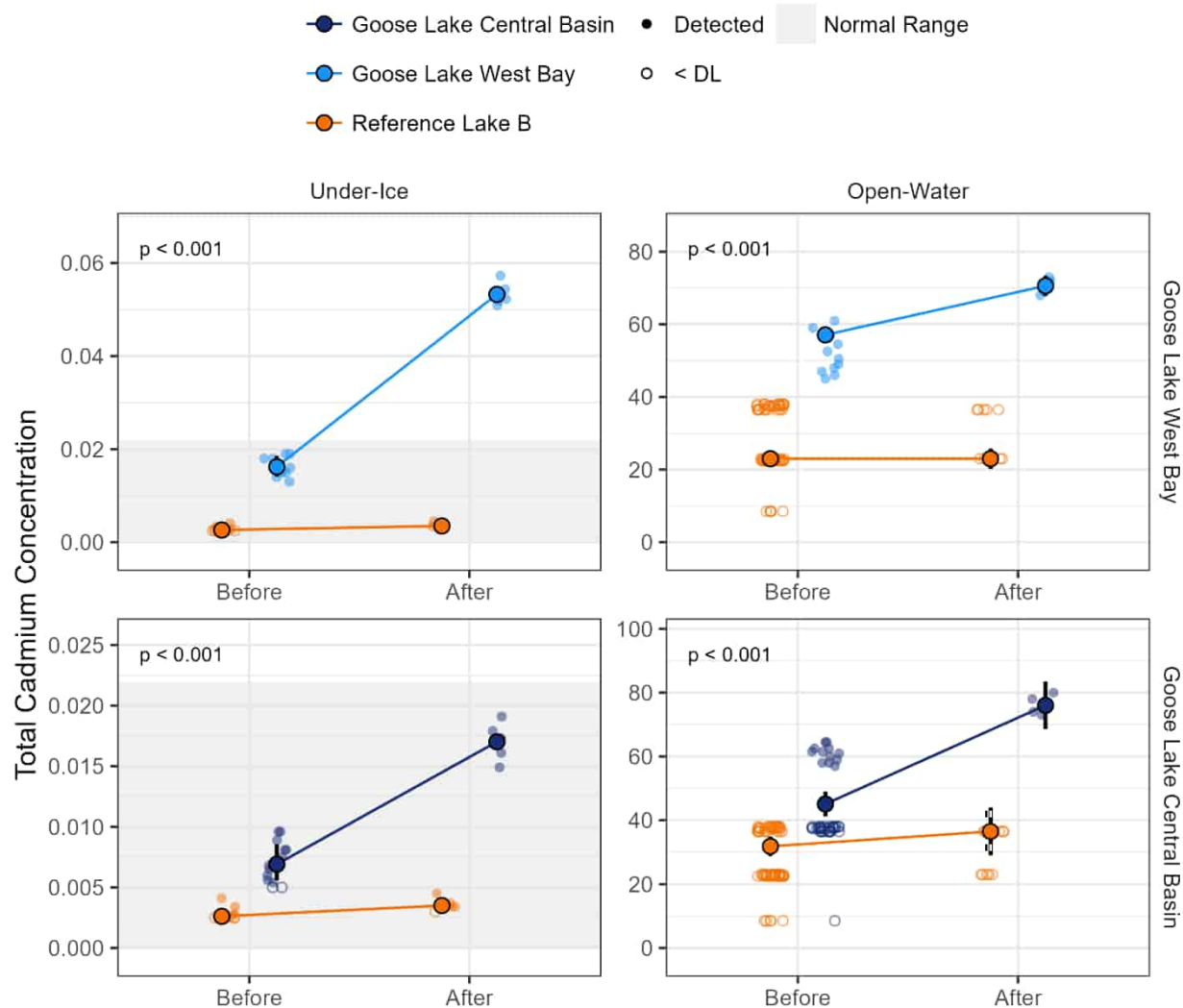
30 TOTAL ARSENIC



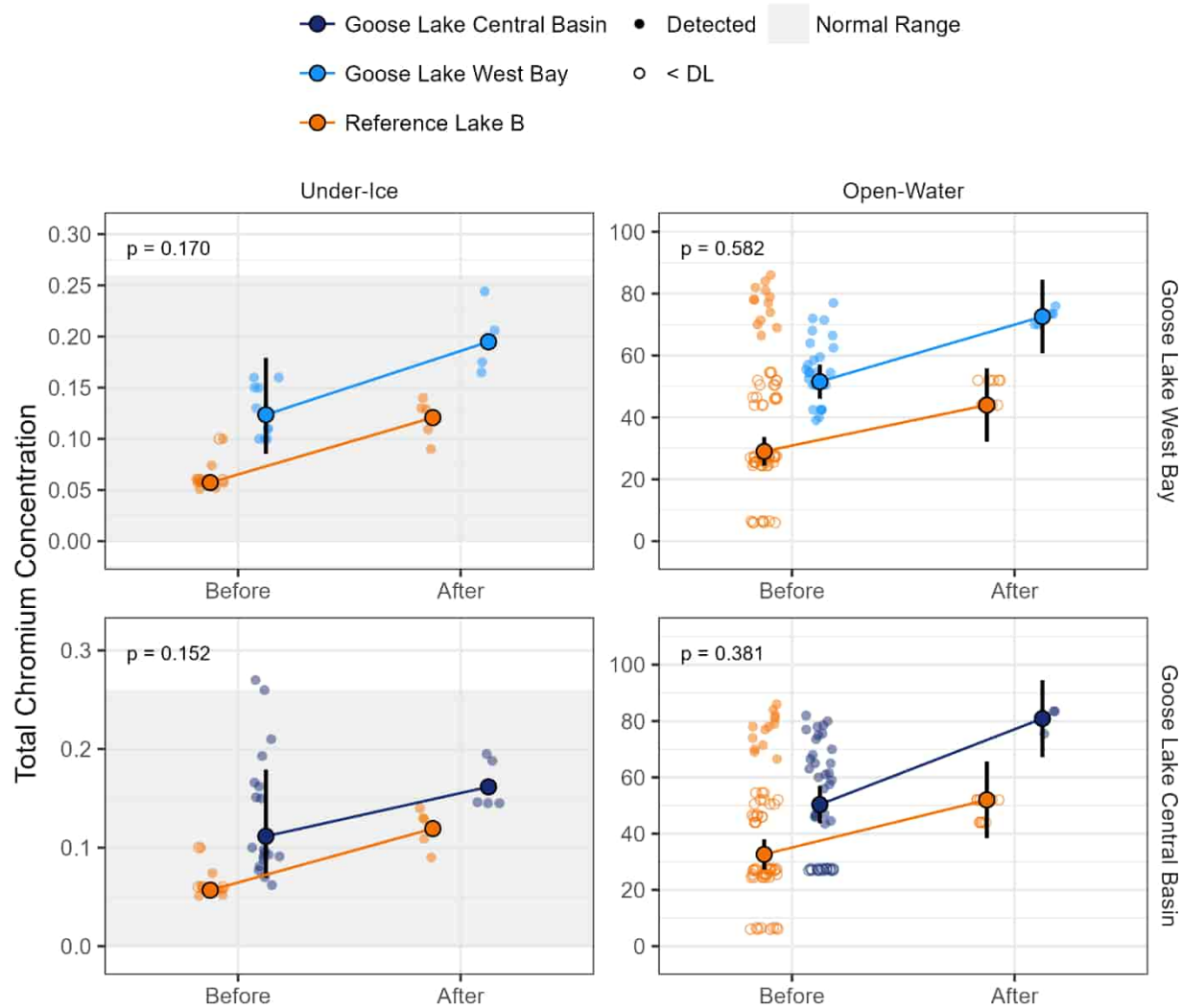
31 TOTAL BARIUM



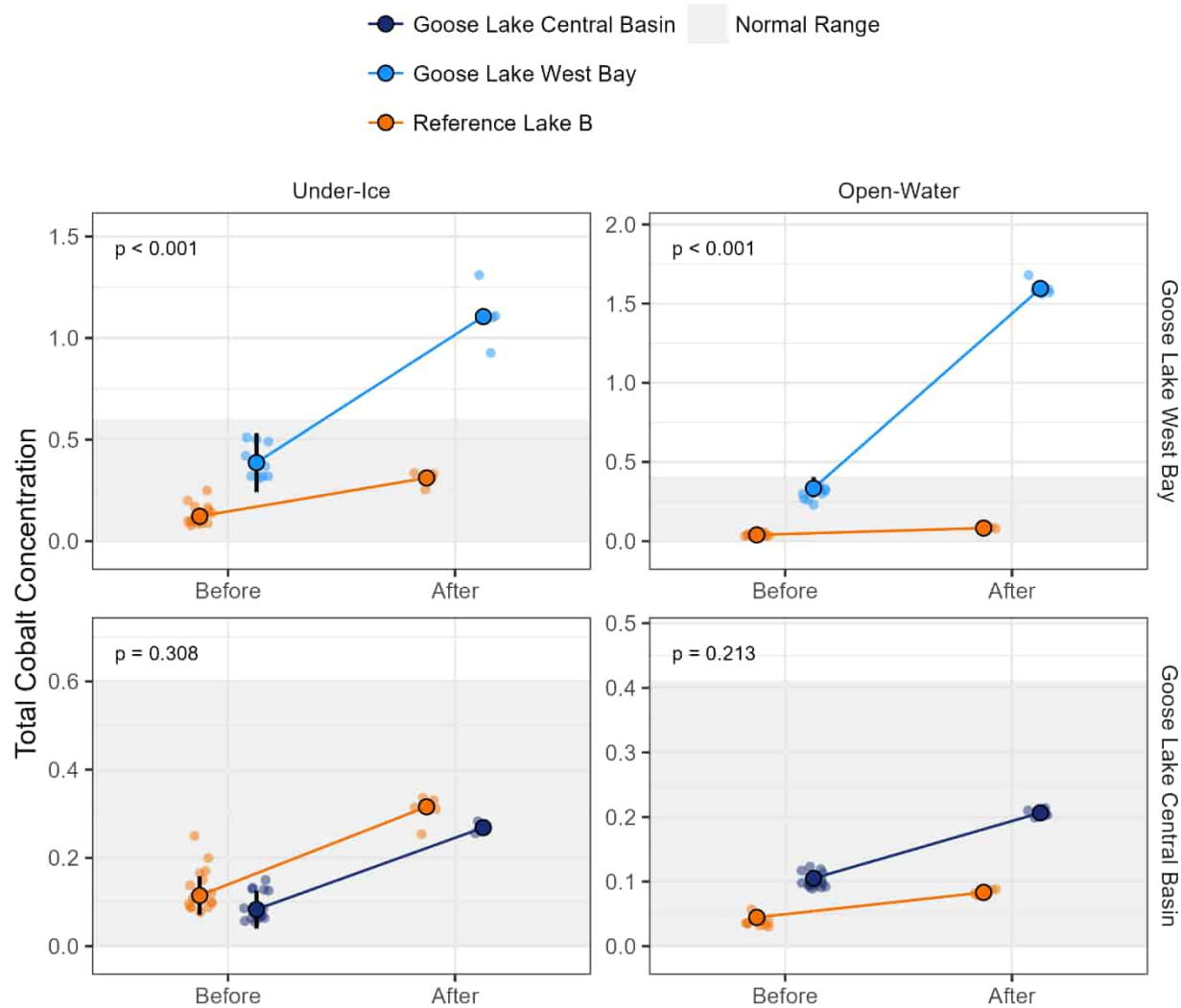
32 TOTAL CADMIUM



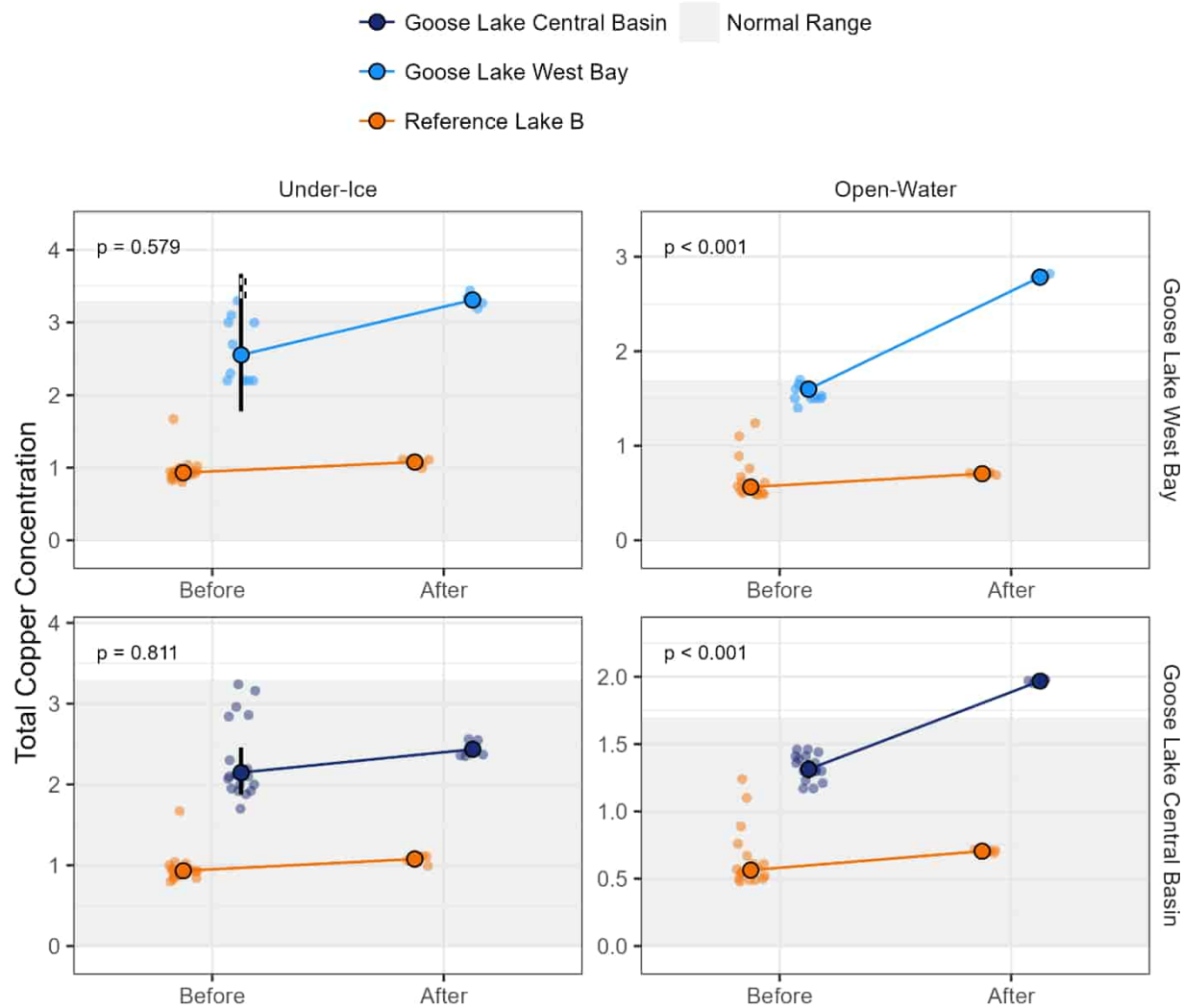
33 TOTAL CHROMIUM



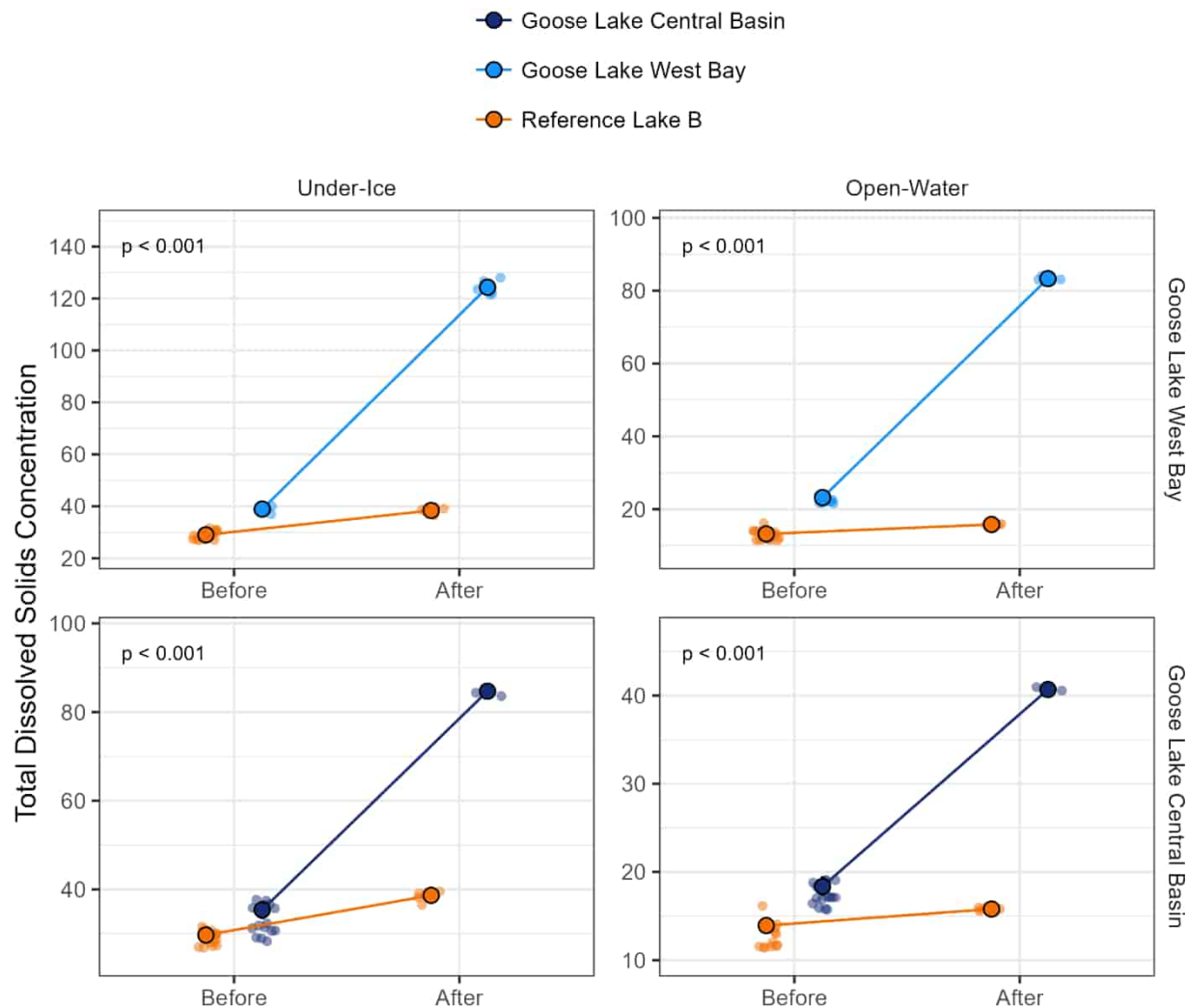
34 TOTAL COBALT



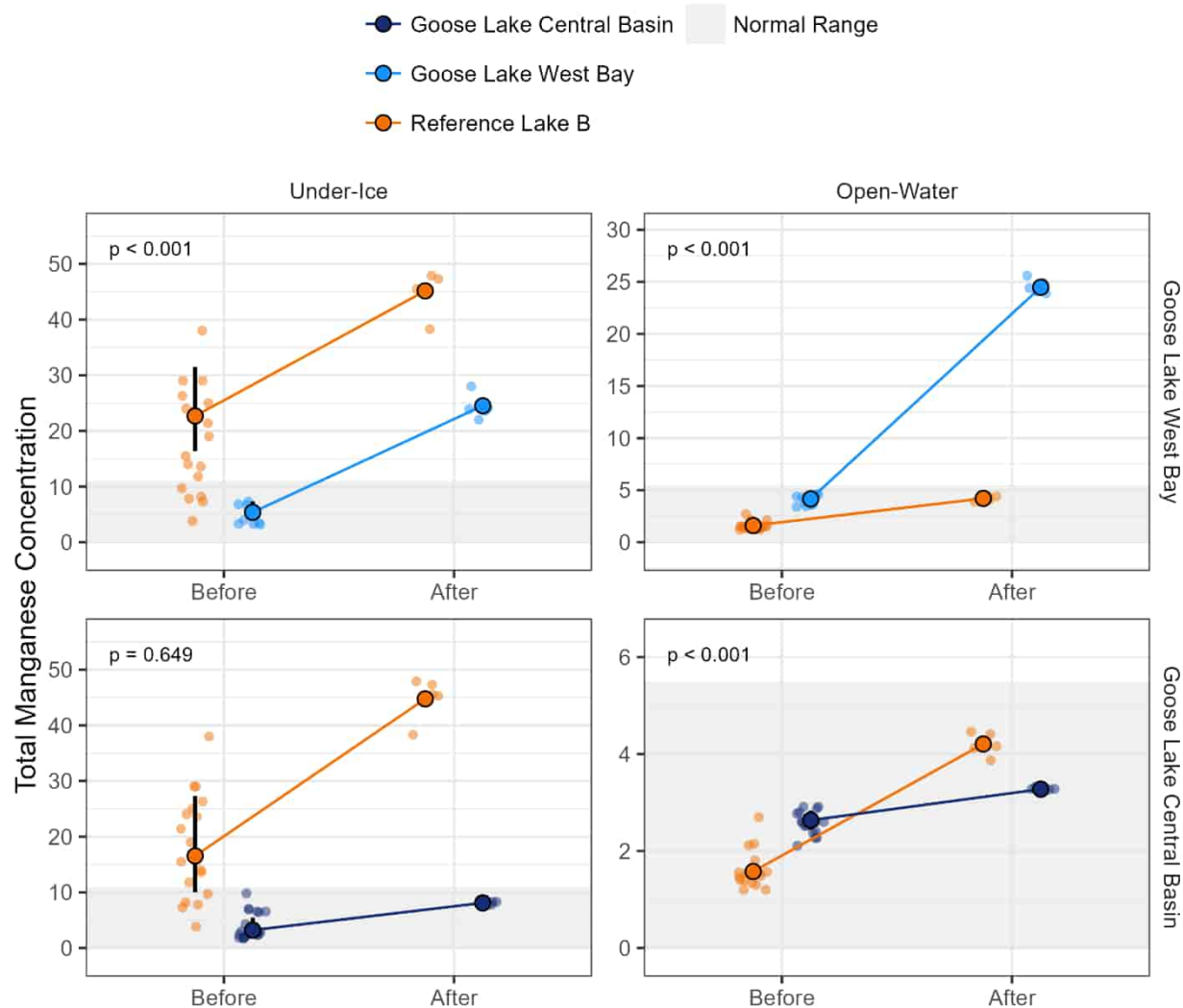
35 TOTAL COPPER



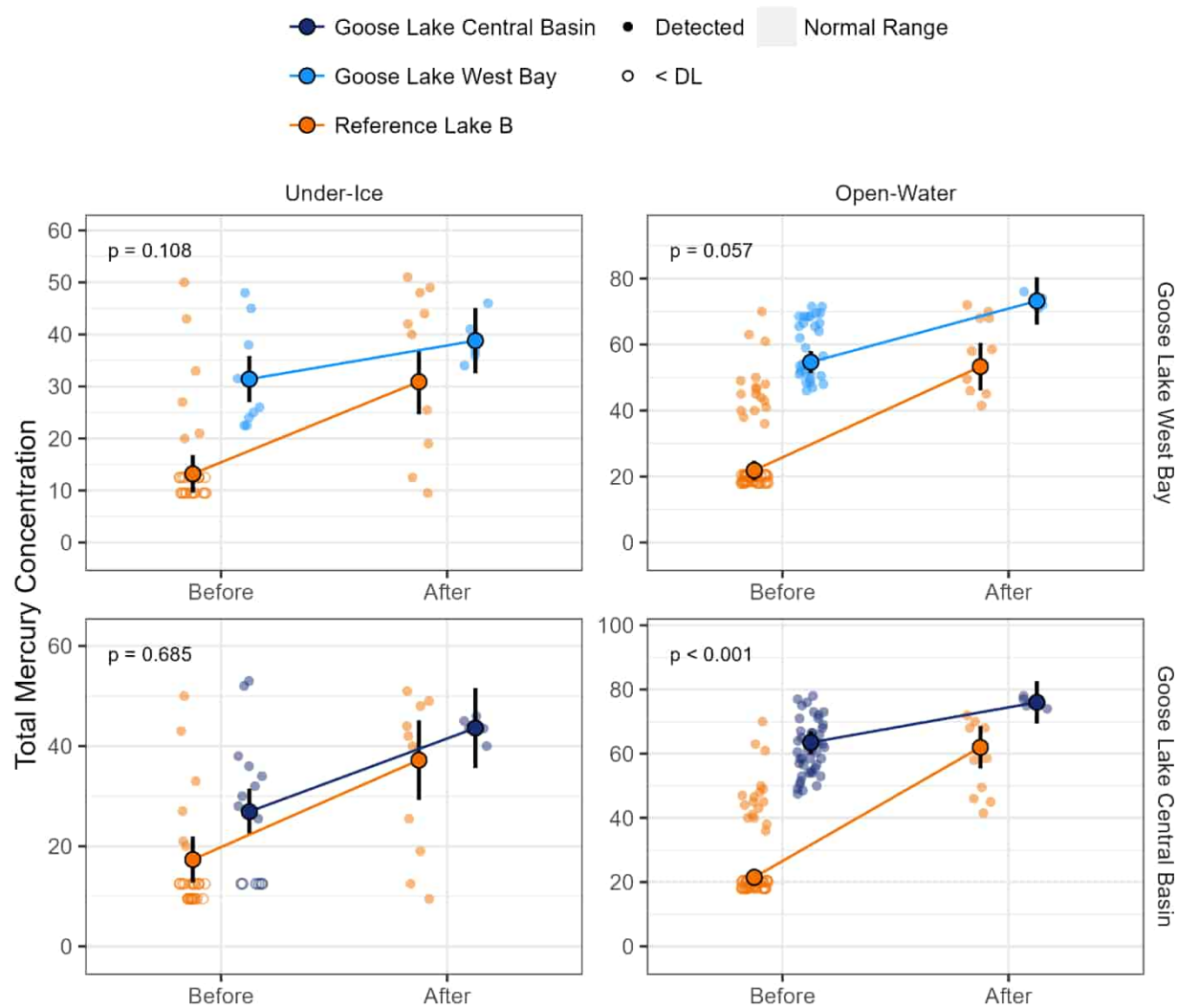
36 TOTAL DISSOLVED SOLIDS



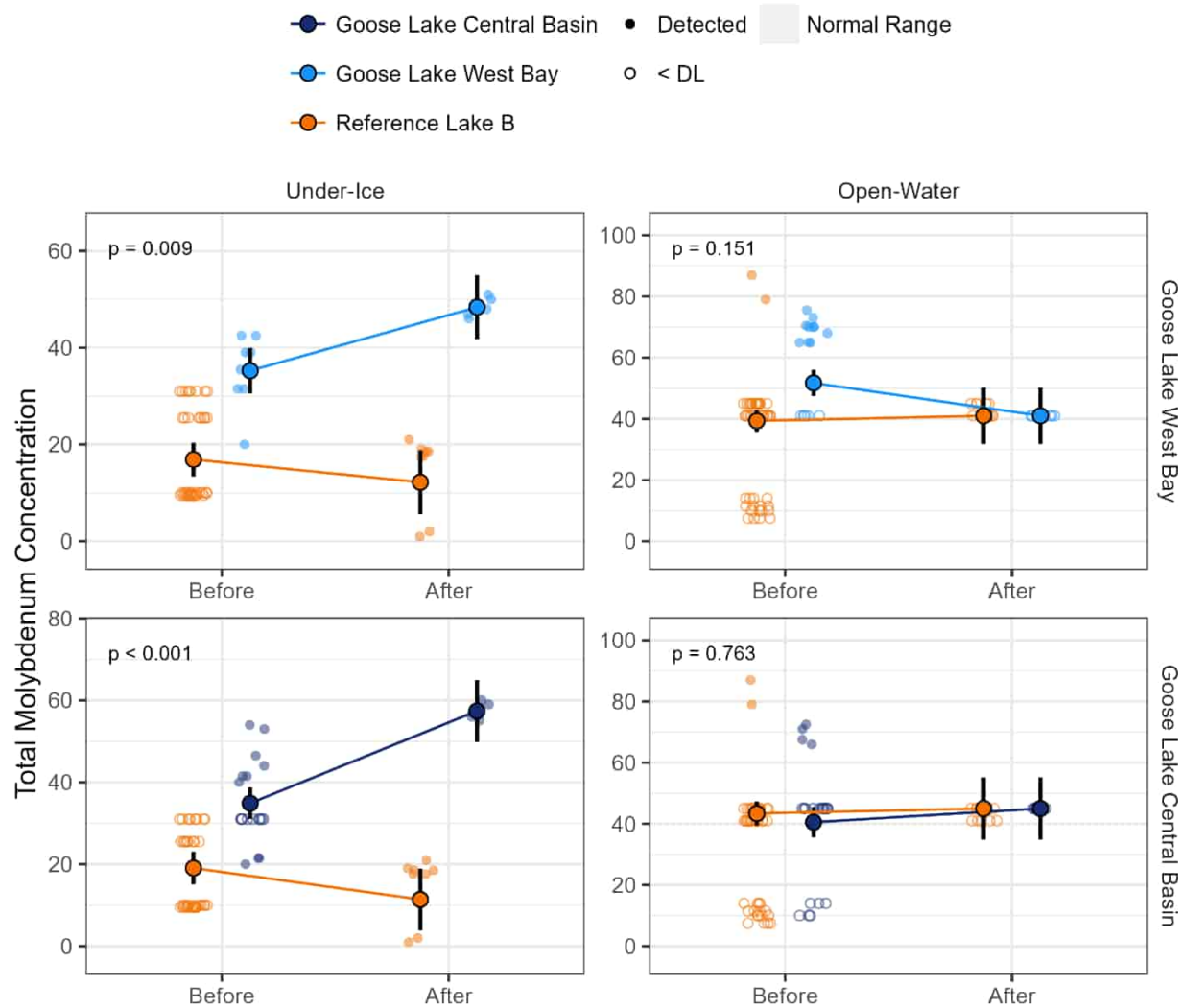
37 TOTAL MANGANESE



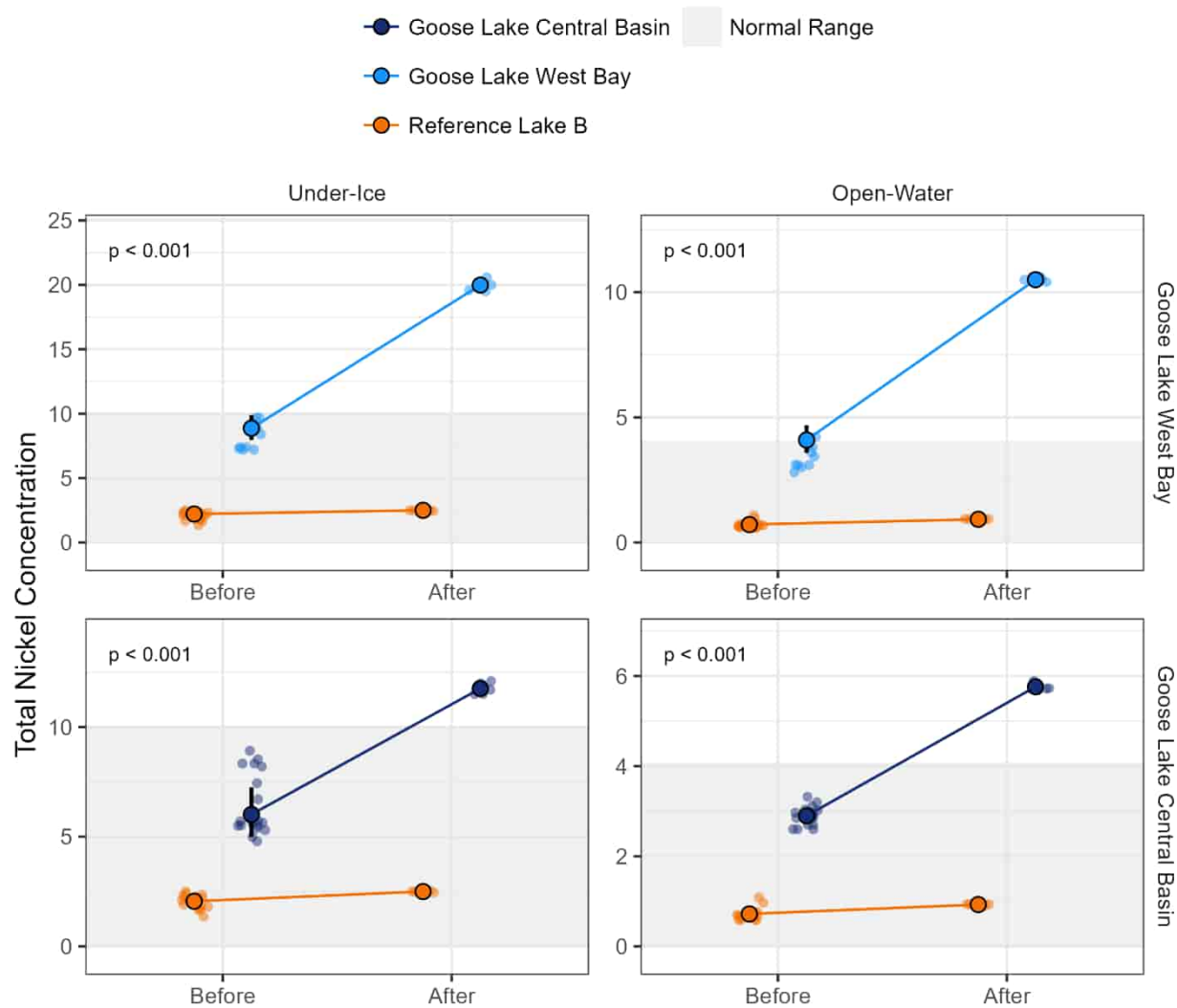
38 TOTAL MERCURY



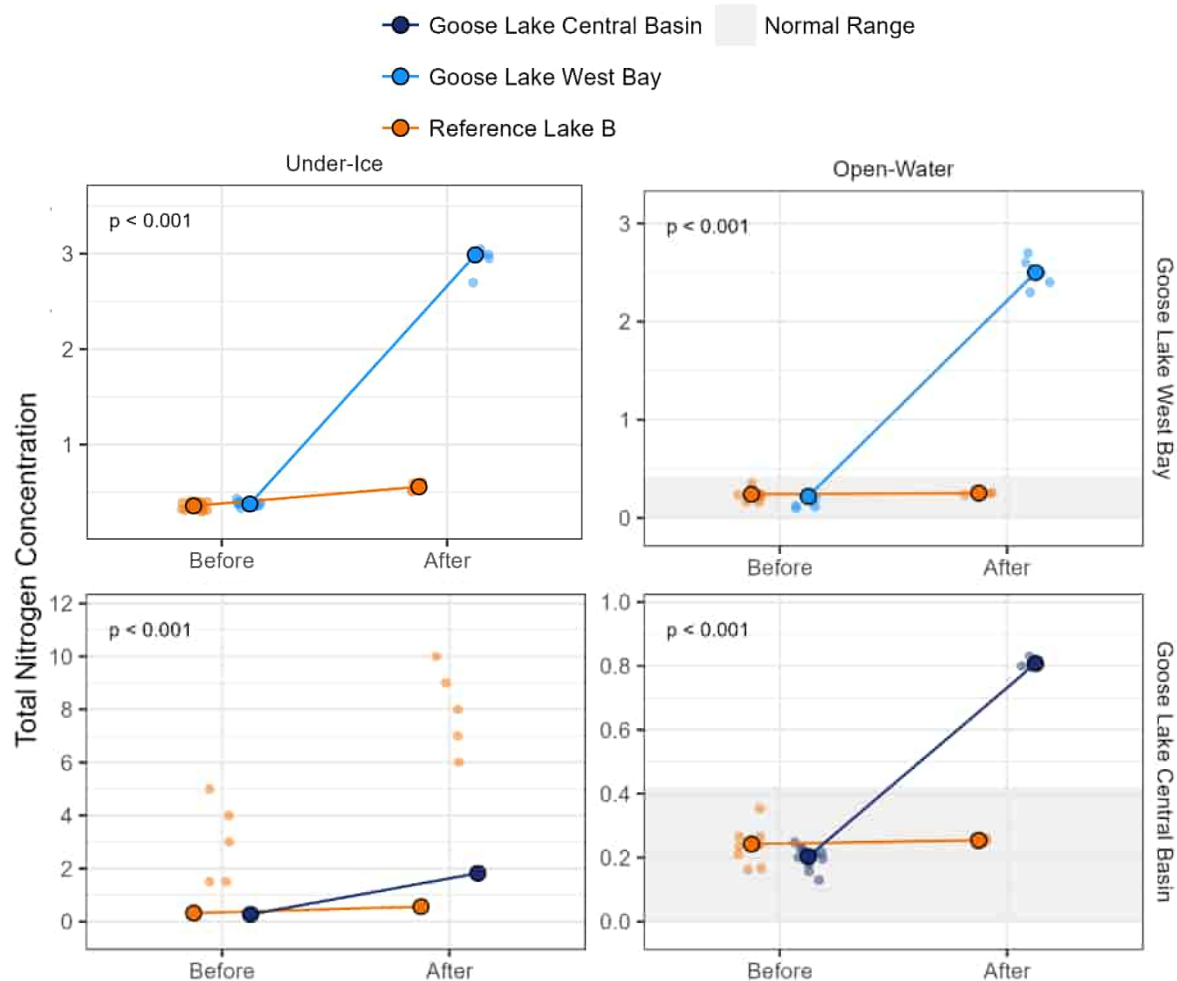
39 TOTAL MOLYBDENUM



40 TOTAL NICKEL

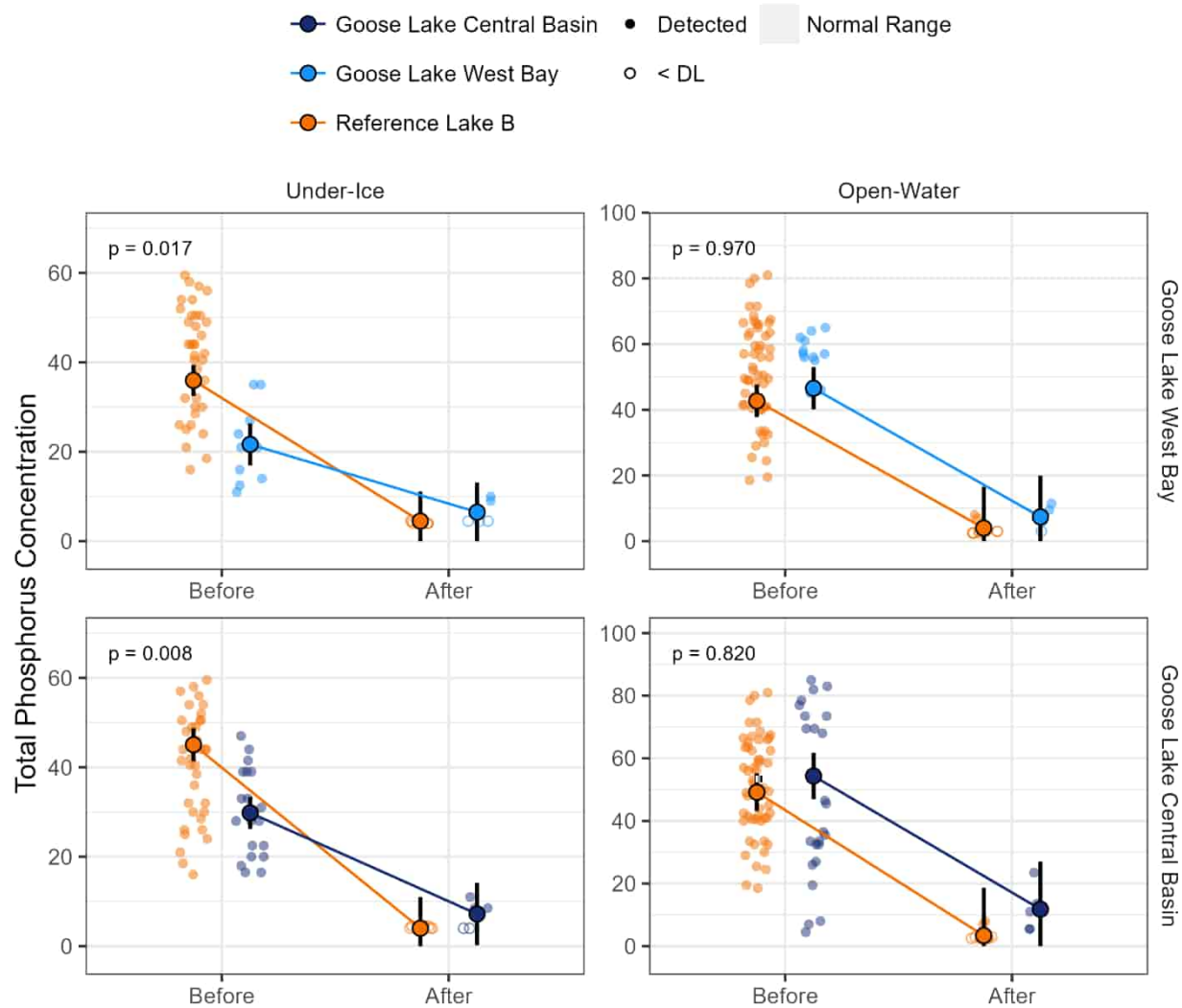


41 TOTAL NITROGEN

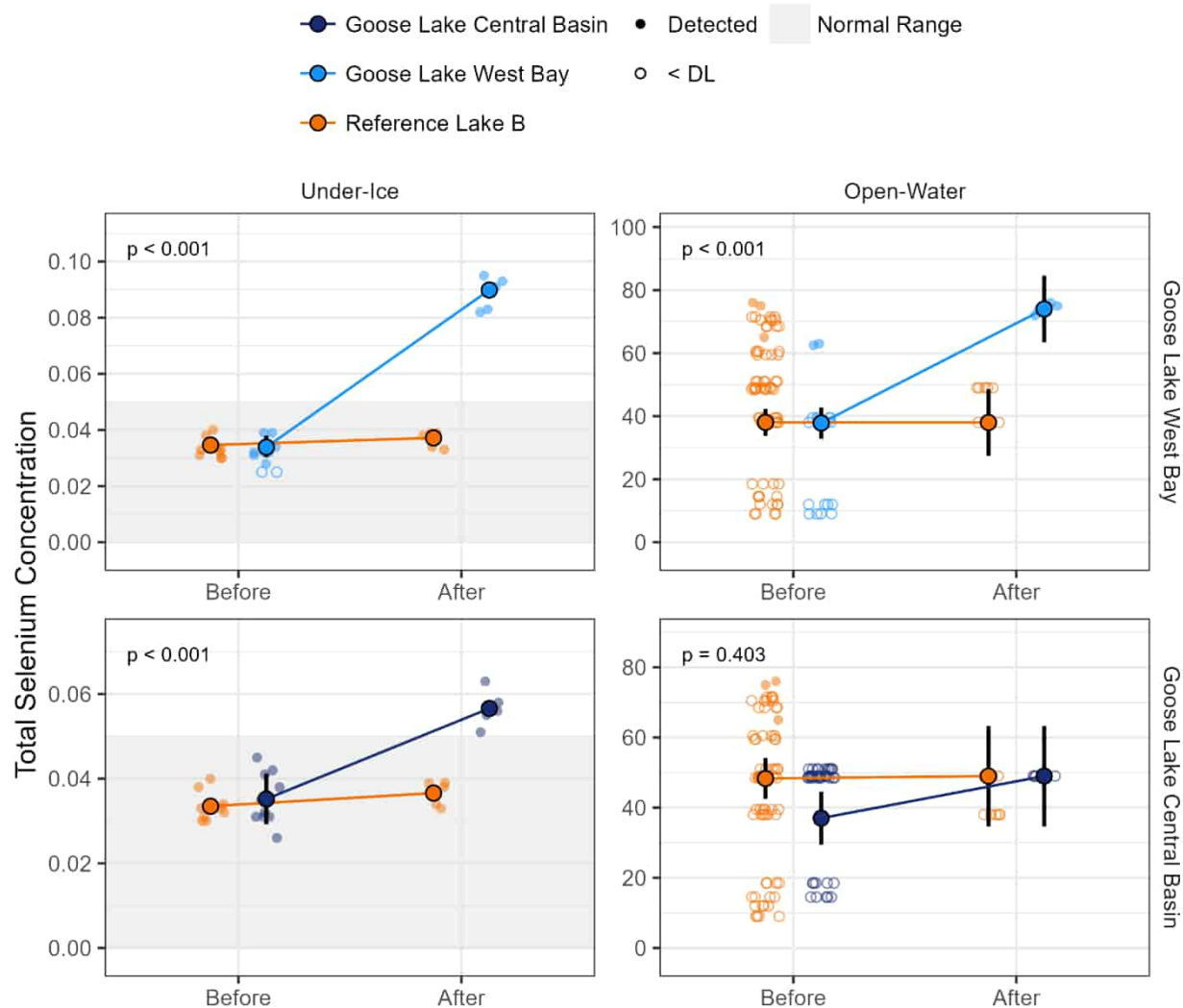


Note: Statistical analysis was carried out on calculated total nitrogen in under-ice conditions as there were no total nitrogen results in the Before period for West Bay in April.

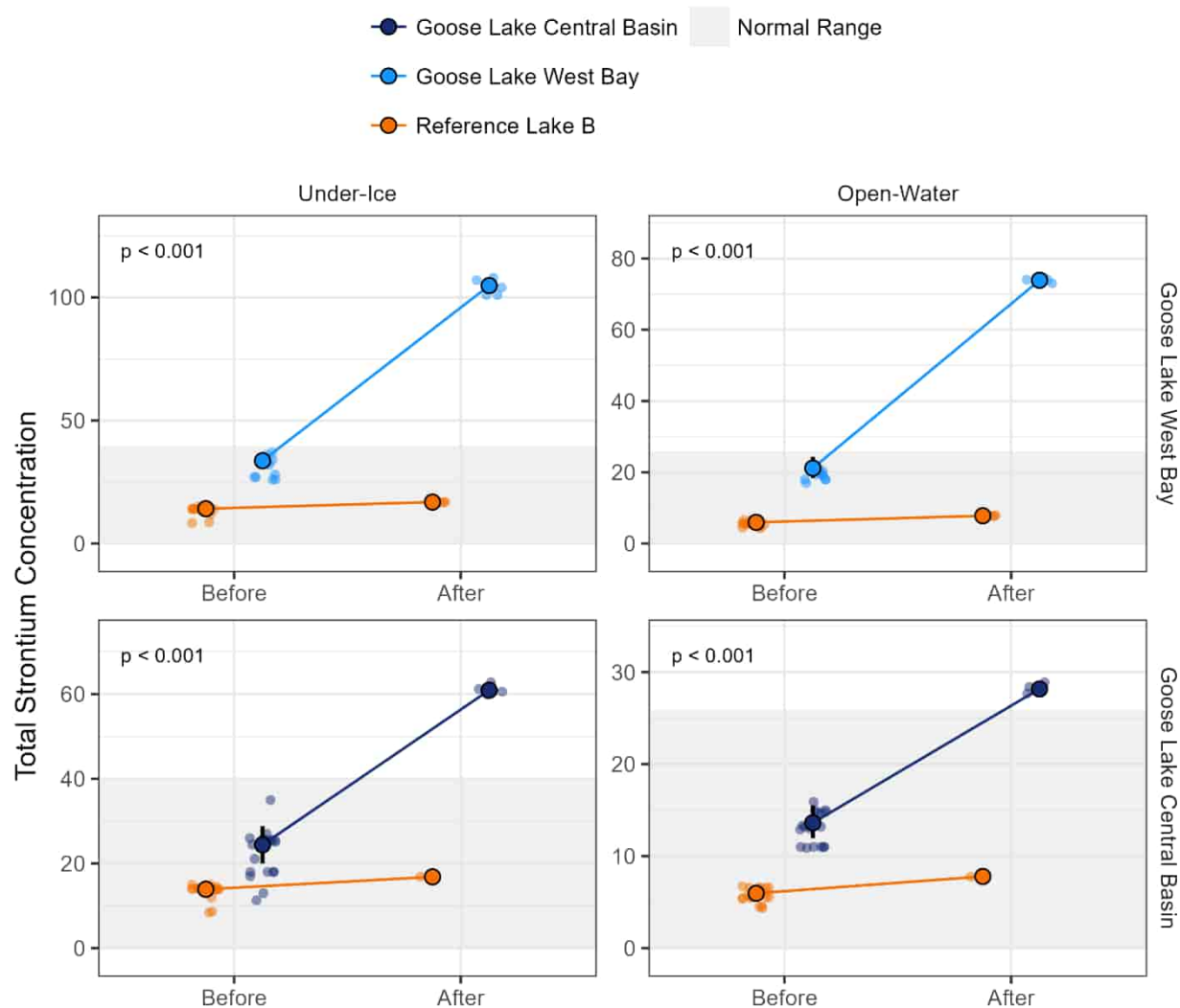
42 TOTAL PHOSPHORUS



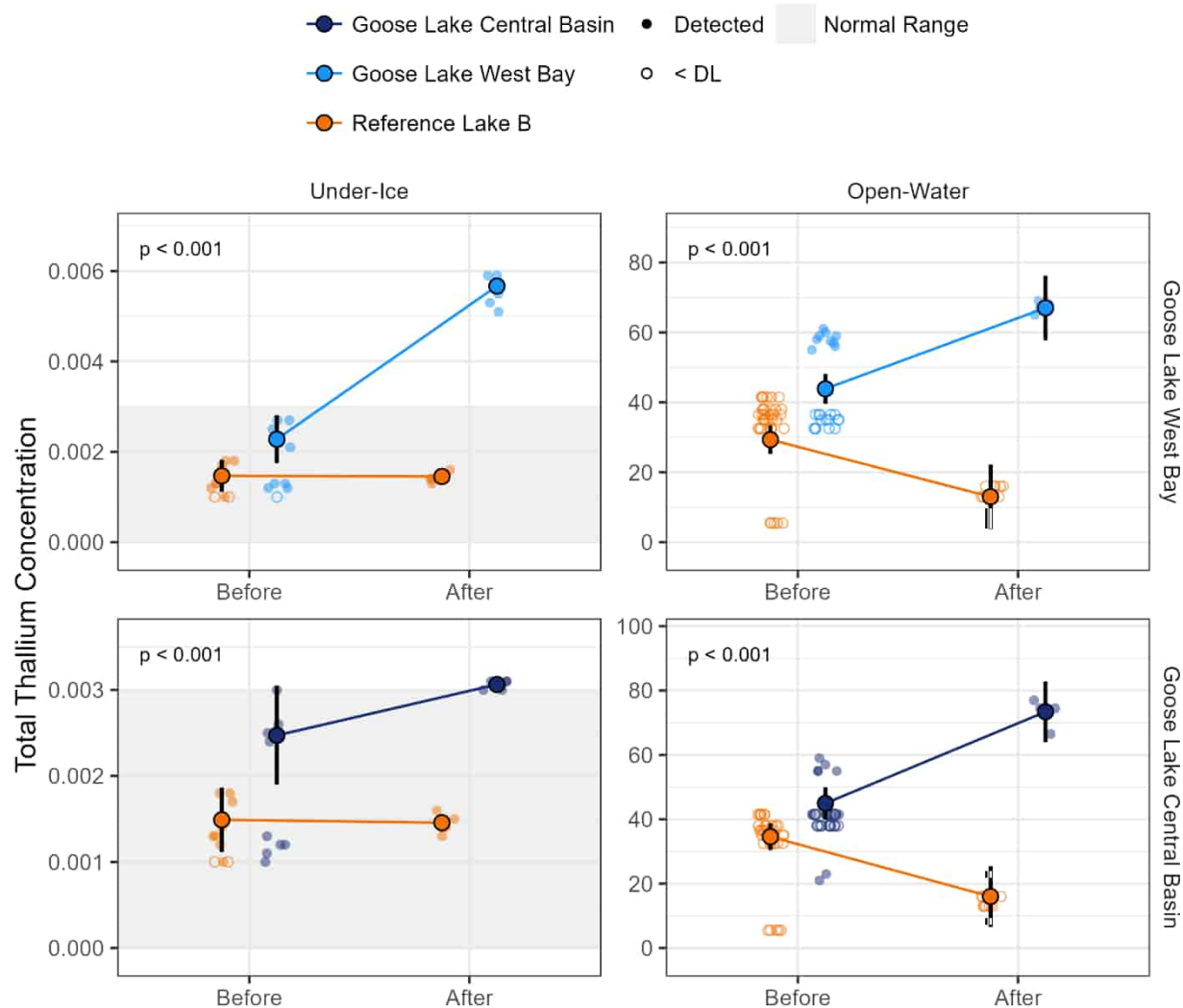
43 TOTAL SELENIUM



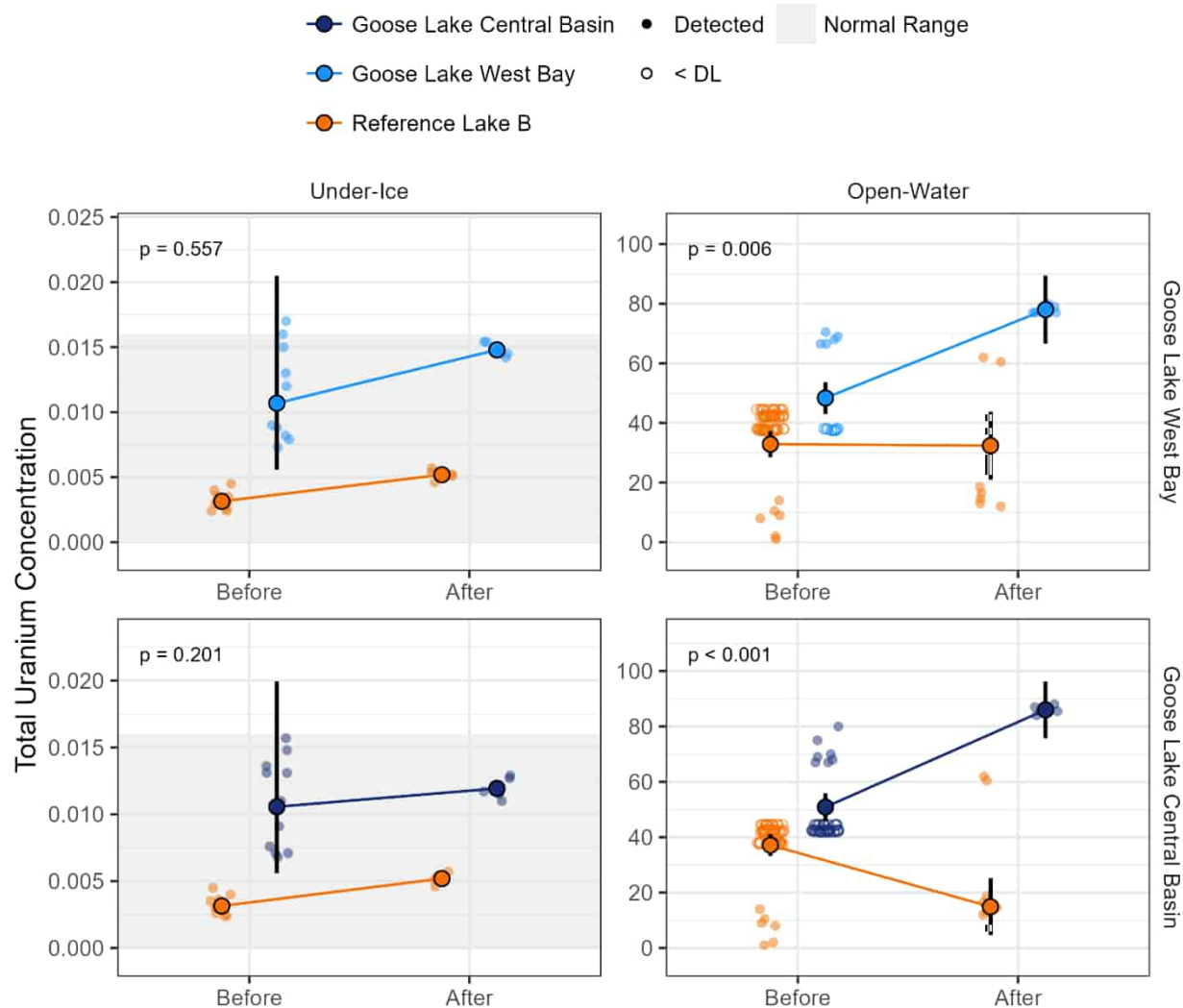
44 TOTAL STRONTIUM



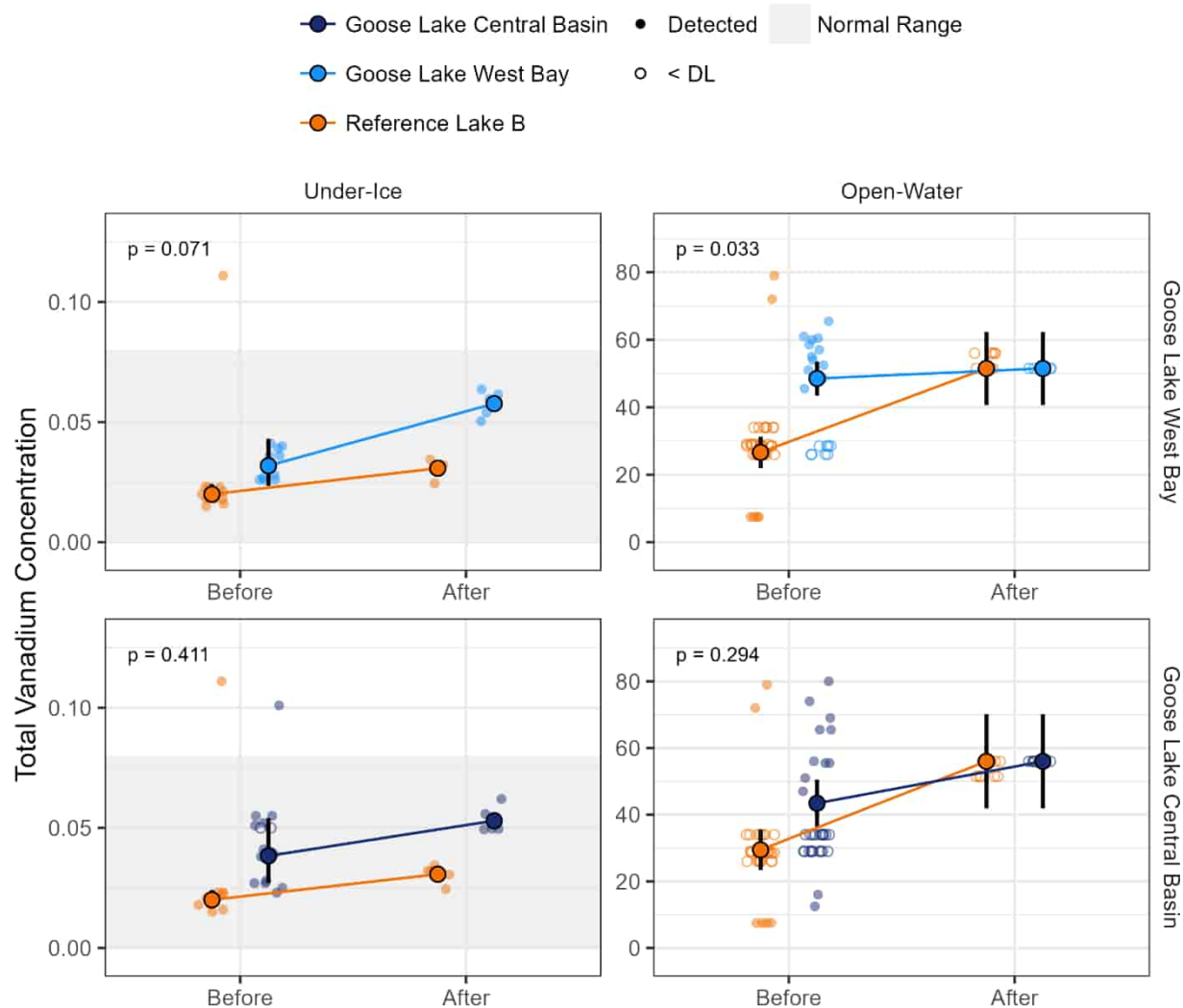
45 TOTAL THALLIUM



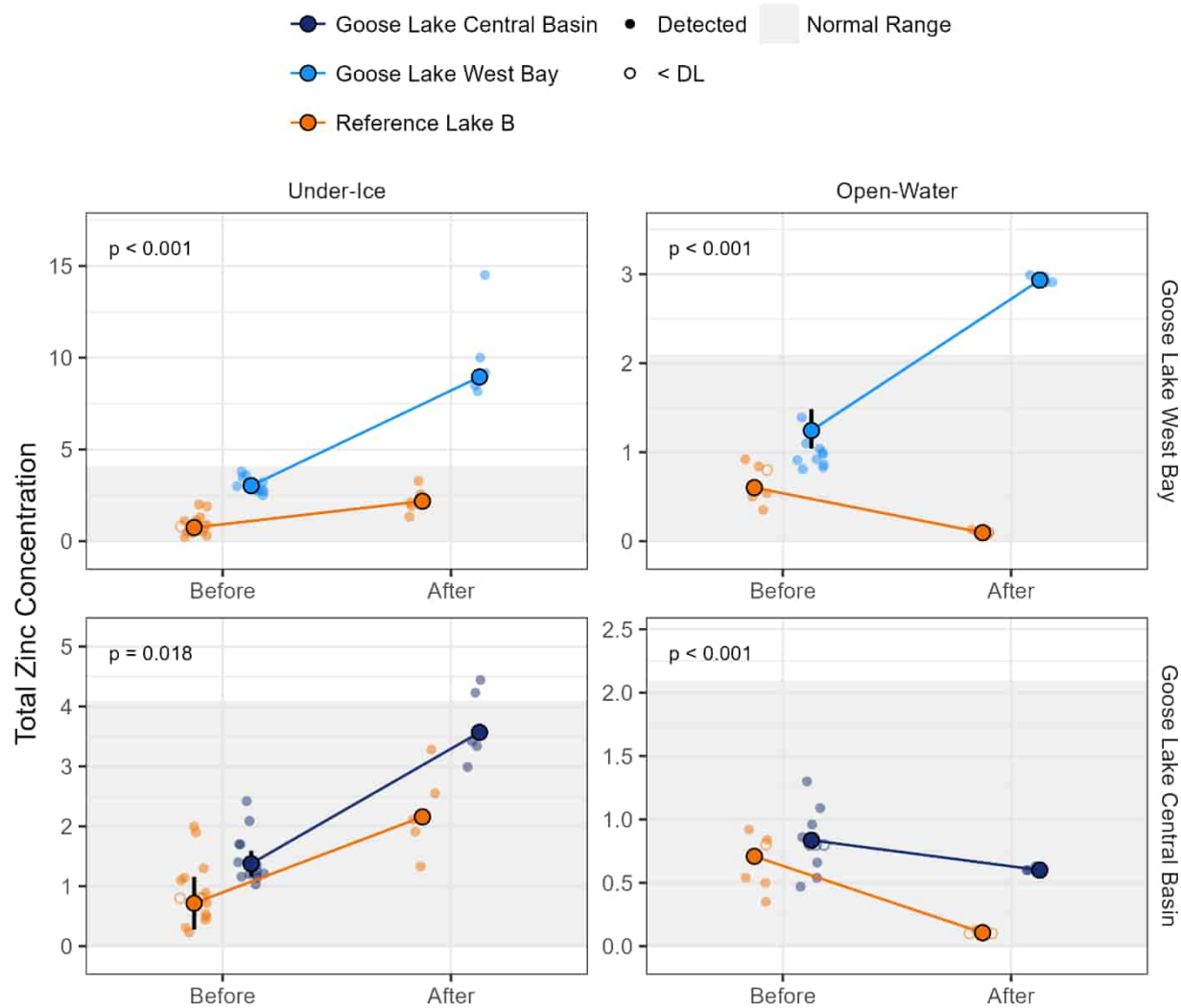
46 TOTAL URANIUM



47 TOTAL VANADIUM



48 TOTAL ZINC



APPENDIX D1

D1 – Certificate of Analysis



Your P.O. #: 470000200
Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/11
Report #: R3672741
Version: 6 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532907

Received: 2025/04/18, 09:30

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	10	N/A	2025/04/23	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	10	N/A	2025/04/22	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	6	N/A	2025/04/21	CAL SOP-00270	SM 24 4500-CN m
Cyanide (total) (1)	4	N/A	2025/04/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	6	N/A	2025/04/21	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	4	N/A	2025/04/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) -Lab Filtered (1, 3)	6	N/A	2025/04/23	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) -Lab Filtered (1, 3)	4	N/A	2025/04/24	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	7	N/A	2025/04/23	AB SOP-00005	SM 24 2510 B m
Conductivity @25C (1)	3	N/A	2025/04/24	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	6	N/A	2025/04/23	AB SOP-00005	SM 24 4500-F C m
Fluoride - Low Level (1)	3	N/A	2025/04/24	AB SOP-00005	SM 24 4500-F C m
Fluoride - Low Level (1)	1	N/A	2025/04/25	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	6	N/A	2025/04/21	CAL SOP-00270	Skalar I291-301w/r m
Free Cyanide (1)	4	N/A	2025/04/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	10	N/A	2025/04/22		Auto Calc
Hardness Total (calculated as CaCO3) (1, 4)	10	N/A	2025/05/09	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	10	N/A	2025/05/09	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	1	N/A	2025/04/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	5	N/A	2025/04/28	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	4	N/A	2025/05/12	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	4	2025/04/24	2025/04/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/04/24	2025/04/28	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	5	2025/05/12	2025/05/12	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (2)	10	N/A	2025/05/08	BBY7SOP-00029	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (2)	10	N/A	2025/05/08	BBY7SOP-00029	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	9	N/A	2025/06/04		Auto Calc
Ammonia-N Low Level (Preserved) (1)	10	N/A	2025/04/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	10	N/A	2025/04/22		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	10	N/A	2025/04/21	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	10	2025/04/20	2025/04/22		Auto Calc



Your P.O. #: 470000200
Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/11
Report #: R3672741
Version: 6 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532907

Received: 2025/04/18, 09:30

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH @25°C (1, 5)	10	N/A	2025/04/23	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	9	N/A	2025/06/04	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 6)	10	N/A	2025/04/21	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	10	2025/04/21	2025/04/22	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	10	N/A	2025/04/24	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	9	2025/04/22	2025/04/23	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	1	2025/04/25	2025/04/25	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	10	N/A	2025/05/09		Auto Calc
Temperature (Field) (1)	9	N/A	2025/06/04	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	10	N/A	2025/04/24		Auto Calc
Nitrogen (Total) (1)	4	2025/04/23	2025/04/23	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	6	2025/04/24	2025/04/24	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 7)	10	N/A	2025/04/24	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus-Dis-Low-Lab Filtered (1, 8)	10	2025/04/23	2025/04/24	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/04/23	2025/04/23	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	9	2025/04/23	2025/04/24	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	10	2025/04/22	2025/04/23	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	7	N/A	2025/04/21	CAL SOP-00081	SM 24 2130 B m
Turbidity (1)	3	N/A	2025/04/23	CAL SOP-00081	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.



Your P.O. #: 470000200
Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/11
Report #: R3672741
Version: 6 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532907

Received: 2025/04/18, 09:30

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (7) TOC present in the sample should be considered as non-purgeable TOC.
- (8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

**RESULTS OF CHEMICAL ANALYSES OF WATER**

Bureau Veritas ID		DIF961			DIF962		
Sampling Date		2025/04/15 15:30			2025/04/15 13:30		
COC Number		C#750435-04-01			C#750435-04-01		
	UNITS	GLCB-B	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	59.0	0.50	B758894	<0.50	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	59.1	0.50	B758893	<0.50	0.50	B758893
Dissolved Nitrate (N)	mg/L	1.4	0.050	B758910	0.0036	0.0030	B758910
Nitrate (NO ₃)	mg/L	6.1	0.22	B758899	0.016	0.013	B758899
Nitrite (NO ₂)	mg/L	0.41	0.0033	B758899	<0.0033	0.0033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	85	10	B758902	<10	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.33	0.050	B758903	<0.020	0.020	B758903
Un-ionized Ammonia	mg/L	<0.00050	0.00050	B973079			
Field Parameters							
Field pH	pH	6.15	N/A	ONSITE			
Field Temperature (Fd)	deg. C	2.07	N/A	ONSITE			
Misc. Inorganics							
Conductivity	uS/cm	150	2.0	B761396	<2.0	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761023	0.00056	0.00050	B759499
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761029	0.00053	0.00050	B760009
Fluoride (F)	mg/L	0.029	0.010	B761397	<0.010	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	0.00050	B761032	<0.00050	0.00050	B760023
pH	pH	5.93	N/A	B761393	5.21	N/A	B762893
Reactive Silica	mg/L	2.8	0.050	B764456	<0.050	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	8.70	0.50	B761391	<0.50	0.50	B762891
Total Organic Carbon (C)	mg/L	5.4	0.50	B763869	<0.50	0.50	B763869
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	10.6	0.50	B761391	<0.50	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	100 (1)	10	B764561	<10	10	B760499
Total Suspended Solids	mg/L	<0.99	0.99	B760479	<1.0	1.0	B760479
RDL = Reportable Detection Limit							
N/A = Not Applicable							
(1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.							



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF961			DIF962		
Sampling Date		2025/04/15 15:30			2025/04/15 13:30		
COC Number		C#750435-04-01			C#750435-04-01		
	UNITS	GLCB-B	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	5.4 (1)	0.50	B762624	<0.50 (1)	0.50	B762624
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	0.0018	B760249	<0.0018	0.0018	B760249
Chloride (Cl)	mg/L	13	0.50	B760797	<0.50	0.50	B760797
Sulphate (SO4)	mg/L	34	0.50	B760797	<0.50	0.50	B760797
Nutrients							
Total Phosphorus (P)	mg/L	0.0029	0.0010	B762883	<0.0010	0.0010	B762875
Total Ammonia (N)	mg/L	0.17	0.0050	B761896	0.0056	0.0050	B761896
Dissolved Nitrite (N)	mg/L	0.13	0.0010	B759644	<0.0010	0.0010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	0.050	B759644	0.0036	0.0030	B759644
Total Nitrogen (N)	mg/L	1.8	0.020	B762164	<0.020 (2)	0.020	B763559
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B762872	<0.0010	0.0010	B762872
Physical Properties							
Turbidity	NTU	0.10	0.10	B759303	<0.10	0.10	B759303
RDL = Reportable Detection Limit							
(1) Sample filtered and preserved past method specified hold time							
(2) Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent. Nitrogen							
< Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF963			DIF964		DIF965		
Sampling Date		2025/04/15 08:45			2025/04/15 09:00		2025/04/15 09:15		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	GLSE-T	RDL	QC Batch	GLSE-M	QC Batch	GLSE-B	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	63.2	0.50	B758894	61.5	B758894	61.5	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	63.4	0.50	B758893	60.6	B758893	61.7	0.50	B758893
Dissolved Nitrate (N)	mg/L	1.5	0.050	B758910	1.5	B758910	1.4	0.050	B758910
Nitrate (NO ₃)	mg/L	6.7	0.22	B758899	6.5	B758899	6.2	0.22	B758899
Nitrite (NO ₂)	mg/L	0.13	0.0033	B758899	0.13	B758899	0.18	0.0033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B758892	<0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	91	10	B758902	90	B758902	90	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.41	0.10	B758903	0.47	B758903	0.43	0.050	B758903
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	B973079	<0.00050	B973079	<0.00050	0.00050	B973079
Field Parameters									
Field pH	pH	5.96	N/A	ONSITE	5.98	ONSITE	5.93	N/A	ONSITE
Field Temperature (Fd)	deg. C	0.28	N/A	ONSITE	1.21	ONSITE	1.9	N/A	ONSITE
Misc. Inorganics									
Conductivity	uS/cm	160	2.0	B762895	160	B762895	150	2.0	B761396
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B759499	<0.00050	B759499	<0.00050	0.00050	B759499
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B760009	<0.00050	B760009	<0.00050	0.00050	B760009
Fluoride (F)	mg/L	0.023	0.010	B762897	0.032	B762897	0.031	0.010	B761397
Free Free Cyanide	mg/L	<0.00050	0.00050	B760023	<0.00050	B760023	<0.00050	0.00050	B760023
pH	pH	6.97	N/A	B762893	6.83	B762893	5.96	N/A	B761393
Reactive Silica	mg/L	2.9	0.050	B764456	2.9	B764456	2.9	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	8.72	0.50	B762891	8.47	B762891	10.3	0.50	B761391
Total Organic Carbon (C)	mg/L	5.4	0.50	B763869	5.4	B763869	5.4	0.50	B763869
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B762891	<0.50	B762891	<0.50	0.50	B761391
Bicarbonate (HCO ₃)	mg/L	10.6	0.50	B762891	10.3	B762891	12.5	0.50	B761391
Carbonate (CO ₃)	mg/L	<0.50	0.50	B762891	<0.50	B762891	<0.50	0.50	B761391
Hydroxide (OH)	mg/L	<0.50	0.50	B762891	<0.50	B762891	<0.50	0.50	B761391
Total Dissolved Solids	mg/L	80	10	B760499	140	B760499	96	10	B760499
Total Suspended Solids	mg/L	<1.0	1.0	B760479	<1.0	B760479	<1.0	1.0	B760479
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	5.5 (1)	0.50	B762624	5.7 (1)	B763803	5.4 (1)	0.50	B762624
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time									



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF963			DIF964		DIF965		
Sampling Date		2025/04/15 08:45			2025/04/15 09:00		2025/04/15 09:15		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	GLSE-T	RDL	QC Batch	GLSE-M	QC Batch	GLSE-B	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	B759666	<0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	0.0018	B760249	<0.0018	B760249	<0.0018	0.0018	B760249
Chloride (Cl)	mg/L	15	0.50	B760797	14	B760804	14	0.50	B760797
Sulphate (SO ₄)	mg/L	36	0.50	B760797	36	B760804	36	0.50	B760797
Nutrients									
Total Phosphorus (P)	mg/L	0.0031	0.0010	B762883	0.0024	B762883	0.0025	0.0010	B762883
Total Ammonia (N)	mg/L	0.24	0.0050	B761900	0.25	B761896	0.24	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.039	0.0010	B759644	0.039	B759644	0.054	0.0010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	1.6	0.050	B759644	1.5	B759644	1.5	0.050	B759644
Total Nitrogen (N)	mg/L	2.0	0.10	B762164	2.0	B762164	1.9	0.020	B763559
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B762872	<0.0010	B762872	<0.0010	0.0010	B762872
Physical Properties									
Turbidity	NTU	<0.10	0.10	B759303	<0.10	B759303	<0.10	0.10	B759303
RDL = Reportable Detection Limit									



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF966			DIF967		
Sampling Date		2025/04/15 11:00			2025/04/15 11:30		
COC Number		C#750435-04-01			C#750435-04-01		
	UNITS	GLTL-T	RDL	QC Batch	GLTL-M	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	66.6	0.50	B758894	65.5	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	65.7	0.50	B758893	65.6	0.50	B758893
Dissolved Nitrate (N)	mg/L	1.5	0.050	B758910	1.3	0.050	B758910
Nitrate (NO ₃)	mg/L	6.5	0.22	B758899	5.8	0.22	B758899
Nitrite (NO ₂)	mg/L	0.38	0.0033	B758899	0.68	0.033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	95	10	B758902	92	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.39	0.050	B758903	0.38	0.050	B758903
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	B973079	<0.00050	0.00050	B973079
Field Parameters							
Field pH	pH	6.19	N/A	ONSITE	6.09	N/A	ONSITE
Field Temperature (Fd)	deg. C	0.43	N/A	ONSITE	2.25	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	170	2.0	B761396	170	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761023	<0.00050	0.00050	B761023
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761029	<0.00050	0.00050	B761029
Fluoride (F)	mg/L	0.021	0.010	B761397	0.026	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	0.00050	B761032	<0.00050	0.00050	B761032
pH	pH	6.01	N/A	B761393	6.92	N/A	B762893
Reactive Silica	mg/L	2.9	0.050	B764456	2.9	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	12.1	0.50	B761391	9.93	0.50	B762891
Total Organic Carbon (C)	mg/L	5.7	0.50	B763869	5.6	0.50	B763869
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	14.8	0.50	B761391	12.1	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	0.50	B761391	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	120	10	B760499	140	10	B760499
Total Suspended Solids	mg/L	<0.96	0.96	B760479	<0.99	0.99	B760479
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	6.2 (1)	0.50	B762624	5.6 (1)	0.50	B762624
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF966			DIF967		
Sampling Date		2025/04/15 11:00			2025/04/15 11:30		
COC Number		C#750435-04-01			C#750435-04-01		
	UNITS	GLTL-T	RDL	QC Batch	GLTL-M	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	0.0018	B760249	<0.0018	0.0018	B760249
Chloride (Cl)	mg/L	16	0.50	B760797	16	0.50	B760797
Sulphate (SO ₄)	mg/L	36	0.50	B760797	35	0.50	B760797
Nutrients							
Total Phosphorus (P)	mg/L	0.0019	0.0010	B762875	0.0018	0.0010	B762608
Total Ammonia (N)	mg/L	0.23	0.0050	B761896	0.13	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.11	0.0010	B759644	0.21	0.010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	1.6	0.050	B759644	1.5	0.050	B759644
Total Nitrogen (N)	mg/L	2.0	0.020	B763559	1.9	0.020	B762126
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B762872	<0.0010	0.0010	B762872
Physical Properties							
Turbidity	NTU	0.12	0.10	B759303	0.13	0.10	B759303
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF968			DIF969		DIF970		
Sampling Date		2025/04/15 12:00			2025/04/15 14:30		2025/04/15 15:00		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	GLTL-B	RDL	QC Batch	GLCB-T	QC Batch	GLCB-M	RDL	QC Batch

Calculated Parameters

Dissolved Hardness (CaCO ₃)	mg/L	64.2	0.50	B758894	59.4	B758894	59.1	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	65.0	0.50	B758893	59.9	B758893	59.6	0.50	B758893
Dissolved Nitrate (N)	mg/L	1.3	0.050	B758910	1.4	B758910	1.3	0.050	B758910
Nitrate (NO ₃)	mg/L	5.6	0.22	B758899	6.2	B758899	5.9	0.22	B758899
Nitrite (NO ₂)	mg/L	0.88	0.033	B758899	0.37	B758899	0.43	0.0033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B758892	<0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	95	10	B758902	86	B758902	84	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.26	0.050	B758903	0.35	B758903	0.32	0.050	B758903
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	B973079	<0.00050	B973079	<0.00050	0.00050	B973079

Field Parameters

Field pH	pH	6.04	N/A	ONSITE	6.24	ONSITE	6.2	N/A	ONSITE
Field Temperature (Fd)	deg. C	2.85	N/A	ONSITE	0.4	ONSITE	1.43	N/A	ONSITE

Misc. Inorganics

Conductivity	uS/cm	170	2.0	B761396	150	B761396	150	2.0	B761396
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761023	<0.00050	B759499	<0.00050	0.00050	B759499
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761029	<0.00050	B760009	<0.00050	0.00050	B760009
Fluoride (F)	mg/L	0.020	0.010	B761397	0.021	B761397	0.020	0.010	B761397
Free Free Cyanide	mg/L	<0.00050	0.00050	B761032	<0.00050	B760023	<0.00050	0.00050	B760023
pH	pH	6.01	N/A	B761393	5.96	B761393	6.04	N/A	B761393
Reactive Silica	mg/L	3.1	0.050	B764456	2.9	B764456	2.8	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	11.8	0.50	B761391	8.95	B761391	8.78	0.50	B761391
Total Organic Carbon (C)	mg/L	5.8	0.50	B763869	5.6	B763869	4.8	0.50	B763869
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B761391	<0.50	B761391	<0.50	0.50	B761391
Bicarbonate (HCO ₃)	mg/L	14.4	0.50	B761391	10.9	B761391	10.7	0.50	B761391
Carbonate (CO ₃)	mg/L	<0.50	0.50	B761391	<0.50	B761391	<0.50	0.50	B761391
Hydroxide (OH)	mg/L	<0.50	0.50	B761391	<0.50	B761391	<0.50	0.50	B761391
Total Dissolved Solids	mg/L	160	10	B760499	84	B760499	96	10	B760499
Total Suspended Solids	mg/L	<1.0	1.0	B760479	<1.0	B760479	<1.0	1.0	B760479

Lab Filtered Inorganics

Dissolved Organic Carbon (C)	mg/L	6.0 (1)	0.50	B763803	4.8 (1)	B763803	5.2 (1)	0.50	B763803

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample filtered and preserved past method specified hold time



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIF968			DIF969		DIF970		
Sampling Date		2025/04/15 12:00			2025/04/15 14:30		2025/04/15 15:00		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	GLTL-B	RDL	QC Batch	GLCB-T	QC Batch	GLCB-M	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	B759666	<0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	0.0018	B760249	<0.0018	B760249	<0.0018	0.0018	B760249
Chloride (Cl)	mg/L	16	0.50	B760797	13	B760797	13	0.50	B760797
Sulphate (SO ₄)	mg/L	37	0.50	B760797	35	B760797	34	0.50	B760797
Nutrients									
Total Phosphorus (P)	mg/L	0.0021	0.0010	B762883	0.0058	B762875	0.0022	0.0010	B762875
Total Ammonia (N)	mg/L	0.035	0.0050	B761900	0.18	B761900	0.15	0.0050	B761896
Dissolved Nitrite (N)	mg/L	0.27	0.010	B759644	0.11	B759644	0.13	0.0010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	0.050	B759644	1.5	B759644	1.5	0.050	B759644
Total Nitrogen (N)	mg/L	1.8	0.020	B763559	1.9	B763559	1.8	0.020	B763559
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B762872	<0.0010	B762872	<0.0010	0.0010	B762872
Physical Properties									
Turbidity	NTU	<0.10	0.10	B762141	<0.10	B762141	<0.10	0.10	B762141
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DIF961		DIF962		DIF963	DIF964		
Sampling Date		2025/04/15 15:30		2025/04/15 13:30		2025/04/15 08:45	2025/04/15 09:00		
COC Number		C#750435-04-01		C#750435-04-01		C#750435-04-01	C#750435-04-01		
	UNITS	GLCB-B	QC Batch	TRIP BLANK	QC Batch	GLSE-T	GLSE-M	RDL	QC Batch

Elements									
Total Mercury (Hg)	ug/L	0.00090	B782531	<0.00010	B763908	0.00097	0.00107	0.00010	B782531
Lab Filtered Elements									
Dissolved Mercury (Hg)	ug/L	0.00095	B782535	0.00013	B763871	0.00122	0.00292	0.00010	B782535
RDL = Reportable Detection Limit									

Bureau Veritas ID		DIF965	DIF966		DIF967	DIF968		
Sampling Date		2025/04/15 09:15	2025/04/15 11:00		2025/04/15 11:30	2025/04/15 12:00		
COC Number		C#750435-04-01	C#750435-04-01		C#750435-04-01	C#750435-04-01		
	UNITS	GLSE-B	GLTL-T	QC Batch	GLTL-M	GLTL-B	RDL	QC Batch

Elements								
Total Mercury (Hg)	ug/L	0.00092	0.00201	B782531	0.00255	0.00103	0.00010	B763908
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L	0.00172	0.00230	B763871	0.00070	0.00083	0.00010	B763871
RDL = Reportable Detection Limit								

Bureau Veritas ID		DIF969		DIF970		
Sampling Date		2025/04/15 14:30		2025/04/15 15:00		
COC Number		C#750435-04-01		C#750435-04-01		
	UNITS	GLCB-T	QC Batch	GLCB-M	RDL	QC Batch

Elements						
Total Mercury (Hg)	ug/L	0.00070	B763908	0.00094	0.00010	B763908
Lab Filtered Elements						
Dissolved Mercury (Hg)	ug/L	0.00062	B763871	0.00263	0.00010	B782535
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF961	DIF962	DIF963	DIF964	DIF965		
Sampling Date		2025/04/15 15:30	2025/04/15 13:30	2025/04/15 08:45	2025/04/15 09:00	2025/04/15 09:15		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLCB-B	TRIP BLANK	GLSE-T	GLSE-M	GLSE-B	RDL	QC Batch

Dissolved Metals by ICPMS

Dissolved Aluminum (Al)	ug/L	16.8	<0.10	18.2	17.7	17.3	0.10	B776025
Dissolved Antimony (Sb)	ug/L	0.0214	<0.0030	0.0431	0.0285	0.0224	0.0030	B776025
Dissolved Arsenic (As)	ug/L	0.340	<0.0050	0.373	0.369	0.336	0.0050	B776025
Dissolved Barium (Ba)	ug/L	21.7	<0.0080	24.3	23.9	24.3	0.0080	B776025
Dissolved Beryllium (Be)	ug/L	0.0039	<0.0015	0.0054	0.0036	0.0044	0.0015	B776025
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	0.0010	B776025
Dissolved Boron (B)	ug/L	3.87	0.44	4.56	4.50	4.22	0.10	B776025
Dissolved Cadmium (Cd)	ug/L	0.0171	<0.0030	0.0204	0.0178	0.0172	0.0030	B776025
Dissolved Calcium (Ca)	ug/L	13100	<2.0	13900	13600	13600	2.0	B776025
Dissolved Chromium (Cr)	ug/L	0.141	<0.020	0.176	0.188	0.151	0.020	B776025
Dissolved Cobalt (Co)	ug/L	0.195	<0.0040	0.168	0.189	0.211	0.0040	B776025
Dissolved Copper (Cu)	ug/L	2.37	<0.020	2.77	2.67	2.45	0.020	B776025
Dissolved Iron (Fe)	ug/L	8.2	<1.0	12.5	11.8	12.1	1.0	B776025
Dissolved Lead (Pb)	ug/L	0.0247	<0.0030	0.180	0.0367	0.0099	0.0030	B776025
Dissolved Lithium (Li)	ug/L	1.71	<0.050	1.87	1.82	1.85	0.050	B776025
Dissolved Magnesium (Mg)	ug/L	6400	<0.50	6920	6700	6710	0.50	B776025
Dissolved Manganese (Mn)	ug/L	6.11	<0.0040	4.46	5.75	7.92	0.0040	B776025
Dissolved Molybdenum (Mo)	ug/L	0.0246	<0.0050	0.0316	0.0268	0.0267	0.0050	B776025
Dissolved Nickel (Ni)	ug/L	11.8	<0.015	12.4	12.1	12.2	0.015	B776025
Dissolved Potassium (K)	ug/L	1220	<5.0	1380	1290	1260	5.0	B776025
Dissolved Selenium (Se)	ug/L	0.060	<0.010	0.054	0.055	0.059	0.010	B776025
Dissolved Silicon (Si)	ug/L	1110	<1.2	1130	1110	1120	1.2	B776025
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	B776025
Dissolved Sodium (Na)	ug/L	1870	1.51	2130	2010	2000	0.50	B776025
Dissolved Strontium (Sr)	ug/L	58.8	<0.0080	64.2	62.7	62.5	0.0080	B776025
Dissolved Sulphur (S)	ug/L	10600	<1.0	11700	11200	11100	1.0	B776025
Dissolved Thallium (Tl)	ug/L	0.00310	<0.00080	0.00370	0.00350	0.00260	0.00080	B776025
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	0.0592	0.0121	<0.0050	0.0050	B776025
Dissolved Titanium (Ti)	ug/L	0.048	<0.030	0.044	0.041	0.037	0.030	B776025
Dissolved Uranium (U)	ug/L	0.0107	<0.00050	0.0104	0.0115	0.0101	0.00050	B776025
Dissolved Vanadium (V)	ug/L	0.0435	<0.0050	0.0549	0.0471	0.0456	0.0050	B776025
Dissolved Zinc (Zn)	ug/L	2.99	<0.060	5.78	4.13	3.09	0.060	B776025

RDL = Reportable Detection Limit



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF961	DIF962	DIF963	DIF964	DIF965		
Sampling Date		2025/04/15 15:30	2025/04/15 13:30	2025/04/15 08:45	2025/04/15 09:00	2025/04/15 09:15		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLCB-B	TRIP BLANK	GLSE-T	GLSE-M	GLSE-B	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.0878	<0.0080	0.108	0.0984	0.0940	0.0080	B776025
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	21.2	0.43	27.0	25.8	37.1	0.10	B776414
Total Antimony (Sb)	ug/L	0.0243	<0.0030	0.0496	0.0337	0.0262	0.0030	B776414
Total Arsenic (As)	ug/L	0.347	<0.0050	0.407	0.379	0.361	0.0050	B776414
Total Barium (Ba)	ug/L	21.7	<0.0080	24.4	23.3	23.8	0.0080	B776414
Total Beryllium (Be)	ug/L	0.0040	<0.0015	0.0051	0.0053	0.0039	0.0015	B776414
Total Bismuth (Bi)	ug/L	0.0014	<0.0010	0.0022	0.0034	0.0011	0.0010	B776414
Total Boron (B)	ug/L	4.17	<0.10	4.38	4.34	4.18	0.10	B776414
Total Cadmium (Cd)	ug/L	0.0161	<0.0030	0.0224	0.0176	0.0183	0.0030	B776414
Total Calcium (Ca)	ug/L	12400	<2.0	13200	12900	12900	2.0	B776414
Total Chromium (Cr)	ug/L	0.156	<0.020	0.228	0.211	0.167	0.020	B776414
Total Cobalt (Co)	ug/L	0.259	<0.0040	0.260	0.263	0.314	0.0040	B776414
Total Copper (Cu)	ug/L	2.35	<0.020	2.71	2.65	2.43	0.020	B776414
Total Iron (Fe)	ug/L	15.7	<1.0	28.6	28.4	28.4	1.0	B776414
Total Lead (Pb)	ug/L	0.0590	<0.0030	0.655	0.123	0.0423	0.0030	B776414
Total Lithium (Li)	ug/L	1.63	<0.050	1.72	1.67	1.61	0.050	B776414
Total Magnesium (Mg)	ug/L	6830	<0.50	7380	6870	7150	0.50	B776414
Total Manganese (Mn)	ug/L	7.72	<0.0040	7.63	7.73	10.9	0.0040	B776414
Total Molybdenum (Mo)	ug/L	0.0302	<0.0050	0.0311	0.0287	0.0291	0.0050	B776414
Total Nickel (Ni)	ug/L	11.4	<0.015	12.1	11.6	11.7	0.015	B776414
Total Potassium (K)	ug/L	1180	<5.0	1340	1230	1210	5.0	B776414
Total Selenium (Se)	ug/L	0.062	<0.010	0.067	0.060	0.050	0.010	B776414
Total Silicon (Si)	ug/L	1170	<1.2	1180	1140	1210	1.2	B776414
Total Silver (Ag)	ug/L	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	0.0020	B776414
Total Sodium (Na)	ug/L	1990	<0.50	2250	2080	2230	0.50	B776414
Total Strontium (Sr)	ug/L	59.9	<0.0080	64.4	61.4	62.3	0.0080	B776414
Total Sulphur (S)	ug/L	10900	<1.0	11400	11200	11200	1.0	B776414
Total Thallium (Tl)	ug/L	0.00310	<0.00080	0.00350	0.00330	0.00300	0.00080	B776414
Total Tin (Sn)	ug/L	0.0095	0.0071	0.0457	0.0257	0.0080	0.0050	B776414
Total Titanium (Ti)	ug/L	0.240	<0.030	0.407	0.253	0.759	0.030	B776414
Total Uranium (U)	ug/L	0.0114	<0.00050	0.0127	0.0125	0.0136	0.00050	B776414
Total Vanadium (V)	ug/L	0.0543	<0.0050	0.0655	0.0661	0.113	0.0050	B776414
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF961	DIF962	DIF963	DIF964	DIF965		
Sampling Date		2025/04/15 15:30	2025/04/15 13:30	2025/04/15 08:45	2025/04/15 09:00	2025/04/15 09:15		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLCB-B	TRIP BLANK	GLSE-T	GLSE-M	GLSE-B	RDL	QC Batch
Total Zinc (Zn)	ug/L	2.95	<0.060	5.81	4.30	3.14	0.060	B776414
Total Zirconium (Zr)	ug/L	0.0937	<0.0080	0.107	0.0914	0.135	0.0080	B776414
RDL = Reportable Detection Limit								



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF966	DIF967	DIF968	DIF969	DIF970		
Sampling Date		2025/04/15 11:00	2025/04/15 11:30	2025/04/15 12:00	2025/04/15 14:30	2025/04/15 15:00		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLTL-T	GLTL-M	GLTL-B	GLCB-T	GLCB-M	RDL	QC Batch

Dissolved Metals by ICPMS

Dissolved Aluminum (Al)	ug/L	16.0	15.5	14.4	16.7	16.4	0.10	B776025
Dissolved Antimony (Sb)	ug/L	0.0454	0.0271	0.0235	0.0205	0.0264	0.0030	B776025
Dissolved Arsenic (As)	ug/L	0.354	0.336	0.337	0.330	0.339	0.0050	B776025
Dissolved Barium (Ba)	ug/L	27.3	27.2	26.5	22.0	22.1	0.0080	B776025
Dissolved Beryllium (Be)	ug/L	0.0043	0.0047	0.0048	0.0044	0.0058	0.0015	B776025
Dissolved Bismuth (Bi)	ug/L	0.0023	<0.0010	<0.0010	<0.0010	0.0015	0.0010	B776025
Dissolved Boron (B)	ug/L	4.69	4.36	4.53	3.73	4.00	0.10	B776025
Dissolved Cadmium (Cd)	ug/L	0.0166	0.0140	0.0121	0.0163	0.0183	0.0030	B776025
Dissolved Calcium (Ca)	ug/L	15000	14700	14500	13000	13100	2.0	B776025
Dissolved Chromium (Cr)	ug/L	0.147	0.148	0.140	0.139	0.142	0.020	B776025
Dissolved Cobalt (Co)	ug/L	0.187	0.177	0.163	0.202	0.201	0.0040	B776025
Dissolved Copper (Cu)	ug/L	2.65	2.48	2.38	2.35	2.47	0.020	B776025
Dissolved Iron (Fe)	ug/L	9.9	9.7	9.2	7.9	8.0	1.0	B776025
Dissolved Lead (Pb)	ug/L	0.789	0.157	0.0256	0.0065	0.0415	0.0030	B776025
Dissolved Lithium (Li)	ug/L	2.08	1.85	1.97	1.75	1.81	0.050	B776025
Dissolved Magnesium (Mg)	ug/L	7060	7020	6770	6530	6420	0.50	B776025
Dissolved Manganese (Mn)	ug/L	5.07	4.97	4.54	6.23	6.37	0.0040	B776025
Dissolved Molybdenum (Mo)	ug/L	0.0222	0.0209	0.0200	0.0256	0.0294	0.0050	B776025
Dissolved Nickel (Ni)	ug/L	10.7	10.5	10.3	11.9	12.0	0.015	B776025
Dissolved Potassium (K)	ug/L	1400	1380	1350	1240	1240	5.0	B776025
Dissolved Selenium (Se)	ug/L	0.057	0.054	0.051	0.062	0.056	0.010	B776025
Dissolved Silicon (Si)	ug/L	1110	1090	1080	1110	1090	1.2	B776025
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	B776025
Dissolved Sodium (Na)	ug/L	2130	2110	2030	1920	1890	0.50	B776025
Dissolved Strontium (Sr)	ug/L	72.0	68.4	66.8	60.5	59.8	0.0080	B776025
Dissolved Sulphur (S)	ug/L	11500	11800	11300	10800	10700	1.0	B776025
Dissolved Thallium (Tl)	ug/L	0.00270	0.00310	0.00280	0.00280	0.00310	0.00080	B776025
Dissolved Tin (Sn)	ug/L	0.0109	<0.0050	<0.0050	<0.0050	0.0143	0.0050	B776025
Dissolved Titanium (Ti)	ug/L	0.032	<0.030	<0.030	0.040	<0.030	0.030	B776025
Dissolved Uranium (U)	ug/L	0.0100	0.00970	0.00910	0.0102	0.0103	0.00050	B776025
Dissolved Vanadium (V)	ug/L	0.0433	0.0441	0.0410	0.0439	0.0435	0.0050	B776025
Dissolved Zinc (Zn)	ug/L	3.32	2.56	2.29	4.55	3.48	0.060	B776025

RDL = Reportable Detection Limit



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF966	DIF967	DIF968	DIF969	DIF970		
Sampling Date		2025/04/15 11:00	2025/04/15 11:30	2025/04/15 12:00	2025/04/15 14:30	2025/04/15 15:00		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLTL-T	GLTL-M	GLTL-B	GLCB-T	GLCB-M	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.0861	0.0895	0.0814	0.0849	0.0890	0.0080	B776025
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	20.5	20.1	17.9	22.5	24.4	0.10	B776414
Total Antimony (Sb)	ug/L	0.0615	0.0341	0.0252	0.0227	0.0296	0.0030	B776414
Total Arsenic (As)	ug/L	0.377	0.371	0.365	0.346	0.360	0.0050	B776414
Total Barium (Ba)	ug/L	26.6	26.9	26.3	21.7	21.9	0.0080	B776414
Total Beryllium (Be)	ug/L	0.0057	0.0051	0.0038	0.0047	0.0072	0.0015	B776414
Total Bismuth (Bi)	ug/L	0.0011	0.0040	0.0016	<0.0010	0.0031	0.0010	B776414
Total Boron (B)	ug/L	4.79	4.36	4.33	4.17	4.02	0.10	B776414
Total Cadmium (Cd)	ug/L	0.0148	0.0168	0.0151	0.0166	0.0162	0.0030	B776414
Total Calcium (Ca)	ug/L	14000	13900	13800	12500	12400	2.0	B776414
Total Chromium (Cr)	ug/L	0.163	0.165	0.201	0.147	0.228	0.020	B776414
Total Cobalt (Co)	ug/L	0.192	0.187	0.185	0.256	0.257	0.0040	B776414
Total Copper (Cu)	ug/L	2.49	2.45	2.38	2.39	2.48	0.020	B776414
Total Iron (Fe)	ug/L	21.4	20.0	18.2	15.6	19.7	1.0	B776414
Total Lead (Pb)	ug/L	1.08	0.321	0.0848	0.0224	0.127	0.0030	B776414
Total Lithium (Li)	ug/L	1.91	1.74	1.75	1.69	1.65	0.050	B776414
Total Magnesium (Mg)	ug/L	7500	7500	7450	7000	6930	0.50	B776414
Total Manganese (Mn)	ug/L	5.55	5.58	5.46	7.62	7.85	0.0040	B776414
Total Molybdenum (Mo)	ug/L	0.0233	0.0216	0.0324	0.0252	0.0281	0.0050	B776414
Total Nickel (Ni)	ug/L	10.2	10.1	10.2	11.5	11.6	0.015	B776414
Total Potassium (K)	ug/L	1350	1320	1320	1190	1200	5.0	B776414
Total Selenium (Se)	ug/L	0.058	0.053	0.056	0.053	0.056	0.010	B776414
Total Silicon (Si)	ug/L	1160	1150	1140	1170	1180	1.2	B776414
Total Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	0.0020	B776414
Total Sodium (Na)	ug/L	2280	2250	2230	2040	2020	0.50	B776414
Total Strontium (Sr)	ug/L	68.6	68.7	68.1	60.0	60.1	0.0080	B776414
Total Sulphur (S)	ug/L	11700	11500	11100	10900	10800	1.0	B776414
Total Thallium (Tl)	ug/L	0.00290	0.00240	0.00300	0.00270	0.00320	0.00080	B776414
Total Tin (Sn)	ug/L	0.0134	0.0115	0.0064	0.0060	0.0221	0.0050	B776414
Total Titanium (Ti)	ug/L	0.478	0.171	0.165	0.178	0.337	0.030	B776414
Total Uranium (U)	ug/L	0.0105	0.00960	0.00900	0.0119	0.0115	0.00050	B776414
Total Vanadium (V)	ug/L	0.0564	0.0507	0.0488	0.0512	0.0597	0.0050	B776414
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIF966	DIF967	DIF968	DIF969	DIF970		
Sampling Date		2025/04/15 11:00	2025/04/15 11:30	2025/04/15 12:00	2025/04/15 14:30	2025/04/15 15:00		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	GLTL-T	GLTL-M	GLTL-B	GLCB-T	GLCB-M	RDL	QC Batch
Total Zinc (Zn)	ug/L	2.94	2.94	2.28	2.86	3.37	0.060	B776414
Total Zirconium (Zr)	ug/L	0.0791	0.0851	0.0823	0.0775	0.0867	0.0080	B776414
RDL = Reportable Detection Limit								



GENERAL COMMENTS

Report reissued to include Equis EDD per client request 2025/05/26.

Report reissued to include results for Un-ionized Ammonia and input of field pH and temperature per attached email, client request received 2025/06/04.

Sample DIF961 [GLCB-B] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).

Sample DIF962 [TRIP BLANK] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF963 [GLSE-T] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF964 [GLSE-M] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF965 [GLSE-B] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF966 [GLTL-T] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF967 [GLTL-M] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIF968 [GLTL-B] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Turbidity.

Sample DIF969 [GLCB-T] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Turbidity.

Sample DIF970 [GLCB-M] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Turbidity.

Results relate only to the items tested.



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

QUALITY ASSURANCE REPORT

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B759303	Turbidity	2025/04/21			101	80 - 120	<0.10	NTU	7.1	20		
B759499	Strong Acid Dissoc. Cyanide (CN)	2025/04/21	95	80 - 120	100	80 - 120	<0.00050	mg/L	7.2	20		
B759644	Dissolved Nitrate plus Nitrite (N)	2025/04/21	127 (1)	80 - 120	105	80 - 120	0.0032, RDL=0.0030 (2)	mg/L	2.5	20		
B759644	Dissolved Nitrite (N)	2025/04/21	107	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
B759666	Orthophosphate (P)	2025/04/21	99	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
B760009	Weak Acid Dissoc. Cyanide (CN)	2025/04/21	95	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20		
B760023	Free Free Cyanide	2025/04/21	98	80 - 120	99	80 - 120	<0.00050	mg/L	8.3	20		
B760249	Total Sulphide	2025/04/22	108	80 - 120	89	80 - 120	<0.0018	mg/L	NC	20		
B760479	Total Suspended Solids	2025/04/23	104	80 - 120	104	80 - 120	<1.0	mg/L	NC	20		
B760499	Total Dissolved Solids	2025/04/23	NC	80 - 120	98	80 - 120	<10	mg/L	14	20		
B760797	Chloride (Cl)	2025/04/22	103	80 - 120	98	80 - 120	<0.50	mg/L	4.5	20		
B760797	Sulphate (SO4)	2025/04/22	106	80 - 120	103	80 - 120	<0.50	mg/L	1.3	20		
B760804	Chloride (Cl)	2025/04/22	104	80 - 120	97	80 - 120	<0.50	mg/L	NC	20		
B760804	Sulphate (SO4)	2025/04/22	108	80 - 120	103	80 - 120	<0.50	mg/L				
B761023	Strong Acid Dissoc. Cyanide (CN)	2025/04/22	95	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20		
B761029	Weak Acid Dissoc. Cyanide (CN)	2025/04/22	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
B761032	Free Free Cyanide	2025/04/22	96	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
B761391	Alkalinity (PP as CaCO3)	2025/04/23					<0.50	mg/L	NC	20		
B761391	Alkalinity (Total as CaCO3)	2025/04/23			98	80 - 120	<0.50	mg/L	9.4	20		
B761391	Bicarbonate (HCO3)	2025/04/23					<0.50	mg/L	9.4	20		
B761391	Carbonate (CO3)	2025/04/23					<0.50	mg/L	NC	20		
B761391	Hydroxide (OH)	2025/04/23					<0.50	mg/L	NC	20		
B761393	pH	2025/04/23			100	97 - 103			1.3	N/A		
B761396	Conductivity	2025/04/23			100	90 - 110	<2.0	uS/cm	1.5	10		
B761397	Fluoride (F)	2025/04/23	88	80 - 120	89	80 - 120	<0.010	mg/L	NC	20		
B761896	Total Ammonia (N)	2025/04/23	106	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20		
B761900	Total Ammonia (N)	2025/04/23	81	80 - 120	106	80 - 120	<0.0050	mg/L	0.49	20		
B762126	Total Nitrogen (N)	2025/04/23	NC	80 - 120	105	80 - 120	<0.020	mg/L	1.8	20	104	80 - 120
B762141	Turbidity	2025/04/23			101	80 - 120	<0.10	NTU	6.1	20		
B762164	Total Nitrogen (N)	2025/04/23	111	80 - 120	99	80 - 120	<0.020	mg/L	0.078	20	103	80 - 120



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B762608	Total Phosphorus (P)	2025/04/23	108	80 - 120	101	80 - 120	<0.0010	mg/L	3.5	20	92	80 - 120
B762624	Dissolved Organic Carbon (C)	2025/04/23	91	75 - 125	100	80 - 120	<0.50	mg/L	7.0	20		
B762872	Dissolved Phosphorus (P)	2025/04/24	95	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20	86	80 - 120
B762875	Total Phosphorus (P)	2025/04/24	100	80 - 120	95	80 - 120	<0.0010	mg/L	5.1	20	87	80 - 120
B762883	Total Phosphorus (P)	2025/04/24	92	80 - 120	98	80 - 120	<0.0010	mg/L	6.0	20	88	80 - 120
B762891	Alkalinity (PP as CaCO3)	2025/04/24					<0.50	mg/L	NC	20		
B762891	Alkalinity (Total as CaCO3)	2025/04/24			97	80 - 120	<0.50	mg/L	1.3	20		
B762891	Bicarbonate (HCO3)	2025/04/24					<0.50	mg/L	1.3	20		
B762891	Carbonate (CO3)	2025/04/24					<0.50	mg/L	NC	20		
B762891	Hydroxide (OH)	2025/04/24					<0.50	mg/L	NC	20		
B762893	pH	2025/04/24			100	97 - 103			0.15	N/A		
B762895	Conductivity	2025/04/24			101	90 - 110	<2.0	uS/cm	0.50	10		
B762897	Fluoride (F)	2025/04/24	98	80 - 120	95	80 - 120	<0.010	mg/L	9.4	20		
B763559	Total Nitrogen (N)	2025/04/24	NC	80 - 120	102	80 - 120	<0.020	mg/L	0.77	20	104	80 - 120
B763803	Dissolved Organic Carbon (C)	2025/04/24	104	75 - 125	98	80 - 120	<0.50	mg/L	3.7	20		
B763869	Total Organic Carbon (C)	2025/04/24	99	75 - 125	100	80 - 120	<0.50	mg/L	6.3	20		
B763871	Dissolved Mercury (Hg)	2025/04/24	65 (1)	80 - 120	104	80 - 120	0.00015, RDL=0.00010	ug/L				
B763908	Total Mercury (Hg)	2025/04/24	110	80 - 120	101	80 - 120	<0.00010	ug/L	3.6	25		
B764456	Reactive Silica	2025/04/24	107	80 - 120	106	80 - 120	<0.050	mg/L	1.5	20		
B764561	Total Dissolved Solids	2025/04/25	93	80 - 120	100	80 - 120	<10	mg/L	4.2	20		
B776025	Dissolved Aluminum (Al)	2025/05/08	94	80 - 120	97	80 - 120	<0.10	ug/L	NC	40		
B776025	Dissolved Antimony (Sb)	2025/05/08	99	80 - 120	100	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Arsenic (As)	2025/05/08	101	80 - 120	103	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Barium (Ba)	2025/05/08	97	80 - 120	99	80 - 120	<0.0080	ug/L	4.9	40		
B776025	Dissolved Beryllium (Be)	2025/05/08	96	80 - 120	96	80 - 120	<0.0015	ug/L	NC	40		
B776025	Dissolved Bismuth (Bi)	2025/05/08	94	80 - 120	96	80 - 120	<0.0010	ug/L	NC	40		
B776025	Dissolved Boron (B)	2025/05/08	93	80 - 120	92	80 - 120	<0.10	ug/L	4.1	40		
B776025	Dissolved Cadmium (Cd)	2025/05/08	97	80 - 120	99	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Calcium (Ca)	2025/05/08	NC	80 - 120	101	80 - 120	<2.0	ug/L	NC	40		
B776025	Dissolved Chromium (Cr)	2025/05/08	94	80 - 120	96	80 - 120	<0.020	ug/L	NC	40		
B776025	Dissolved Cobalt (Co)	2025/05/08	93	80 - 120	95	80 - 120	<0.0040	ug/L	NC	40		



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776025	Dissolved Copper (Cu)	2025/05/08	93	80 - 120	95	80 - 120	<0.020	ug/L	NC	40		
B776025	Dissolved Iron (Fe)	2025/05/08	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	40		
B776025	Dissolved Lead (Pb)	2025/05/08	93	80 - 120	94	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Lithium (Li)	2025/05/08	97	80 - 120	97	80 - 120	<0.050	ug/L	NC	40		
B776025	Dissolved Magnesium (Mg)	2025/05/08	NC	80 - 120	95	80 - 120	<0.50	ug/L	NC	40		
B776025	Dissolved Manganese (Mn)	2025/05/08	91	80 - 120	94	80 - 120	<0.0040	ug/L	NC	40		
B776025	Dissolved Molybdenum (Mo)	2025/05/08	96	80 - 120	96	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Nickel (Ni)	2025/05/08	96	80 - 120	98	80 - 120	<0.015	ug/L	NC	40		
B776025	Dissolved Potassium (K)	2025/05/08	101	80 - 120	103	80 - 120	<5.0	ug/L	NC	40		
B776025	Dissolved Selenium (Se)	2025/05/08	97	80 - 120	97	80 - 120	<0.010	ug/L	NC	40		
B776025	Dissolved Silicon (Si)	2025/05/08	87	80 - 120	88	80 - 120	<1.2	ug/L	NC	40		
B776025	Dissolved Silver (Ag)	2025/05/08	98	80 - 120	99	80 - 120	<0.0020	ug/L	NC	40		
B776025	Dissolved Sodium (Na)	2025/05/08	94	80 - 120	97	80 - 120	<0.50	ug/L	1.6	40		
B776025	Dissolved Strontium (Sr)	2025/05/08	NC	80 - 120	93	80 - 120	<0.0080	ug/L	NC	40		
B776025	Dissolved Sulphur (S)	2025/05/08	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	40		
B776025	Dissolved Thallium (Tl)	2025/05/08	94	80 - 120	95	80 - 120	<0.00080	ug/L	NC	40		
B776025	Dissolved Tin (Sn)	2025/05/08	98	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Titanium (Ti)	2025/05/08	99	80 - 120	100	80 - 120	<0.030	ug/L	NC	40		
B776025	Dissolved Uranium (U)	2025/05/08	94	80 - 120	94	80 - 120	<0.00050	ug/L	NC	40		
B776025	Dissolved Vanadium (V)	2025/05/08	97	80 - 120	97	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Zinc (Zn)	2025/05/08	95	80 - 120	100	80 - 120	<0.060	ug/L	NC	40		
B776025	Dissolved Zirconium (Zr)	2025/05/08	93	80 - 120	91	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Aluminum (Al)	2025/05/08	95	80 - 120	96	80 - 120	<0.10	ug/L	11	40		
B776414	Total Antimony (Sb)	2025/05/08	97	80 - 120	97	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Arsenic (As)	2025/05/08	102	80 - 120	104	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Barium (Ba)	2025/05/08	97	80 - 120	99	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Beryllium (Be)	2025/05/08	94	80 - 120	94	80 - 120	<0.0015	ug/L	NC	40		
B776414	Total Bismuth (Bi)	2025/05/08	93	80 - 120	93	80 - 120	<0.0010	ug/L	NC	40		
B776414	Total Boron (B)	2025/05/08	94	80 - 120	92	80 - 120	<0.10	ug/L	13	40		
B776414	Total Cadmium (Cd)	2025/05/08	97	80 - 120	98	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Calcium (Ca)	2025/05/08	NC	80 - 120	96	80 - 120	<2.0	ug/L	NC	40		
B776414	Total Chromium (Cr)	2025/05/08	93	80 - 120	93	80 - 120	<0.020	ug/L	NC	40		



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776414	Total Cobalt (Co)	2025/05/08	92	80 - 120	92	80 - 120	<0.0040	ug/L	NC	40		
B776414	Total Copper (Cu)	2025/05/08	90	80 - 120	91	80 - 120	<0.020	ug/L	NC	40		
B776414	Total Iron (Fe)	2025/05/08	99	80 - 120	98	80 - 120	<1.0	ug/L	NC	40		
B776414	Total Lead (Pb)	2025/05/08	90	80 - 120	90	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Lithium (Li)	2025/05/08	87	80 - 120	88	80 - 120	<0.050	ug/L	NC	40		
B776414	Total Magnesium (Mg)	2025/05/08	NC	80 - 120	99	80 - 120	<0.50	ug/L	NC	40		
B776414	Total Manganese (Mn)	2025/05/08	95	80 - 120	96	80 - 120	<0.0040	ug/L	NC	40		
B776414	Total Molybdenum (Mo)	2025/05/08	97	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Nickel (Ni)	2025/05/08	93	80 - 120	95	80 - 120	<0.015	ug/L	NC	40		
B776414	Total Potassium (K)	2025/05/08	98	80 - 120	101	80 - 120	<5.0	ug/L	NC	40		
B776414	Total Selenium (Se)	2025/05/08	99	80 - 120	98	80 - 120	<0.010	ug/L	NC	40		
B776414	Total Silicon (Si)	2025/05/08	91	80 - 120	90	80 - 120	<1.2	ug/L	NC	40		
B776414	Total Silver (Ag)	2025/05/08	97	80 - 120	96	80 - 120	<0.0020	ug/L	NC	40		
B776414	Total Sodium (Na)	2025/05/08	97	80 - 120	100	80 - 120	<0.50	ug/L	NC	40		
B776414	Total Strontium (Sr)	2025/05/08	NC	80 - 120	94	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Sulphur (S)	2025/05/08	101	80 - 120	100	80 - 120	<1.0	ug/L	NC	40		
B776414	Total Thallium (Tl)	2025/05/08	93	80 - 120	93	80 - 120	<0.00080	ug/L	NC	40		
B776414	Total Tin (Sn)	2025/05/08	97	80 - 120	99	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Titanium (Ti)	2025/05/08	97	80 - 120	97	80 - 120	<0.030	ug/L	NC	40		
B776414	Total Uranium (U)	2025/05/08	90	80 - 120	90	80 - 120	<0.00050	ug/L	NC	40		
B776414	Total Vanadium (V)	2025/05/08	102	80 - 120	96	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Zinc (Zn)	2025/05/08	98	80 - 120	98	80 - 120	<0.060	ug/L	1.5	40		
B776414	Total Zirconium (Zr)	2025/05/08	94	80 - 120	93	80 - 120	<0.0080	ug/L	NC	40		
B782531	Total Mercury (Hg)	2025/05/12			101	80 - 120	<0.00010	ug/L				



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B782535	Dissolved Mercury (Hg)	2025/05/12			102	80 - 120	<0.00010	ug/L				
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration) NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL). (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria. (2) Method blank exceeds acceptance limits, 2x RDL acceptable for low level analysis												



Bureau Veritas Job #: C532907
Report Date: 2025/06/11

B2Gold Back River Corp.
Your P.O. #: 470000200
Sampler Initials: MK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C532907

2025/04/18 09:30

Bureau Veritas 4804 Canada Way, Burnaby, British Columbia Canada V5G 1W5 Tel: (604) 731-7276 Toll-free: (800) 463-6268 Fax: (604) 731-2386 www.bv.com										CHAIN OF CUSTODY RECORD																																																																																																																																		
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:																																																																																																																													
Company Name: #10900 B2Gold Back River Corp.					Company Name: Chris LeGoffe and Beatriz Cope-Flores					Quotation #: C41460					Bureau Veritas Job #:																																																																																																																													
Attention: Accounts Payable					Attention: (306) 914-3922					P.O. #:					Bottle Order #:																																																																																																																													
Address: Park Place Suite 3400-666 Burrard St.					Address: (867) 336-1349					Project: Ice-cover program B2Gold					CDC #:																																																																																																																													
VANCOUVER BC V6C 2X8					Tel: (604) 681-8371 Fax: (604) 681-6209					Project Name:					Project Manager:																																																																																																																													
Tel: (604) 681-8371					Email: B2.accounts.payable@b2gold.com					Site #:					Stephanie Rodriguez Caracho																																																																																																																													
Email: B2.accounts.payable@b2gold.com					Email: CLeGoffe@b2gold.com					Barcode: C8750435-04-01																																																																																																																																		
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Turnaround Time (TAT) Required:																																																																																																																													
☐ AT1 ☐ COME ☐ Other										Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are + 5 days - contact your Project Manager for details.					☐																																																																																																																													
SAMPLES MUST BE KEPT COOL (+10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS										Job Specific Rush TAT (if applies to entire submission) Date Received: ☐ Rush Confirmation Number: (not for use)																																																																																																																																		
<table border="1"> <thead> <tr> <th>Sample Barcode Label</th> <th>Sample Location Identification</th> <th>Date Sampled</th> <th>Time Sampled</th> <th>Matrix</th> <th>Measures Field Filtered (Y/N)</th> <th>AEEMP - Routine Parameters</th> <th>AEEMP - Nutrients</th> <th>AEEMP - Other Conventional</th> <th>Ultra Low Level Total Metals + Hg</th> <th>Ultra Low Level Dissolved Metals + Hg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GLCB-B</td> <td>15 Apr 25</td> <td>15:30</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>2</td> <td>TRIP BLANK</td> <td>15 Apr 25</td> <td>13:30</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>3</td> <td>GLSE-T</td> <td>15 Apr 25</td> <td>8:45</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>4</td> <td>GLSE-M</td> <td>15 Apr 25</td> <td>9:00</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>5</td> <td>GLSE-B</td> <td>15 Apr 25</td> <td>9:15</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>6</td> <td>GLTL-T</td> <td>15 Apr 25</td> <td>11:00</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>7</td> <td>GLTL-M</td> <td>15 Apr 25</td> <td>11:30</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>8</td> <td>GLTL-B</td> <td>15 Apr 25</td> <td>12:00</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>9</td> <td>GLCB-T</td> <td>15 Apr 25</td> <td>14:30</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>10</td> <td>GLCB-M</td> <td>15 Apr 25</td> <td>15:00</td> <td>SW</td> <td>N</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>										Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Measures Field Filtered (Y/N)	AEEMP - Routine Parameters	AEEMP - Nutrients	AEEMP - Other Conventional	Ultra Low Level Total Metals + Hg	Ultra Low Level Dissolved Metals + Hg	1	GLCB-B	15 Apr 25	15:30	SW	N	✓	✓	✓	✓	✓	2	TRIP BLANK	15 Apr 25	13:30	SW	N	✓	✓	✓	✓	✓	3	GLSE-T	15 Apr 25	8:45	SW	N	✓	✓	✓	✓	✓	4	GLSE-M	15 Apr 25	9:00	SW	N	✓	✓	✓	✓	✓	5	GLSE-B	15 Apr 25	9:15	SW	N	✓	✓	✓	✓	✓	6	GLTL-T	15 Apr 25	11:00	SW	N	✓	✓	✓	✓	✓	7	GLTL-M	15 Apr 25	11:30	SW	N	✓	✓	✓	✓	✓	8	GLTL-B	15 Apr 25	12:00	SW	N	✓	✓	✓	✓	✓	9	GLCB-T	15 Apr 25	14:30	SW	N	✓	✓	✓	✓	✓	10	GLCB-M	15 Apr 25	15:00	SW	N	✓	✓	✓	✓	✓	 MCAL-2025-04-1306									
Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Measures Field Filtered (Y/N)	AEEMP - Routine Parameters	AEEMP - Nutrients	AEEMP - Other Conventional	Ultra Low Level Total Metals + Hg	Ultra Low Level Dissolved Metals + Hg																																																																																																																																		
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* RELINQUISHED BY: (Signature/Print)					RECEIVED BY: (Signature/Print)					Date: (YYMMDD)					Time																																																																																																																													
Michael Kovacs					Charles K. LeGoffe					25/04/19					1450																																																																																																																													
Date: (YYMMDD)					Time					# jars used and not submitted					Laboratory Use Only																																																																																																																													
15/04/16					7:30										Total Substances: ☐ Temperature (°C) on Receipt: See ACTR Contain Seal Intact on Cooler? ☐ Yes ☐ No																																																																																																																													
* UNLESS OTHERWISE NOTED TO IN WRITING, WORK SUBMITTED UNDER THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT www.bv.com/en/roam/html/LABORATORY_RESOURCES/COCT-TERMS-AND-CONDITIONS.																																																																																																																																												
** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.																																																																																																																																												
*** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.																																																																																																																																												

Received in Yellowknife

By: J. LeGoffe

@ 9:20

APR 18 2025

See ACTR

Temp: 1 1

Bureau Veritas Canada (2019) Inc.



CHAIN-OF-CUSTODY RECORD

[illegible]

COOLER OBSERVATIONS:				BV JOB#:			
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT		☒	TEMP	4	6	5	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT		☒	TEMP	5	6	6	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT		☒	TEMP	3	4	4	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
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ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
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ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
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CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
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CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP				
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				

RECEIVED BY (SIGN & PRINT)	DATE (YYYY/MM/DD)	TIME (HH:MM)
Jorge M. Carr	2025/04/08	9:30



ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #		COOLER OBSERVATIONS:				BV JOB#:				
Page 1 of 1	CH 750435-04-01									
CUSTODY SEAL	YES	NO	COOLER ID							
PRESENT	☒	☒	TEMP	1	1	1				
INTACT	☒	☒	COOLER ID							
ICE PRESENT	☒	☒	TEMP	0	0	0				
CUSTODY SEAL	YES	NO	COOLER ID							
PRESENT	☒	☒	TEMP	1	2	3				
INTACT	☒	☒	COOLER ID							
ICE PRESENT	☒	☒	TEMP	1	1	1				
CUSTODY SEAL	YES	NO	COOLER ID							
PRESENT	☒	☒	TEMP	1	2	3				
INTACT	☒	☒	COOLER ID							
ICE PRESENT	☒	☒	TEMP	1	2	3				
CUSTODY SEAL	YES	NO	COOLER ID							
PRESENT	☒	☒	TEMP	1	2	3				
INTACT	☒	☒	COOLER ID							
ICE PRESENT	☒	☒	TEMP	1	2	3				

RECEIVED BY (SIGN & PRINT)	DATE (YYYY/MM/DD)	TIME (HH:MM)
KA10267 mg Chen Wei	2025/04/18	1450

Credit - 1st Approval Sent	Credit - Final Approval Sent	Credit - CIT Alert Sent	Client deleted the Invoice ?
false	false	false	
Client rec'd Original Invoice ?	Preventative Measure	CSAT Escalation Sent	
		false	

by **Beatriz Cupe-Flores** on **Tue, 3 Jun at 4:29 PM** via **Email**

Clone of Question_un-ionized ammonia reported_B2Gold

Hi Melissa,

What is the lab protocol to include un-ionized ammonia as part of the COA?
Does the field crew have to include field data in the COC when submitting samples?

Please, let us know if this is possible and what would be required.

Thanks!

Beatriz Cupe-Flores

Toxicologist
Water Quality, Prairies & North, Earth & Environment
She/her

M +1 306-914-3922

Vacation alert: June 6 to June 9

Field parameters	Unit	TRIP BLANK	FIELD BLANK	DUP-1	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	BRP-29A-5	BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	GLCB-B	GLCB-M	GLCB-T	GLS-B
		15-04-25	16-04-25	18-04-25	17-04-25	17-04-25	17-04-25	17-04-25	17-04-25	18-04-25	18-04-25	18-04-25	18-04-25	18-04-25	16-04-25	16-04-25	16-04-25	16-04-25	16-04-25	15-04-25	15-04-25	15-04-25	15-04-25
pH	-	-	-	-	6.1	6.19	6.09	6.08	6.28	6.13	6.18	6.15	6.23	6.26	6.19	6.26	6.36	6.44	6.46	6.15	6.2	6.24	5.9
Temperature	°C	-	-	-	0.14	0.31	0.13	0.11	0.04	1.24	1.02	1.24	1.19	1.29	2.08	2.69	2.43	2.92	2.33	2.07	1.43	0.4	1.9

Please, send the updated COAs when the un-ionized ammonia is added and also send the EDDs to upload this data to EQUiS.

I'll email the field data for the Freshet program as soon as the field crew send it to me.



Your P.O. #: 470000200
 Your Project #: Ice-cover program B2Gold
 Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
 Park Place
 Suite 3400-666 Burrard St.
 VANCOUVER, BC
 CANADA V6C 2X8

Report Date: 2025/06/12
 Report #: R3673552
 Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532918

Received: 2025/04/17, 14:00

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	6	N/A	2025/04/24	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	6	N/A	2025/04/22	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	6	N/A	2025/04/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	6	N/A	2025/04/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) -Lab Filtered (1, 3)	1	N/A	2025/05/01	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) -Lab Filtered (1, 3)	5	N/A	2025/05/08	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	5	N/A	2025/04/24	AB SOP-00005	SM 24 2510 B m
Conductivity @25C (1)	1	N/A	2025/04/25	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	5	N/A	2025/04/24	AB SOP-00005	SM 24 4500-F C m
Fluoride - Low Level (1)	1	N/A	2025/04/25	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	6	N/A	2025/04/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	6	N/A	2025/04/24		Auto Calc
Hardness Total (calculated as CaCO3) (1, 4)	6	N/A	2025/05/09	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	6	N/A	2025/05/09	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	3	N/A	2025/04/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	2	N/A	2025/04/28	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/04/23	2025/04/28	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	4	2025/04/28	2025/04/28	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/05/12	2025/05/12	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (2)	6	N/A	2025/05/08	BBY7SOP-00029	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (2)	6	N/A	2025/05/08	BBY7SOP-00029	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N	5	N/A	2025/06/04		Auto Calc
Ammonia-N Low Level (Preserved) (1)	6	N/A	2025/04/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	6	N/A	2025/04/22		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	6	N/A	2025/04/21	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	6	2025/04/20	2025/04/22		Auto Calc
pH @25°C (1, 5)	6	N/A	2025/04/24	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	5	N/A	2025/06/04	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 6)	6	N/A	2025/04/21	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	6	2025/04/23	2025/04/24	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	6	N/A	2025/04/24	AB SOP-00011	EPA 370.1 R1978 m



Your P.O. #: 470000200
Your Project #: Ice-cover program B2Gold
Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/12

Report #: R3673552

Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532918

Received: 2025/04/17, 14:00

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Dissolved Solids (Filt. Residue) (1)	6	2025/04/23	2025/04/24	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	6	N/A	2025/05/09		Auto Calc
Temperature (Field) (1)	5	N/A	2025/06/04	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2025/04/24		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/04/30		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2025/05/01		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/05/02		Auto Calc
Nitrogen (Total) (1)	2	2025/04/24	2025/04/24	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/04/29	2025/04/30	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	2	2025/04/29	2025/05/01	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/05/01	2025/05/02	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 7)	6	N/A	2025/05/07	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus-Dis-Low-Lab Filtered (1, 8)	6	2025/04/28	2025/04/28	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	2	2025/04/28	2025/04/28	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	3	2025/04/28	2025/04/29	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/05/01	2025/05/02	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	6	2025/04/23	2025/04/23	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	6	N/A	2025/04/21	CAL SOP-00081	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the



Your P.O. #: 470000200
Your Project #: Ice-cover program B2Gold
Your C.O.C. #: C#750435-04-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/12
Report #: R3673552
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C532918

Received: 2025/04/17, 14:00
customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (7) TOC present in the sample should be considered as non-purgeable TOC.
- (8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIG028			DIG029		DIG030		
Sampling Date		2025/04/16 15:30			2025/04/16 10:00		2025/04/16 11:00		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	FIELD BLANK	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	B758894	30.3	B758894	30.3	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	B758893	30.5	B758893	30.6	0.50	B758893
Dissolved Nitrate (N)	mg/L	0.0035	0.0030	B758910	0.025	B758910	0.026	0.0030	B758910
Nitrate (NO ₃)	mg/L	0.015	0.013	B758899	0.11	B758899	0.11	0.013	B758899
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	B758899	<0.0033	B758899	<0.0033	0.0033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B758892	<0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	<10	10	B758902	39	B758902	36	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	0.020	B758903	0.57	B758903	0.48	0.020	B758903
Un-Ionized Ammonia	mg/L				<0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters									
Field pH	pH				6.19	ONSITE	6.26	N/A	ONSITE
Field Temperature (Fd)	deg. C				2.08	ONSITE	2.69	N/A	ONSITE
Misc. Inorganics									
Conductivity	uS/cm	<2.0	2.0	B762906	74	B762906	71	2.0	B762906
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761023	<0.00050	B761023	0.00480	0.00050	B761023
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B761029	<0.00050	B761029	<0.00050	0.00050	B761029
Fluoride (F)	mg/L	<0.010	0.010	B762907	0.023	B762907	0.025	0.010	B762907
Free Free Cyanide	mg/L	<0.00050	0.00050	B761032	<0.00050	B761032	<0.00050	0.00050	B761032
pH	pH	5.20	N/A	B762903	7.18	B762903	7.27	N/A	B762903
Reactive Silica	mg/L	<0.050	0.050	B764456	1.3	B764456	1.4	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	<0.50	0.50	B762900	21.3	B762900	17.5	0.50	B762900
Total Organic Carbon (C)	mg/L	<0.50	0.50	B777460	5.3	B777460	5.0	0.50	B777460
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Bicarbonate (HCO ₃)	mg/L	<0.50	0.50	B762900	26.0	B762900	21.4	0.50	B762900
Carbonate (CO ₃)	mg/L	<0.50	0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Hydroxide (OH)	mg/L	<0.50	0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Total Dissolved Solids	mg/L	<10	10	B761716	52	B761716	48	10	B761716
Total Suspended Solids	mg/L	<1.0	1.0	B761718	<1.0	B761718	1.1	1.0	B761718
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	<0.50 (1)	0.50	B770027	4.6 (1)	B778349	4.7 (1)	0.50	B778349
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time									



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIG028			DIG029		DIG030		
Sampling Date		2025/04/16 15:30			2025/04/16 10:00		2025/04/16 11:00		
COC Number		C#750435-04-01			C#750435-04-01		C#750435-04-01		
	UNITS	FIELD BLANK	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	B759666	<0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	0.0018	B762926	<0.0018	B762924	<0.0018	0.0018	B762926
Chloride (Cl)	mg/L	<0.50	0.50	B760797	0.57	B760797	0.56	0.50	B760797
Sulphate (SO ₄)	mg/L	<0.50	0.50	B760797	12	B760797	12	0.50	B760797
Nutrients									
Total Phosphorus (P)	mg/L	<0.0010	0.0010	B772401	<0.0010	B767160	<0.0010	0.0010	B766687
Total Ammonia (N)	mg/L	<0.0050	0.0050	B761876	0.16	B761876	0.16	0.0050	B761876
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	B759644	<0.0010	B759644	<0.0010	0.0010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	0.0035	0.0030	B759644	0.025	B759644	0.026	0.0030	B759644
Total Nitrogen (N)	mg/L	<0.020 (1)	0.020	B771327	0.60	B768075	0.51	0.020	B763570
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B766690	<0.0010	B766690	<0.0010	0.0010	B766690
Physical Properties									
Turbidity	NTU	<0.10	0.10	B759303	0.10	B759303	<0.10	0.10	B759303
RDL = Reportable Detection Limit									
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.									



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIG031		DIG032		DIG033		
Sampling Date		2025/04/16 12:30		2025/04/16 13:45		2025/04/16 15:00		
COC Number		C#750435-04-01		C#750435-04-01		C#750435-04-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	30.7	B758894	30.2	B758894	30.8	0.50	B758894
Total Hardness (CaCO ₃)	mg/L	30.9	B758893	30.7	B758893	30.6	0.50	B758893
Dissolved Nitrate (N)	mg/L	0.025	B758910	0.020	B758910	0.025	0.0030	B758910
Nitrate (NO ₃)	mg/L	0.11	B758899	0.089	B758899	0.11	0.013	B758899
Nitrite (NO ₂)	mg/L	<0.0033	B758899	<0.0033	B758899	<0.0033	0.0033	B758899
Sulphide (as H ₂ S)	mg/L	<0.0020	B758892	<0.0020	B758892	<0.0020	0.0020	B758892
Calculated Total Dissolved Solids	mg/L	39	B758902	38	B758902	39	10	B758902
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.49	B758903	0.59	B758903	0.53	0.020	B758903
Un-ionized Ammonia	mg/L	<0.00050	B973096	<0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters								
Field pH	pH	6.36	ONSITE	6.44	ONSITE	6.46	N/A	ONSITE
Field Temperature (Fd)	deg. C	2.43	ONSITE	2.92	ONSITE	2.33	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	72	B762906	71	B762906	72	2.0	B762906
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B761023	<0.00050	B761023	<0.00050	0.00050	B761023
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B761029	<0.00050	B761029	<0.00050	0.00050	B761029
Fluoride (F)	mg/L	0.024	B762907	0.024	B762907	0.026	0.010	B762907
Free Free Cyanide	mg/L	<0.00050	B761032	<0.00050	B761032	<0.00050	0.00050	B761032
pH	pH	7.17	B762903	7.29	B762903	7.23	N/A	B762903
Reactive Silica	mg/L	1.3	B764456	1.3	B764456	1.3	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	22.2	B762900	20.5	B762900	21.6	0.50	B762900
Total Organic Carbon (C)	mg/L	5.0	B777460	5.0	B777460	5.0	0.50	B777460
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Bicarbonate (HCO ₃)	mg/L	27.1	B762900	25.0	B762900	26.3	0.50	B762900
Carbonate (CO ₃)	mg/L	<0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Hydroxide (OH)	mg/L	<0.50	B762900	<0.50	B762900	<0.50	0.50	B762900
Total Dissolved Solids	mg/L	48	B761716	48	B761716	44	10	B761716
Total Suspended Solids	mg/L	<1.0	B761718	1.8	B761718	1.2	1.0	B761718
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	4.5 (1)	B778349	4.7 (1)	B778349	4.8 (1)	0.50	B778349
RDL = Reportable Detection Limit								
N/A = Not Applicable								
(1) Sample filtered and preserved past method specified hold time								



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DIG031		DIG032		DIG033		
Sampling Date		2025/04/16 12:30		2025/04/16 13:45		2025/04/16 15:00		
COC Number		C#750435-04-01		C#750435-04-01		C#750435-04-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	B759666	<0.0010	B759666	<0.0010	0.0010	B759666
Total Sulphide	mg/L	<0.0018	B762924	<0.0018	B762924	<0.0018	0.0018	B762924
Chloride (Cl)	mg/L	0.75	B760797	0.63	B760797	0.69	0.50	B760797
Sulphate (SO ₄)	mg/L	12	B760797	12	B760797	12	0.50	B760797
Nutrients								
Total Phosphorus (P)	mg/L	<0.0010	B766687	<0.0010	B767160	<0.0010	0.0010	B767160
Total Ammonia (N)	mg/L	0.15	B761876	0.16	B761896	0.16	0.0050	B761896
Dissolved Nitrite (N)	mg/L	<0.0010	B759644	<0.0010	B759644	<0.0010	0.0010	B759644
Dissolved Nitrate plus Nitrite (N)	mg/L	0.025	B759644	0.020	B759644	0.025 (1)	0.0030	B759644
Total Nitrogen (N)	mg/L	0.52	B763570	0.61	B768071	0.56	0.020	B768075
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	B766690	<0.0010	B766690	<0.0010	0.0010	B766690
Physical Properties								
Turbidity	NTU	0.13	B759303	<0.10	B759303	0.13	0.10	B759303
RDL = Reportable Detection Limit								
(1) Matrix spike exceeds acceptance limits due to matrix interference.								



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DIG028			DIG029	DIG030		
Sampling Date		2025/04/16 15:30			2025/04/16 10:00	2025/04/16 11:00		
COC Number		C#750435-04-01			C#750435-04-01	C#750435-04-01		
	UNITS	FIELD BLANK	RDL	QC Batch	BRP-38-1	BRP-38-2	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	0.00130 (1)	0.00010	B767192	0.00394	0.00320 (2)	0.00010	B767192
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L				0.00071	0.00165	0.00010	B763871
RDL = Reportable Detection Limit								
(1) Duplicate RPD above control limit - Non-homogenous sample - Increased variability of results.								
(2) Matrix Spike exceeds acceptance limits - Probable matrix interference.								

Bureau Veritas ID		DIG031		DIG032	DIG033		
Sampling Date		2025/04/16 12:30		2025/04/16 13:45	2025/04/16 15:00		
COC Number		C#750435-04-01		C#750435-04-01	C#750435-04-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	BRP-38-5	RDL	QC Batch
Elements							
Total Mercury (Hg)	ug/L	0.00051	B782531	0.00207	0.00046	0.00010	B767192
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00293	B763871	0.00266	0.00044	0.00010	B763871
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG028	DIG029	DIG030	DIG031	DIG032		
Sampling Date		2025/04/16 15:30	2025/04/16 10:00	2025/04/16 11:00	2025/04/16 12:30	2025/04/16 13:45		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	FIELD BLANK	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	ug/L	<0.10	1.84	1.75	1.85	1.85	0.10	B776025
Dissolved Antimony (Sb)	ug/L	<0.0030	0.0599	0.0306	0.0287	0.0306	0.0030	B776025
Dissolved Arsenic (As)	ug/L	<0.0050	0.301	0.300	0.288	0.275	0.0050	B776025
Dissolved Barium (Ba)	ug/L	0.0084	9.75	9.73	9.42	9.61	0.0080	B776025
Dissolved Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	B776025
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	B776025
Dissolved Boron (B)	ug/L	0.48	1.95	1.86	1.91	1.92	0.10	B776025
Dissolved Cadmium (Cd)	ug/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	B776025
Dissolved Calcium (Ca)	ug/L	<2.0	5560	5550	5610	5520	2.0	B776025
Dissolved Chromium (Cr)	ug/L	<0.020	0.070	0.073	0.075	0.070	0.020	B776025
Dissolved Cobalt (Co)	ug/L	<0.0040	0.0361	0.0349	0.0400	0.0371	0.0040	B776025
Dissolved Copper (Cu)	ug/L	<0.020	1.10	1.02	1.04	1.09	0.020	B776025
Dissolved Iron (Fe)	ug/L	<1.0	25.2	27.7	27.3	27.7	1.0	B776025
Dissolved Lead (Pb)	ug/L	<0.0030	0.295	0.174	0.171	0.116	0.0030	B776025
Dissolved Lithium (Li)	ug/L	<0.050	0.971	0.992	0.995	0.962	0.050	B776025
Dissolved Magnesium (Mg)	ug/L	<0.50	3980	3990	4060	4000	0.50	B776025
Dissolved Manganese (Mn)	ug/L	<0.0040	0.534	0.412	1.82	0.727	0.0040	B776025
Dissolved Molybdenum (Mo)	ug/L	<0.0050	0.0069	0.0055	0.0055	0.0060	0.0050	B776025
Dissolved Nickel (Ni)	ug/L	<0.015	2.40	2.40	2.40	2.36	0.015	B776025
Dissolved Potassium (K)	ug/L	<5.0	784	786	791	779	5.0	B776025
Dissolved Selenium (Se)	ug/L	<0.010	0.036	0.036	0.028	0.026	0.010	B776025
Dissolved Silicon (Si)	ug/L	<1.2	494	502	488	494	1.2	B776025
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	B776025
Dissolved Sodium (Na)	ug/L	0.94	1200	1220	1220	1220	0.50	B776025
Dissolved Strontium (Sr)	ug/L	<0.0080	16.8	16.8	16.9	16.7	0.0080	B776025
Dissolved Sulphur (S)	ug/L	<1.0	4280	4110	4260	4070	1.0	B776025
Dissolved Thallium (Tl)	ug/L	<0.00080	0.00140	0.00120	0.00100	0.00130	0.00080	B776025
Dissolved Tin (Sn)	ug/L	<0.0050	0.0179	0.0096	0.0097	0.0092	0.0050	B776025
Dissolved Titanium (Ti)	ug/L	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	B776025
Dissolved Uranium (U)	ug/L	<0.00050	0.00440	0.00410	0.00430	0.00420	0.00050	B776025
Dissolved Vanadium (V)	ug/L	<0.0050	0.0214	0.0189	0.0188	0.0182	0.0050	B776025
Dissolved Zinc (Zn)	ug/L	<0.060	1.14	0.994	1.09	1.73	0.060	B776025

RDL = Reportable Detection Limit



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG028	DIG029	DIG030	DIG031	DIG032		
Sampling Date		2025/04/16 15:30	2025/04/16 10:00	2025/04/16 11:00	2025/04/16 12:30	2025/04/16 13:45		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	FIELD BLANK	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	<0.0080	0.0320	0.0276	0.0299	0.0319	0.0080	B776025
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	0.23	6.50	5.52	6.51	6.59	0.10	B776414
Total Antimony (Sb)	ug/L	<0.0030	0.0750	0.0503	0.0453	0.0402	0.0030	B776414
Total Arsenic (As)	ug/L	<0.0050	0.314	0.310	0.303	0.317	0.0050	B776414
Total Barium (Ba)	ug/L	<0.0080	10.1	10.4	10.1	10.2	0.0080	B776414
Total Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	B776414
Total Bismuth (Bi)	ug/L	<0.0010	0.0017	0.0023	0.0021	0.0026	0.0010	B776414
Total Boron (B)	ug/L	0.32	1.81	1.70	1.73	1.67	0.10	B776414
Total Cadmium (Cd)	ug/L	<0.0030	0.0045	0.0034	0.0034	0.0037	0.0030	B776414
Total Calcium (Ca)	ug/L	<2.0	5290	5280	5380	5280	2.0	B776414
Total Chromium (Cr)	ug/L	<0.020	0.109	0.129	0.130	0.140	0.020	B776414
Total Cobalt (Co)	ug/L	<0.0040	0.254	0.336	0.311	0.331	0.0040	B776414
Total Copper (Cu)	ug/L	<0.020	1.11	1.11	1.11	1.06	0.020	B776414
Total Iron (Fe)	ug/L	<1.0	62.6	69.7	61.0	66.0	1.0	B776414
Total Lead (Pb)	ug/L	<0.0030	3.63	1.82	0.912	0.994	0.0030	B776414
Total Lithium (Li)	ug/L	<0.050	0.951	0.942	0.927	0.921	0.050	B776414
Total Magnesium (Mg)	ug/L	<0.50	4200	4240	4240	4250	0.50	B776414
Total Manganese (Mn)	ug/L	<0.0040	38.3	47.9	45.3	47.3	0.0040	B776414
Total Molybdenum (Mo)	ug/L	<0.0050	0.0086	0.0086	0.0103	0.0075	0.0050	B776414
Total Nickel (Ni)	ug/L	<0.015	2.45	2.55	2.51	2.50	0.015	B776414
Total Potassium (K)	ug/L	<5.0	750	762	790	773	5.0	B776414
Total Selenium (Se)	ug/L	<0.010	0.038	0.034	0.039	0.039	0.010	B776414
Total Silicon (Si)	ug/L	<1.2	523	529	521	528	1.2	B776414
Total Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	B776414
Total Sodium (Na)	ug/L	<0.50	1260	1290	1290	1300	0.50	B776414
Total Strontium (Sr)	ug/L	<0.0080	16.9	16.9	16.9	16.8	0.0080	B776414
Total Sulphur (S)	ug/L	<1.0	4230	4100	4100	4090	1.0	B776414
Total Thallium (Tl)	ug/L	<0.00080	0.00160	0.00150	0.00140	0.00140	0.00080	B776414
Total Tin (Sn)	ug/L	<0.0050	0.0237	0.0182	0.0206	0.0146	0.0050	B776414
Total Titanium (Ti)	ug/L	<0.030	0.282	0.175	0.411	0.216	0.030	B776414
Total Uranium (U)	ug/L	<0.00050	0.00520	0.00510	0.00570	0.00540	0.00050	B776414
Total Vanadium (V)	ug/L	<0.0050	0.0344	0.0305	0.0322	0.0321	0.0050	B776414
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG028	DIG029	DIG030	DIG031	DIG032		
Sampling Date		2025/04/16 15:30	2025/04/16 10:00	2025/04/16 11:00	2025/04/16 12:30	2025/04/16 13:45		
COC Number		C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01	C#750435-04-01		
	UNITS	FIELD BLANK	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Total Zinc (Zn)	ug/L	0.061	1.91	2.11	2.55	3.28	0.060	B776414
Total Zirconium (Zr)	ug/L	<0.0080	0.0384	0.0478	0.0475	0.0493	0.0080	B776414
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG033		
Sampling Date		2025/04/16 15:00		
COC Number		C#750435-04-01		
	UNITS	BRP-38-5	RDL	QC Batch
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	ug/L	1.70	0.10	B776025
Dissolved Antimony (Sb)	ug/L	0.0184	0.0030	B776025
Dissolved Arsenic (As)	ug/L	0.291	0.0050	B776025
Dissolved Barium (Ba)	ug/L	9.36	0.0080	B776025
Dissolved Beryllium (Be)	ug/L	<0.0015	0.0015	B776025
Dissolved Bismuth (Bi)	ug/L	<0.0010	0.0010	B776025
Dissolved Boron (B)	ug/L	1.82	0.10	B776025
Dissolved Cadmium (Cd)	ug/L	<0.0030	0.0030	B776025
Dissolved Calcium (Ca)	ug/L	5710	2.0	B776025
Dissolved Chromium (Cr)	ug/L	0.061	0.020	B776025
Dissolved Cobalt (Co)	ug/L	0.0371	0.0040	B776025
Dissolved Copper (Cu)	ug/L	0.982	0.020	B776025
Dissolved Iron (Fe)	ug/L	28.4	1.0	B776025
Dissolved Lead (Pb)	ug/L	0.125	0.0030	B776025
Dissolved Lithium (Li)	ug/L	0.981	0.050	B776025
Dissolved Magnesium (Mg)	ug/L	4010	0.50	B776025
Dissolved Manganese (Mn)	ug/L	1.16	0.0040	B776025
Dissolved Molybdenum (Mo)	ug/L	<0.0050	0.0050	B776025
Dissolved Nickel (Ni)	ug/L	2.34	0.015	B776025
Dissolved Potassium (K)	ug/L	764	5.0	B776025
Dissolved Selenium (Se)	ug/L	0.030	0.010	B776025
Dissolved Silicon (Si)	ug/L	513	1.2	B776025
Dissolved Silver (Ag)	ug/L	<0.0020	0.0020	B776025
Dissolved Sodium (Na)	ug/L	1210	0.50	B776025
Dissolved Strontium (Sr)	ug/L	16.6	0.0080	B776025
Dissolved Sulphur (S)	ug/L	4100	1.0	B776025
Dissolved Thallium (Tl)	ug/L	0.00130	0.00080	B776025
Dissolved Tin (Sn)	ug/L	0.0065	0.0050	B776025
Dissolved Titanium (Ti)	ug/L	<0.030	0.030	B776025
Dissolved Uranium (U)	ug/L	0.00480	0.00050	B776025
Dissolved Vanadium (V)	ug/L	0.0174	0.0050	B776025
Dissolved Zinc (Zn)	ug/L	0.592	0.060	B776025
RDL = Reportable Detection Limit				



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG033		
Sampling Date		2025/04/16 15:00		
COC Number		C#750435-04-01		
	UNITS	BRP-38-5	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.0271	0.0080	B776025
Total Metals by ICPMS				
Total Aluminum (Al)	ug/L	3.44	0.10	B776414
Total Antimony (Sb)	ug/L	0.0344	0.0030	B776414
Total Arsenic (As)	ug/L	0.315	0.0050	B776414
Total Barium (Ba)	ug/L	9.95	0.0080	B776414
Total Beryllium (Be)	ug/L	<0.0015	0.0015	B776414
Total Bismuth (Bi)	ug/L	0.0010	0.0010	B776414
Total Boron (B)	ug/L	1.67	0.10	B776414
Total Cadmium (Cd)	ug/L	<0.0030	0.0030	B776414
Total Calcium (Ca)	ug/L	5250	2.0	B776414
Total Chromium (Cr)	ug/L	0.090	0.020	B776414
Total Cobalt (Co)	ug/L	0.314	0.0040	B776414
Total Copper (Cu)	ug/L	0.992	0.020	B776414
Total Iron (Fe)	ug/L	62.3	1.0	B776414
Total Lead (Pb)	ug/L	0.717	0.0030	B776414
Total Lithium (Li)	ug/L	0.904	0.050	B776414
Total Magnesium (Mg)	ug/L	4260	0.50	B776414
Total Manganese (Mn)	ug/L	45.5	0.0040	B776414
Total Molybdenum (Mo)	ug/L	0.0057	0.0050	B776414
Total Nickel (Ni)	ug/L	2.49	0.015	B776414
Total Potassium (K)	ug/L	743	5.0	B776414
Total Selenium (Se)	ug/L	0.033	0.010	B776414
Total Silicon (Si)	ug/L	521	1.2	B776414
Total Silver (Ag)	ug/L	<0.0020	0.0020	B776414
Total Sodium (Na)	ug/L	1270	0.50	B776414
Total Strontium (Sr)	ug/L	16.7	0.0080	B776414
Total Sulphur (S)	ug/L	4110	1.0	B776414
Total Thallium (Tl)	ug/L	0.00130	0.00080	B776414
Total Tin (Sn)	ug/L	0.0090	0.0050	B776414
Total Titanium (Ti)	ug/L	0.087	0.030	B776414
Total Uranium (U)	ug/L	0.00460	0.00050	B776414
Total Vanadium (V)	ug/L	0.0245	0.0050	B776414
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DIG033		
Sampling Date		2025/04/16 15:00		
COC Number		C#750435-04-01		
	UNITS	BRP-38-5	RDL	QC Batch
Total Zinc (Zn)	ug/L	1.33	0.060	B776414
Total Zirconium (Zr)	ug/L	0.0375	0.0080	B776414
RDL = Reportable Detection Limit				



GENERAL COMMENTS

Report reissued to add Equis EDD per client request 2025/05/26.

Report reissued to include results for Un-ionized Ammonia and input of field pH and temperature per attached email, client request received 2025/06/04.

Sample DIG028 [FIELD BLANK] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIG029 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Ammonia-N (Total).

Sample DIG030 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Ammonia-N (Total).

Sample DIG031 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIG032 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DIG033 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Results relate only to the items tested.



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

QUALITY ASSURANCE REPORT

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B759303	Turbidity	2025/04/21			101	80 - 120	<0.10	NTU	7.1	20		
B759644	Dissolved Nitrate plus Nitrite (N)	2025/04/21	127 (1)	80 - 120	105	80 - 120	0.0032, RDL=0.0030 (2)	mg/L	2.5	20		
B759644	Dissolved Nitrite (N)	2025/04/21	107	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
B759666	Orthophosphate (P)	2025/04/21	99	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
B760797	Chloride (Cl)	2025/04/22	103	80 - 120	98	80 - 120	<0.50	mg/L	4.5	20		
B760797	Sulphate (SO4)	2025/04/22	106	80 - 120	103	80 - 120	<0.50	mg/L	1.3	20		
B761023	Strong Acid Dissoc. Cyanide (CN)	2025/04/22	95	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20		
B761029	Weak Acid Dissoc. Cyanide (CN)	2025/04/22	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
B761032	Free Free Cyanide	2025/04/22	96	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
B761716	Total Dissolved Solids	2025/04/24	94	80 - 120	100	80 - 120	<10	mg/L	0.89	20		
B761718	Total Suspended Solids	2025/04/23	NC	80 - 120	101	80 - 120	<0.99	mg/L	0.64	20		
B761876	Total Ammonia (N)	2025/04/23	84	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20		
B761896	Total Ammonia (N)	2025/04/23	106	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20		
B762900	Alkalinity (PP as CaCO3)	2025/04/24					<0.50	mg/L	NC	20		
B762900	Alkalinity (Total as CaCO3)	2025/04/24			98	80 - 120	<0.50	mg/L	NC	20		
B762900	Bicarbonate (HCO3)	2025/04/24					<0.50	mg/L	NC	20		
B762900	Carbonate (CO3)	2025/04/24					<0.50	mg/L	NC	20		
B762900	Hydroxide (OH)	2025/04/24					<0.50	mg/L	NC	20		
B762903	pH	2025/04/24			100	97 - 103			0.37	N/A		
B762906	Conductivity	2025/04/24			102	90 - 110	<2.0	uS/cm	1.4	10		
B762907	Fluoride (F)	2025/04/24	94	80 - 120	94	80 - 120	<0.010	mg/L	NC	20		
B762924	Total Sulphide	2025/04/24	106	80 - 120	97	80 - 120	<0.0018	mg/L	NC	20		
B762926	Total Sulphide	2025/04/24	102	80 - 120	100	80 - 120	<0.0018	mg/L	NC	20		
B763570	Total Nitrogen (N)	2025/04/24	108	80 - 120	104	80 - 120	<0.020	mg/L	2.7	20	103	80 - 120
B763871	Dissolved Mercury (Hg)	2025/04/24	65 (1)	80 - 120	104	80 - 120	0.00015, RDL=0.00010	ug/L				
B764456	Reactive Silica	2025/04/24	107	80 - 120	106	80 - 120	<0.050	mg/L	1.5	20		
B766687	Total Phosphorus (P)	2025/04/28	102	80 - 120	98	80 - 120	<0.0010	mg/L	0.65	20	90	80 - 120
B766690	Dissolved Phosphorus (P)	2025/04/28	96	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
B767160	Total Phosphorus (P)	2025/04/29	99	80 - 120	98	80 - 120	<0.0010	mg/L	3.4	20	90	80 - 120



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B767192	Total Mercury (Hg)	2025/04/28	50 (1)	80 - 120	100	80 - 120	<0.00010	ug/L	48 (1)	25		
B768071	Total Nitrogen (N)	2025/04/30	NC	80 - 120	115	80 - 120	0.021, RDL=0.020 (3)	mg/L	4.9	20	114	80 - 120
B768075	Total Nitrogen (N)	2025/05/01	113	80 - 120	107	80 - 120	<0.020	mg/L	NC	20	109	80 - 120
B770027	Dissolved Organic Carbon (C)	2025/05/01	89	75 - 125	106	80 - 120	<0.50	mg/L	NC	20		
B771327	Total Nitrogen (N)	2025/05/02	113	80 - 120	110	80 - 120	<0.020	mg/L	2.7	20	108	80 - 120
B772401	Total Phosphorus (P)	2025/05/02	115	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20	90	80 - 120
B776025	Dissolved Aluminum (Al)	2025/05/08	94	80 - 120	97	80 - 120	<0.10	ug/L	NC	40		
B776025	Dissolved Antimony (Sb)	2025/05/08	99	80 - 120	100	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Arsenic (As)	2025/05/08	101	80 - 120	103	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Barium (Ba)	2025/05/08	97	80 - 120	99	80 - 120	<0.0080	ug/L	4.9	40		
B776025	Dissolved Beryllium (Be)	2025/05/08	96	80 - 120	96	80 - 120	<0.0015	ug/L	NC	40		
B776025	Dissolved Bismuth (Bi)	2025/05/08	94	80 - 120	96	80 - 120	<0.0010	ug/L	NC	40		
B776025	Dissolved Boron (B)	2025/05/08	93	80 - 120	92	80 - 120	<0.10	ug/L	4.1	40		
B776025	Dissolved Cadmium (Cd)	2025/05/08	97	80 - 120	99	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Calcium (Ca)	2025/05/08	NC	80 - 120	101	80 - 120	<2.0	ug/L	NC	40		
B776025	Dissolved Chromium (Cr)	2025/05/08	94	80 - 120	96	80 - 120	<0.020	ug/L	NC	40		
B776025	Dissolved Cobalt (Co)	2025/05/08	93	80 - 120	95	80 - 120	<0.0040	ug/L	NC	40		
B776025	Dissolved Copper (Cu)	2025/05/08	93	80 - 120	95	80 - 120	<0.020	ug/L	NC	40		
B776025	Dissolved Iron (Fe)	2025/05/08	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	40		
B776025	Dissolved Lead (Pb)	2025/05/08	93	80 - 120	94	80 - 120	<0.0030	ug/L	NC	40		
B776025	Dissolved Lithium (Li)	2025/05/08	97	80 - 120	97	80 - 120	<0.050	ug/L	NC	40		
B776025	Dissolved Magnesium (Mg)	2025/05/08	NC	80 - 120	95	80 - 120	<0.50	ug/L	NC	40		
B776025	Dissolved Manganese (Mn)	2025/05/08	91	80 - 120	94	80 - 120	<0.0040	ug/L	NC	40		
B776025	Dissolved Molybdenum (Mo)	2025/05/08	96	80 - 120	96	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Nickel (Ni)	2025/05/08	96	80 - 120	98	80 - 120	<0.015	ug/L	NC	40		
B776025	Dissolved Potassium (K)	2025/05/08	101	80 - 120	103	80 - 120	<5.0	ug/L	NC	40		
B776025	Dissolved Selenium (Se)	2025/05/08	97	80 - 120	97	80 - 120	<0.010	ug/L	NC	40		
B776025	Dissolved Silicon (Si)	2025/05/08	87	80 - 120	88	80 - 120	<1.2	ug/L	NC	40		
B776025	Dissolved Silver (Ag)	2025/05/08	98	80 - 120	99	80 - 120	<0.0020	ug/L	NC	40		
B776025	Dissolved Sodium (Na)	2025/05/08	94	80 - 120	97	80 - 120	<0.50	ug/L	1.6	40		



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776025	Dissolved Strontium (Sr)	2025/05/08	NC	80 - 120	93	80 - 120	<0.0080	ug/L	NC	40		
B776025	Dissolved Sulphur (S)	2025/05/08	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	40		
B776025	Dissolved Thallium (Tl)	2025/05/08	94	80 - 120	95	80 - 120	<0.00080	ug/L	NC	40		
B776025	Dissolved Tin (Sn)	2025/05/08	98	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Titanium (Ti)	2025/05/08	99	80 - 120	100	80 - 120	<0.030	ug/L	NC	40		
B776025	Dissolved Uranium (U)	2025/05/08	94	80 - 120	94	80 - 120	<0.00050	ug/L	NC	40		
B776025	Dissolved Vanadium (V)	2025/05/08	97	80 - 120	97	80 - 120	<0.0050	ug/L	NC	40		
B776025	Dissolved Zinc (Zn)	2025/05/08	95	80 - 120	100	80 - 120	<0.060	ug/L	NC	40		
B776025	Dissolved Zirconium (Zr)	2025/05/08	93	80 - 120	91	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Aluminum (Al)	2025/05/08	95	80 - 120	96	80 - 120	<0.10	ug/L	11	40		
B776414	Total Antimony (Sb)	2025/05/08	97	80 - 120	97	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Arsenic (As)	2025/05/08	102	80 - 120	104	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Barium (Ba)	2025/05/08	97	80 - 120	99	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Beryllium (Be)	2025/05/08	94	80 - 120	94	80 - 120	<0.0015	ug/L	NC	40		
B776414	Total Bismuth (Bi)	2025/05/08	93	80 - 120	93	80 - 120	<0.0010	ug/L	NC	40		
B776414	Total Boron (B)	2025/05/08	94	80 - 120	92	80 - 120	<0.10	ug/L	13	40		
B776414	Total Cadmium (Cd)	2025/05/08	97	80 - 120	98	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Calcium (Ca)	2025/05/08	NC	80 - 120	96	80 - 120	<2.0	ug/L	NC	40		
B776414	Total Chromium (Cr)	2025/05/08	93	80 - 120	93	80 - 120	<0.020	ug/L	NC	40		
B776414	Total Cobalt (Co)	2025/05/08	92	80 - 120	92	80 - 120	<0.0040	ug/L	NC	40		
B776414	Total Copper (Cu)	2025/05/08	90	80 - 120	91	80 - 120	<0.020	ug/L	NC	40		
B776414	Total Iron (Fe)	2025/05/08	99	80 - 120	98	80 - 120	<1.0	ug/L	NC	40		
B776414	Total Lead (Pb)	2025/05/08	90	80 - 120	90	80 - 120	<0.0030	ug/L	NC	40		
B776414	Total Lithium (Li)	2025/05/08	87	80 - 120	88	80 - 120	<0.050	ug/L	NC	40		
B776414	Total Magnesium (Mg)	2025/05/08	NC	80 - 120	99	80 - 120	<0.50	ug/L	NC	40		
B776414	Total Manganese (Mn)	2025/05/08	95	80 - 120	96	80 - 120	<0.0040	ug/L	NC	40		
B776414	Total Molybdenum (Mo)	2025/05/08	97	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Nickel (Ni)	2025/05/08	93	80 - 120	95	80 - 120	<0.015	ug/L	NC	40		
B776414	Total Potassium (K)	2025/05/08	98	80 - 120	101	80 - 120	<5.0	ug/L	NC	40		
B776414	Total Selenium (Se)	2025/05/08	99	80 - 120	98	80 - 120	<0.010	ug/L	NC	40		
B776414	Total Silicon (Si)	2025/05/08	91	80 - 120	90	80 - 120	<1.2	ug/L	NC	40		



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776414	Total Silver (Ag)	2025/05/08	97	80 - 120	96	80 - 120	<0.0020	ug/L	NC	40		
B776414	Total Sodium (Na)	2025/05/08	97	80 - 120	100	80 - 120	<0.50	ug/L	NC	40		
B776414	Total Strontium (Sr)	2025/05/08	NC	80 - 120	94	80 - 120	<0.0080	ug/L	NC	40		
B776414	Total Sulphur (S)	2025/05/08	101	80 - 120	100	80 - 120	<1.0	ug/L	NC	40		
B776414	Total Thallium (Tl)	2025/05/08	93	80 - 120	93	80 - 120	<0.00080	ug/L	NC	40		
B776414	Total Tin (Sn)	2025/05/08	97	80 - 120	99	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Titanium (Ti)	2025/05/08	97	80 - 120	97	80 - 120	<0.030	ug/L	NC	40		
B776414	Total Uranium (U)	2025/05/08	90	80 - 120	90	80 - 120	<0.00050	ug/L	NC	40		
B776414	Total Vanadium (V)	2025/05/08	102	80 - 120	96	80 - 120	<0.0050	ug/L	NC	40		
B776414	Total Zinc (Zn)	2025/05/08	98	80 - 120	98	80 - 120	<0.060	ug/L	1.5	40		
B776414	Total Zirconium (Zr)	2025/05/08	94	80 - 120	93	80 - 120	<0.0080	ug/L	NC	40		
B777460	Total Organic Carbon (C)	2025/05/07	103	75 - 125	103	80 - 120	<0.50	mg/L	2.0	20		
B778349	Dissolved Organic Carbon (C)	2025/05/08	98	75 - 125	103	80 - 120	<0.50	mg/L	NC	20		
B782531	Total Mercury (Hg)	2025/05/12			101	80 - 120	<0.00010	ug/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis

(3) Method blank above criteria. Data inspected. All data $< \text{RDL}$ or greater than $10 \times \text{Method Blank}$.



Bureau Veritas Job #: C532918
Report Date: 2025/06/12

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

$$3 \mid 3 \mid 2$$

Credit - 1st Approval Sent	Credit - Final Approval Sent	Credit - CIT Alert Sent	Client deleted the Invoice ?
false	false	false	
Client rec'd Original Invoice ?	Preventative Measure	CSAT Escalation Sent	
		false	

by **Beatriz Cupe-Flores** on **Tue, 3 Jun at 4:29 PM** via **Email**

Clone of Question_un-ionized ammonia reported_B2Gold

Hi Melissa,

What is the lab protocol to include un-ionized ammonia as part of the COA?
Does the field crew have to include field data in the COC when submitting samples?

Please, let us know if this is possible and what would be required.

Thanks!

Beatriz Cupe-Flores

Toxicologist
Water Quality, Prairies & North, Earth & Environment
She/her

M +1 306-914-3922

Vacation alert: June 6 to June 9

Field parameters	Unit	TRIP BLANK	FIELD BLANK	DUP- 1	BRP- 29A- 1	BRP- 29A- 2	BRP- 29A- 3	BRP- 29A- 4	BRP- 29A- 5	BRP- 32-1	BRP- 32-2	BRP- 32-3	BRP- 32-4	BRP- 32-5	BRP- 38-1	BRP- 38-2	BRP- 38-3	BRP- 38-4	BRP- 38-5	GLCB- B	GLCB- M	GLCB- T	GLS B
		15-04-25	16-04-25	18-04-25	17-04-25	17-04-25	17-04-25	17-04-25	17-04-25	18-04-25	18-04-25	18-04-25	18-04-25	18-04-25	16-04-25	16-04-25	16-04-25	16-04-25	16-04-25	15-04-25	15-04-25	15-04-25	15-04-25
pH	-	-	-	-	6.1	6.19	6.09	6.08	6.28	6.13	6.18	6.15	6.23	6.26	6.19	6.26	6.36	6.44	6.46	6.15	6.2	6.24	5.9
Temperature	°C	-	-	-	0.14	0.31	0.13	0.11	0.04	1.24	1.02	1.24	1.19	1.29	2.08	2.69	2.43	2.92	2.33	2.07	1.43	0.4	1.9

Please, send the updated COAs when the un-ionized ammonia is added and also send the EDDs to upload this data to EQUiS.

I'll email the field data for the Freshet program as soon as the field crew send it to me.



Your P.O. #: 470000200
 Your Project #: Ice-cover program B2Gold
 Your C.O.C. #: 750435-01-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
 Park Place
 Suite 3400-666 Burrard St.
 VANCOUVER, BC
 CANADA V6C 2X8

Report Date: 2025/06/25
 Report #: R3679033
 Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C533369

Received: 2025/04/21, 08:00

Sample Matrix: Water
 # Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	14	N/A	2025/04/23	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	14	N/A	2025/04/23	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	14	N/A	2025/04/24	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	14	N/A	2025/04/24	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) -Lab Filtered (1, 3)	11	N/A	2025/04/24	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) -Lab Filtered (1, 3)	3	N/A	2025/04/28	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	14	N/A	2025/04/24	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	14	N/A	2025/04/24	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	14	N/A	2025/04/24	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H ₂ S) (1)	14	N/A	2025/04/24		Auto Calc
Hardness Total (calculated as CaCO ₃) (1, 4)	14	N/A	2025/05/09	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO ₃) (1)	14	N/A	2025/05/09	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	6	N/A	2025/05/12	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	8	N/A	2025/05/13	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	6	2025/04/29	2025/04/29	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	8	2025/05/13	2025/05/13	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (2)	12	N/A	2025/05/08	BBY7SOP-00029	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (2)	2	N/A	2025/05/09	BBY7SOP-00029	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (2)	14	N/A	2025/05/09	BBY7SOP-00029	EPA 6020b R2 m
Un-Ionized Ammonia (NH ₃) as N	1	N/A	2025/06/10		Auto Calc
Un-Ionized Ammonia (NH ₃) as N	1	N/A	2025/06/06		Auto Calc
Un-Ionized Ammonia (NH ₃) as N	7	N/A	2025/06/07		Auto Calc
Un-Ionized Ammonia (NH ₃) as N	4	N/A	2025/06/09		Auto Calc
Ammonia-N Low Level (Preserved) (1)	14	N/A	2025/04/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	14	N/A	2025/04/24		Auto Calc
NO ₂ (N); NO ₂ (N) + NO ₃ (N) in Water (LL) (1)	14	N/A	2025/04/23	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	14	2025/04/22	2025/04/24		Auto Calc
pH @25°C (1, 5)	14	N/A	2025/04/23	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	13	N/A	2025/06/04	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 6)	14	N/A	2025/04/23	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	14	2025/04/23	2025/04/24	AB SOP-00080	SM 24 4500 S2-A D Fm



Your P.O. #: 470000200
Your Project #: Ice-cover program B2Gold
Your C.O.C. #: 750435-01-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/25
Report #: R3679033
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C533369

Received: 2025/04/21, 08:00

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Silica (Reactive) (1)	3	N/A	2025/04/24	AB SOP-00011	EPA 370.1 R1978 m
Silica (Reactive) (1)	11	N/A	2025/04/25	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	13	2025/04/23	2025/04/24	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	1	2025/04/27	2025/04/28	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	14	N/A	2025/05/09		Auto Calc
Temperature (Field) (1)	13	N/A	2025/06/04	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2025/04/24		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	12	N/A	2025/04/29		Auto Calc
Nitrogen (Total) (1)	2	2025/04/24	2025/04/24	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	12	2025/04/28	2025/04/28	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 7)	6	N/A	2025/04/24	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 7)	8	N/A	2025/04/28	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus-Dis-Low-Lab Filtered (1, 8)	14	2025/04/28	2025/04/28	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	3	2025/04/28	2025/04/28	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	11	2025/04/28	2025/04/29	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	8	2025/04/23	2025/04/23	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	3	2025/04/24	2025/04/24	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	3	2025/04/24	2025/04/26	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	14	N/A	2025/04/23	CAL SOP-00081	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.



Your P.O. #: 470000200
Your Project #: Ice-cover program B2Gold
Your C.O.C. #: 750435-01-01

Attention: Chris LeGoffe

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/06/25

Report #: R3679033

Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C533369

Received: 2025/04/21, 08:00

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(7) TOC present in the sample should be considered as non-purgeable TOC.

(8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII115		DII116		DII117		
Sampling Date		2025/04/17 10:30		2025/04/17 11:30		2025/04/17 09:00		
COC Number		750435-01-01		750435-01-01		750435-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	QC Batch	GLWB-T	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	88.5	B760829	93.4	B760829	91.5	0.50	B760829
Total Hardness (CaCO ₃)	mg/L	91.8	B760828	94.4	B760828	91.7	0.50	B760828
Dissolved Nitrate (N)	mg/L	2.4	B761181	2.5	B761181	2.3	0.050	B761181
Nitrate (NO ₃)	mg/L	11	B760554	11	B760554	10	0.22	B760554
Nitrite (NO ₂)	mg/L	0.17	B760554	0.22	B760554	0.19	0.0033	B760554
Sulphide (as H ₂ S)	mg/L	<0.0020	B760806	<0.0020	B760806	<0.0020	0.0020	B760806
Calculated Total Dissolved Solids	mg/L	120	B760830	130	B760830	120	10	B760830
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.54	B760560	0.48	B760560	0.65	0.10	B760560
Un-ionized Ammonia	mg/L	<0.00050	B973096	<0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters								
Field pH	pH	6.1	ONSITE	6.19	ONSITE	6.12	N/A	ONSITE
Field Temperature (Fd)	deg. C	0.14	ONSITE	0.31	ONSITE	0.05	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	220	B762895	230	B762895	220	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00060	B763756	<0.00050	B763756	<0.00050	0.00050	B763756
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763904	<0.00050	B763904	<0.00050	0.00050	B763904
Fluoride (F)	mg/L	0.029	B762897	0.026	B762897	0.027	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	B763914	<0.00050	B763914	<0.00050	0.00050	B763914
pH	pH	6.79	B762893	6.75	B762893	6.77	N/A	B762893
Reactive Silica	mg/L	3.6	B764458	3.7	B764458	3.7	0.050	B764456
Alkalinity (Total as CaCO ₃)	mg/L	8.09	B762891	8.21	B762891	8.15	0.50	B762891
Total Organic Carbon (C)	mg/L	5.9	B764133	6.4	B764133	6.3	0.50	B764133
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	9.87	B762891	10.0	B762891	9.94	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	150	B761738	150	B761738	150	10	B761738
Total Suspended Solids	mg/L	<1.0	B762332	<1.0	B762332	<1.0	1.0	B762332
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	6.1 (1)	B767138	5.8 (1)	B763803	5.8 (1)	0.50	B763803
RDL = Reportable Detection Limit								
N/A = Not Applicable								
(1) Sample filtered and preserved past method specified hold time								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII115		DII116		DII117		
Sampling Date		2025/04/17 10:30		2025/04/17 11:30		2025/04/17 09:00		
COC Number		750435-01-01		750435-01-01		750435-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	QC Batch	GLWB-T	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	B762582	0.0015	B762582	0.0012	0.0010	B762582
Total Sulphide	mg/L	<0.0018	B762930	<0.0018	B762930	<0.0018	0.0018	B762930
Chloride (Cl)	mg/L	24	B762192	26	B762192	25	0.50	B762192
Sulphate (SO ₄)	mg/L	46	B762192	46	B762192	45	0.50	B762192
Nutrients								
Total Phosphorus (P)	mg/L	0.0015	B767113	0.0019	B767113	0.0014	0.0010	B767113
Total Ammonia (N)	mg/L	0.33	B761900	0.33	B761900	0.34	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.052	B762865	0.068	B762865	0.058	0.0010	B762865
Dissolved Nitrate plus Nitrite (N)	mg/L	2.4	B762865	2.6	B762865	2.4	0.050	B762865
Total Nitrogen (N)	mg/L	3.0	B766596	3.0	B766596	3.0	0.10	B766596
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	B766690	<0.0010 (1)	B766690	<0.0010 (1)	0.0010	B766690
Physical Properties								
Turbidity	NTU	0.12	B762141	<0.10	B762141	<0.10	0.10	B762141
RDL = Reportable Detection Limit								
(1) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII118		DII119		DII120		
Sampling Date		2025/04/17 09:30		2025/04/17 10:00		2025/04/17 12:15		
COC Number		750435-01-01		750435-01-01		750435-01-01		
	UNITS	GLWB-M	QC Batch	GLWB-B	QC Batch	BRP-29A-3	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	89.5	B760829	88.3	B760829	89.0	0.50	B760829
Total Hardness (CaCO ₃)	mg/L	87.8	B760828	88.8	B760828	89.8	0.50	B760828
Dissolved Nitrate (N)	mg/L	2.4	B761181	2.4	B761181	2.4	0.050	B761181
Nitrate (NO ₃)	mg/L	11	B760554	10	B760554	10	0.22	B760554
Nitrite (NO ₂)	mg/L	0.23	B760554	0.22	B760554	0.19	0.0033	B760554
Sulphide (as H ₂ S)	mg/L	<0.0020	B760806	<0.0020	B760806	<0.0020	0.0020	B760806
Calculated Total Dissolved Solids	mg/L	120	B760830	120	B760830	120	10	B760830
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.80	B760560	0.31	B760560	0.24	0.10	B760560
Un-Ionized Ammonia	mg/L	<0.00050	B973096	<0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters								
Field pH	pH	6.07	ONSITE	5.97	ONSITE	6.09	N/A	ONSITE
Field Temperature (Fd)	deg. C	0.25	ONSITE	0.83	ONSITE	0.13	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	220	B762895	220	B762895	220	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763756	0.00050	B763756	0.00050	0.00050	B763756
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763904	<0.00050	B763904	<0.00050	0.00050	B763904
Fluoride (F)	mg/L	0.028	B762897	0.027	B762897	0.031	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	B763914	<0.00050	B763914	<0.00050	0.00050	B763914
pH	pH	6.76	B762893	6.76	B762893	6.77	N/A	B762893
Reactive Silica	mg/L	3.8	B764458	3.7	B764456	3.6	0.050	B764458
Alkalinity (Total as CaCO ₃)	mg/L	8.38	B762891	7.32	B762891	8.19	0.50	B762891
Total Organic Carbon (C)	mg/L	5.9	B764133	5.9	B766689	5.9	0.50	B764133
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	10.2	B762891	8.93	B762891	10.0	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	B762891	<0.50	B762891	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	140	B761738	140	B761738	140 (1)	10	B766339
Total Suspended Solids	mg/L	<1.0	B762332	<1.0	B762332	<1.0	1.0	B762332
RDL = Reportable Detection Limit								
N/A = Not Applicable								
(1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII118		DII119		DII120		
Sampling Date		2025/04/17 09:30		2025/04/17 10:00		2025/04/17 12:15		
COC Number		750435-01-01		750435-01-01		750435-01-01		
	UNITS	GLWB-M	QC Batch	GLWB-B	QC Batch	BRP-29A-3	RDL	QC Batch
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	6.3 (1)	B767138	6.3 (1)	B763803	6.4 (1)	0.50	B763803
Anions								
Orthophosphate (P)	mg/L	<0.0010	B762582	<0.0010	B762582	<0.0010	0.0010	B762582
Total Sulphide	mg/L	<0.0018	B762930	<0.0018	B762930	<0.0018	0.0018	B762930
Chloride (Cl)	mg/L	24	B762192	25	B762192	24	0.50	B762192
Sulphate (SO ₄)	mg/L	45	B762192	44	B762192	44	0.50	B762192
Nutrients								
Total Phosphorus (P)	mg/L	0.0016	B767113	0.0031	B767106	<0.0010 (2)	0.0010	B766687
Total Ammonia (N)	mg/L	0.33	B761900	0.29	B761900	0.33	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.071	B762865	0.068	B762865	0.058	0.0010	B762865
Dissolved Nitrate plus Nitrite (N)	mg/L	2.5	B762865	2.4	B762865	2.4	0.050	B762865
Total Nitrogen (N)	mg/L	3.3	B766596	2.7	B766599	2.7	0.10	B763570
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	B766690	<0.0010	B766690	0.0011	0.0010	B766690
Physical Properties								
Turbidity	NTU	<0.10	B762141	<0.10	B762141	<0.10	0.10	B762141
RDL = Reportable Detection Limit								
(1) Sample filtered and preserved past method specified hold time								
(2) TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII121		DII122			DII123		
Sampling Date		2025/04/17 13:30		2025/04/17 14:30			2025/04/18 11:00		
COC Number		750435-01-01		750435-01-01			750435-01-01		
	UNITS	BRP-29A-4	QC Batch	BRP-29A-5	RDL	QC Batch	BRP-32-3	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	87.2	B760829	92.6	0.50	B760829	61.2	0.50	B760829
Total Hardness (CaCO ₃)	mg/L	90.9	B760828	94.7	0.50	B760828	63.2	0.50	B760828
Dissolved Nitrate (N)	mg/L	2.4	B761181	2.4	0.050	B761181	1.2	0.050	B761181
Nitrate (NO ₃)	mg/L	10	B760554	10	0.22	B760554	5.4	0.22	B760554
Nitrite (NO ₂)	mg/L	0.23	B760554	0.40	0.0033	B760554	0.41	0.0033	B760554
Sulphide (as H ₂ S)	mg/L	<0.0020	B760806	<0.0020	0.0020	B760806	<0.0020	0.0020	B760806
Calculated Total Dissolved Solids	mg/L	120	B761193	130	10	B761193	83	10	B761193
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.53	B760560	0.43	0.10	B760560	0.47	0.050	B760560
Un-Ionized Ammonia	mg/L	<0.00050	B973096	<0.00050	0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters									
Field pH	pH	6.08	ONSITE	6.28	N/A	ONSITE	6.15	N/A	ONSITE
Field Temperature (Fd)	deg. C	0.11	ONSITE	0.04	N/A	ONSITE	1.24	N/A	ONSITE
Misc. Inorganics									
Conductivity	uS/cm	220	B762895	220	2.0	B762895	150	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763756	<0.00050	0.00050	B763756	<0.00050	0.00050	B763756
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763904	<0.00050	0.00050	B763904	<0.00050	0.00050	B763904
Fluoride (F)	mg/L	0.027	B762897	0.026	0.010	B762897	0.026	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	B763914	<0.00050	0.00050	B763914	<0.00050	0.00050	B763914
pH	pH	6.76	B762893	6.82	N/A	B762893	6.77	N/A	B762893
Reactive Silica	mg/L	3.6	B764458	3.8	0.050	B764458	2.8	0.050	B764458
Alkalinity (Total as CaCO ₃)	mg/L	6.91	B762891	8.11	0.50	B762891	7.63	0.50	B762891
Total Organic Carbon (C)	mg/L	5.8	B764133	5.8	0.50	B766689	5.1	0.50	B766689
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	8.43	B762891	9.89	0.50	B762891	9.31	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	170	B761738	170	10	B761738	100	10	B762139
Total Suspended Solids	mg/L	<1.0	B762332	<1.0	1.0	B762332	<1.0	1.0	B763432
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	5.5 (1)	B763803	6.0 (1)	0.50	B763803	5.1 (1)	0.50	B763803
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII121		DII122			DII123		
Sampling Date		2025/04/17 13:30		2025/04/17 14:30			2025/04/18 11:00		
COC Number		750435-01-01		750435-01-01			750435-01-01		
	UNITS	BRP-29A-4	QC Batch	BRP-29A-5	RDL	QC Batch	BRP-32-3	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	B762582	<0.0010	0.0010	B762582	<0.0010	0.0010	B762582
Total Sulphide	mg/L	<0.0018	B762930	<0.0018	0.0018	B762930	<0.0018	0.0018	B762930
Chloride (Cl)	mg/L	24	B762192	25	0.50	B762192	14	0.50	B762192
Sulphate (SO4)	mg/L	45	B762192	46	0.50	B762192	33	0.50	B762192
Nutrients									
Total Phosphorus (P)	mg/L	<0.0010	B767113	<0.0010	0.0010	B767113	0.0018	0.0010	B767113
Total Ammonia (N)	mg/L	0.31	B761900	0.26	0.0050	B761900	0.16	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.069	B762865	0.12	0.0010	B762865	0.13	0.0010	B762865
Dissolved Nitrate plus Nitrite (N)	mg/L	2.4	B762865	2.5	0.050	B762865	1.4	0.050	B762865
Total Nitrogen (N)	mg/L	3.0	B766596	2.9	0.10	B766596	1.8	0.020	B766596
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	B766690	<0.0010	0.0010	B766690	<0.0010	0.0010	B766690
Physical Properties									
Turbidity	NTU	0.10	B762141	<0.10	0.10	B762141	0.13	0.10	B762141
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII124		DII125			DII126		
Sampling Date		2025/04/18 08:30		2025/04/18 09:45			2025/04/18 09:00		
COC Number		750435-01-01		750435-01-01			750435-01-01		
	UNITS	BRP-32-1	QC Batch	BRP-32-2	RDL	QC Batch	DUP-1	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	62.8	B760829	62.8	0.50	B760829	63.9	0.50	B760829
Total Hardness (CaCO ₃)	mg/L	63.9	B760828	64.8	0.50	B760828	60.9	0.50	B760828
Dissolved Nitrate (N)	mg/L	1.3	B761181	1.4	0.050	B761181	1.3	0.050	B761181
Nitrate (NO ₃)	mg/L	5.9	B760554	6.1	0.22	B760554	5.8	0.22	B760554
Nitrite (NO ₂)	mg/L	0.48	B760554	0.41	0.0033	B760554	0.47	0.0033	B760554
Sulphide (as H ₂ S)	mg/L	<0.0020	B761177	<0.0020	0.0020	B761177	<0.0020	0.0020	B761177
Calculated Total Dissolved Solids	mg/L	84	B761193	86	10	B761193	85	10	B761193
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.35	B760560	0.39	0.050	B760560	0.35	0.050	B760560
Un-Ionized Ammonia	mg/L	<0.00050	B973096	<0.00050	0.00050	B973096			
Field Parameters									
Field pH	pH	6.28	ONSITE	6.18	N/A	ONSITE			
Field Temperature (Fd)	deg. C	1.24	ONSITE	1.02	N/A	ONSITE			
Misc. Inorganics									
Conductivity	uS/cm	150	B762895	150	2.0	B762895	150	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763756	<0.00050	0.00050	B763756	<0.00050	0.00050	B763756
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	B763904	<0.00050	0.00050	B763904	<0.00050	0.00050	B763904
Fluoride (F)	mg/L	0.026	B762897	0.026	0.010	B762897	0.025	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	B763914	<0.00050	0.00050	B763914	<0.00050	0.00050	B763914
pH	pH	6.74	B762893	6.75	N/A	B762893	6.77	N/A	B762893
Reactive Silica	mg/L	2.8	B764458	2.8	0.050	B764458	2.8	0.050	B764458
Alkalinity (Total as CaCO ₃)	mg/L	7.34	B762891	7.46	0.50	B762891	7.73	0.50	B762891
Total Organic Carbon (C)	mg/L	5.0	B766689	4.9	0.50	B766689	5.1	0.50	B766689
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	8.96	B762891	9.10	0.50	B762891	9.43	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	B762891	<0.50	0.50	B762891	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	100	B762139	100	10	B762139	110	10	B762139
Total Suspended Solids	mg/L	<1.0	B763432	<1.0	1.0	B763432	1.3	1.0	B763446
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	5.0 (1)	B767138	5.1 (1)	0.50	B763803	4.9 (1)	0.50	B763803
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII124		DII125			DII126		
Sampling Date		2025/04/18 08:30		2025/04/18 09:45			2025/04/18 09:00		
COC Number		750435-01-01		750435-01-01			750435-01-01		
	UNITS	BRP-32-1	QC Batch	BRP-32-2	RDL	QC Batch	DUP-1	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	B762582	<0.0010	0.0010	B762582	<0.0010	0.0010	B762582
Total Sulphide	mg/L	<0.0018	B762930	<0.0018	0.0018	B762930	<0.0018	0.0018	B762930
Chloride (Cl)	mg/L	14	B762192	14	0.50	B762192	14	0.50	B762192
Sulphate (SO ₄)	mg/L	33	B762192	33	0.50	B762192	33	0.50	B762192
Nutrients									
Total Phosphorus (P)	mg/L	<0.0010	B767113	0.0014	0.0010	B767113	0.0011	0.0010	B767113
Total Ammonia (N)	mg/L	0.13	B761900	0.18	0.0050	B761900	0.12	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.14	B762865	0.12	0.0010	B762865	0.14	0.0010	B762865
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	B762865	1.5	0.050	B762865	1.4	0.050	B762865
Total Nitrogen (N)	mg/L	1.8	B766596	1.9	0.020	B766596	1.8	0.020	B766596
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0028	B766690	0.0010	0.0010	B766690	<0.0010	0.0010	B766690
Physical Properties									
Turbidity	NTU	0.10	B762141	<0.10	0.10	B762141	<0.10	0.10	B762774
RDL = Reportable Detection Limit									



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII127			DII128		
Sampling Date		2025/04/18 12:15			2025/04/18 13:30		
COC Number		750435-01-01			750435-01-01		
	UNITS	BRP-32-4	RDL	QC Batch	BRP-32-5	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	62.2	0.50	B760829	64.6	0.50	B760829
Total Hardness (CaCO ₃)	mg/L	63.1	0.50	B760828	62.4	0.50	B760828
Dissolved Nitrate (N)	mg/L	1.3	0.050	B761181	1.3	0.050	B761181
Nitrate (NO ₃)	mg/L	5.8	0.22	B760554	5.9	0.22	B760554
Nitrite (NO ₂)	mg/L	0.48	0.0033	B760554	0.40	0.0033	B760554
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	B761177	<0.0020	0.0020	B761177
Calculated Total Dissolved Solids	mg/L	84	10	B761193	86	10	B761193
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.36	0.050	B760560	0.37	0.050	B760560
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	B973096	<0.00050	0.00050	B973096
Field Parameters							
Field pH	pH	6.23	N/A	ONSITE	6.26	N/A	ONSITE
Field Temperature (Fd)	deg. C	1.19	N/A	ONSITE	1.29	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	150	2.0	B762895	150	2.0	B762895
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B763756	<0.00050	0.00050	B763756
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	B763904	<0.00050	0.00050	B763904
Fluoride (F)	mg/L	0.026	0.010	B762897	0.026	0.010	B762897
Free Free Cyanide	mg/L	<0.00050	0.00050	B763914	<0.00050	0.00050	B763914
pH	pH	6.74	N/A	B762893	6.81	N/A	B762893
Reactive Silica	mg/L	2.8	0.050	B764456	2.8	0.050	B764458
Alkalinity (Total as CaCO ₃)	mg/L	7.46	0.50	B762891	7.54	0.50	B762891
Total Organic Carbon (C)	mg/L	4.9	0.50	B766689	5.2	0.50	B766689
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	B762891	<0.50	0.50	B762891
Bicarbonate (HCO ₃)	mg/L	9.10	0.50	B762891	9.20	0.50	B762891
Carbonate (CO ₃)	mg/L	<0.50	0.50	B762891	<0.50	0.50	B762891
Hydroxide (OH)	mg/L	<0.50	0.50	B762891	<0.50	0.50	B762891
Total Dissolved Solids	mg/L	120	10	B762139	120	10	B762139
Total Suspended Solids	mg/L	<0.99	0.99	B763446	<1.0	1.0	B763446
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	5.1 (1)	0.50	B763803	5.4 (1)	0.50	B763803
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DII127			DII128		
Sampling Date		2025/04/18 12:15			2025/04/18 13:30		
COC Number		750435-01-01			750435-01-01		
	UNITS	BRP-32-4	RDL	QC Batch	BRP-32-5	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	B762582	<0.0010	0.0010	B762582
Total Sulphide	mg/L	<0.0018	0.0018	B762930	<0.0018	0.0018	B762930
Chloride (Cl)	mg/L	14	0.50	B762192	14	0.50	B762192
Sulphate (SO4)	mg/L	33	0.50	B762192	33	0.50	B762192
Nutrients							
Total Phosphorus (P)	mg/L	0.0014	0.0010	B766687	<0.0010	0.0010	B767113
Total Ammonia (N)	mg/L	0.14	0.0050	B761900	0.16	0.0050	B761900
Dissolved Nitrite (N)	mg/L	0.14	0.0010	B762865	0.12	0.0010	B762865
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	0.050	B762865	1.5	0.050	B762865
Total Nitrogen (N)	mg/L	1.8	0.020	B763570	1.8	0.020	B766596
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	B766690	<0.0010	0.0010	B766690
Physical Properties							
Turbidity	NTU	<0.10	0.10	B762774	<0.10	0.10	B762774
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DII115	DII116		DII117	DII118		
Sampling Date		2025/04/17 10:30	2025/04/17 11:30		2025/04/17 09:00	2025/04/17 09:30		
COC Number		750435-01-01	750435-01-01		750435-01-01	750435-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	QC Batch	GLWB-T	GLWB-M	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	0.00249	0.00116	B768679	0.00124	0.00151	0.00010	B945434
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L	0.00290 (1)	0.00139 (2)	B783034	0.00114	0.00744	0.00010	B945449
RDL = Reportable Detection Limit								
(1) Duplicate RPD above control limit - Non-homogenous sample - Reanalysis yields similar results.								
(2) Matrix Spike exceeds acceptance limits - Probable matrix interference.								

Bureau Veritas ID		DII119		DII120		DII121		DII122		
Sampling Date		2025/04/17 10:00		2025/04/17 12:15		2025/04/17 13:30		2025/04/17 14:30		
COC Number		750435-01-01		750435-01-01		750435-01-01		750435-01-01		
	UNITS	GLWB-B	QC Batch	BRP-29A-3	QC Batch	BRP-29A-4	QC Batch	BRP-29A-5	RDL	QC Batch
Elements										
Total Mercury (Hg)	ug/L	0.00119	B768679	0.00121	B945434	0.00124	B945434	0.00467	0.00010	B945434
Lab Filtered Elements										
Dissolved Mercury (Hg)	ug/L	0.00087	B783034	0.00138	B945449	0.00287	B783034	0.00755	0.00010	B945449
RDL = Reportable Detection Limit										

Bureau Veritas ID		DII123	DII124		DII125	DII126		
Sampling Date		2025/04/18 11:00	2025/04/18 08:30		2025/04/18 09:45	2025/04/18 09:00		
COC Number		750435-01-01	750435-01-01		750435-01-01	750435-01-01		
	UNITS	BRP-32-3	BRP-32-1	QC Batch	BRP-32-2	DUP-1	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	0.00092	0.00105	B945434	0.00084	0.00319	0.00010	B768923
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L	0.00234	0.00390	B945449	0.00062	0.00057	0.00010	B783034
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DII127	DII128		
Sampling Date		2025/04/18 12:15	2025/04/18 13:30		
COC Number		750435-01-01	750435-01-01		
	UNITS	BRP-32-4	BRP-32-5	RDL	QC Batch
Elements					
Total Mercury (Hg)	ug/L	0.00107 (1)	0.00092	0.00010	B945434
Lab Filtered Elements					
Dissolved Mercury (Hg)	ug/L	0.00235	0.00180	0.00010	B945449
RDL = Reportable Detection Limit					
(1) Originally analyzed on 250429					



Bureau Veritas Job #: C533369

Report Date: 2025/06/25

B2Gold Back River Corp.

Client Project #: Ice-cover program B2Gold

Your P.O. #: 470000200

Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII115		DII116	DII117	DII118	DII119		
Sampling Date		2025/04/17 10:30		2025/04/17 11:30	2025/04/17 09:00	2025/04/17 09:30	2025/04/17 10:00		
COC Number		750435-01-01		750435-01-01	750435-01-01	750435-01-01	750435-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	GLWB-T	GLWB-M	GLWB-B	RDL	QC Batch
Dissolved Metals by ICPMS									
Dissolved Aluminum (Al)	ug/L	29.4	B776035	31.0	30.9	28.9	29.1	0.10	B776035
Dissolved Antimony (Sb)	ug/L	0.0360	B776035	0.0353	0.0762	0.0250	0.0269	0.0030	B776035
Dissolved Arsenic (As)	ug/L	0.388	B776035	0.395	0.424	0.403	0.372	0.0050	B776035
Dissolved Barium (Ba)	ug/L	32.5	B776035	34.3	33.0	33.0	33.4	0.0080	B776035
Dissolved Beryllium (Be)	ug/L	0.0135	B776035	0.0137	0.0135	0.0140	0.0121	0.0015	B776035
Dissolved Bismuth (Bi)	ug/L	<0.0010	B776035	0.0046	<0.0010	<0.0010	<0.0010	0.0010	B776035
Dissolved Boron (B)	ug/L	5.46	B776035	5.41	5.70	5.45	5.65	0.10	B776035
Dissolved Cadmium (Cd)	ug/L	0.0510	B776035	0.0573	0.0543	0.0497	0.0551	0.0030	B776035
Dissolved Calcium (Ca)	ug/L	19200	B776035	20300	19900	19600	19300	2.0	B776035
Dissolved Chromium (Cr)	ug/L	0.153	B776035	0.166	0.184	0.152	0.150	0.020	B776035
Dissolved Cobalt (Co)	ug/L	0.957	B776035	1.14	0.979	0.931	0.929	0.0040	B776035
Dissolved Copper (Cu)	ug/L	3.11	B776035	3.17	3.45	3.09	3.08	0.020	B776035
Dissolved Iron (Fe)	ug/L	10.2	B776035	9.9	10.6	10.1	9.7	1.0	B776035
Dissolved Lead (Pb)	ug/L	0.0301	B951381	0.235	1.48	0.0667	0.0392	0.0030	B776035
Dissolved Lithium (Li)	ug/L	2.05	B776035	2.10	2.15	2.05	2.16	0.050	B776035
Dissolved Magnesium (Mg)	ug/L	9830	B776035	10400	10200	9850	9750	0.50	B776035
Dissolved Manganese (Mn)	ug/L	22.1	B776035	25.9	21.8	21.8	22.2	0.0040	B776035
Dissolved Molybdenum (Mo)	ug/L	0.0244	B776035	0.0233	0.0294	0.0234	0.0216	0.0050	B776035
Dissolved Nickel (Ni)	ug/L	19.4	B776035	20.5	19.7	19.4	19.3	0.015	B776035
Dissolved Potassium (K)	ug/L	1610	B776035	1650	1650	1610	1580	5.0	B776035
Dissolved Selenium (Se)	ug/L	0.088	B776035	0.086	0.077	0.071	0.082	0.010	B776035
Dissolved Silicon (Si)	ug/L	1510	B776035	1600	1590	1560	1550	1.2	B776035
Dissolved Silver (Ag)	ug/L	<0.0020	B776035	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	B776035
Dissolved Sodium (Na)	ug/L	2780	B776035	2970	2910	2820	2800	0.50	B776035
Dissolved Strontium (Sr)	ug/L	102	B776035	107	104	103	102	0.0080	B776035
Dissolved Sulphur (S)	ug/L	14900	B776035	15300	15200	15100	15300	1.0	B776035
Dissolved Thallium (Tl)	ug/L	0.00470	B776035	0.00550	0.00520	0.00550	0.00490	0.00080	B776035
Dissolved Tin (Sn)	ug/L	0.0050	B776035	0.0137	0.0170	<0.0050	<0.0050	0.0050	B776035
Dissolved Titanium (Ti)	ug/L	0.052	B776035	0.040	0.034	0.030	0.054	0.030	B776035
Dissolved Uranium (U)	ug/L	0.0137	B776035	0.0131	0.0144	0.0126	0.0128	0.00050	B776035
Dissolved Vanadium (V)	ug/L	0.0483	B776035	0.0487	0.0489	0.0453	0.0462	0.0050	B776035
Dissolved Zinc (Zn)	ug/L	8.24	B776035	9.81	10.2	8.50	8.75	0.060	B776035
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII115		DII116	DII117	DII118	DII119		
Sampling Date		2025/04/17 10:30		2025/04/17 11:30	2025/04/17 09:00	2025/04/17 09:30	2025/04/17 10:00		
COC Number		750435-01-01		750435-01-01	750435-01-01	750435-01-01	750435-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	GLWB-T	GLWB-M	GLWB-B	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.122	B776035	0.119	0.121	0.120	0.115	0.0080	B776035
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	35.2	B776384	40.3	38.1	32.9	34.1	0.10	B776384
Total Antimony (Sb)	ug/L	0.0335	B776384	0.0438	0.0944	0.0279	0.0260	0.0030	B776384
Total Arsenic (As)	ug/L	0.423	B776384	0.408	0.422	0.386	0.393	0.0050	B776384
Total Barium (Ba)	ug/L	32.2	B776384	34.7	33.2	33.3	32.8	0.0080	B776384
Total Beryllium (Be)	ug/L	0.0155	B776384	0.0141	0.0123	0.0143	0.0098	0.0015	B776384
Total Bismuth (Bi)	ug/L	<0.0010	B776384	0.0059	0.0025	<0.0010	<0.0010	0.0010	B776384
Total Boron (B)	ug/L	5.52	B776384	5.46	5.61	4.94	5.18	0.10	B776384
Total Cadmium (Cd)	ug/L	0.0523	B776384	0.0573	0.0562	0.0525	0.0526	0.0030	B776384
Total Calcium (Ca)	ug/L	20300	B776384	20700	19900	19600	19400	2.0	B776384
Total Chromium (Cr)	ug/L	0.175	B776384	0.206	0.239	0.194	0.182	0.020	B776384
Total Cobalt (Co)	ug/L	1.10	B776384	1.31	1.09	1.07	1.06	0.0040	B776384
Total Copper (Cu)	ug/L	3.27	B776384	3.44	3.56	3.27	3.22	0.020	B776384
Total Iron (Fe)	ug/L	21.5	B776384	27.4	26.0	21.6	23.7	1.0	B776384
Total Lead (Pb)	ug/L	0.110	B776384	0.387	2.69	0.135	0.0774	0.0030	B776384
Total Lithium (Li)	ug/L	2.14	B776384	2.15	2.16	2.12	2.08	0.050	B776384
Total Magnesium (Mg)	ug/L	10000	B776384	10400	10200	9460	9780	0.50	B776384
Total Manganese (Mn)	ug/L	23.9	B776384	28.0	24.3	23.6	23.6	0.0040	B776384
Total Molybdenum (Mo)	ug/L	0.0267	B776384	0.0242	0.0314	0.0273	0.0239	0.0050	B776384
Total Nickel (Ni)	ug/L	19.5	B776384	20.6	20.0	20.0	19.4	0.015	B776384
Total Potassium (K)	ug/L	1610	B776384	1680	1680	1600	1580	5.0	B776384
Total Selenium (Se)	ug/L	0.082	B776384	0.083	0.084	0.087	0.079	0.010	B776384
Total Silicon (Si)	ug/L	1570	B776384	1590	1570	1510	1530	1.2	B776384
Total Silver (Ag)	ug/L	<0.0020	B776384	0.0022	0.0032	<0.0020	0.0025	0.0020	B776384
Total Sodium (Na)	ug/L	2820	B776384	2990	2920	2700	2780	0.50	B776384
Total Strontium (Sr)	ug/L	101	B776384	107	103	102	101	0.0080	B776384
Total Sulphur (S)	ug/L	15500	B776384	15500	15600	14800	15000	1.0	B776384
Total Thallium (Tl)	ug/L	0.00590	B776384	0.00590	0.00540	0.00540	0.00520	0.00080	B776384
Total Tin (Sn)	ug/L	0.0066	B776384	0.0195	0.0288	0.0061	0.0078	0.0050	B776384
Total Titanium (Ti)	ug/L	0.152	B776384	0.251	0.317	0.166	0.174	0.030	B776384
Total Uranium (U)	ug/L	0.0145	B776384	0.0154	0.0159	0.0143	0.0145	0.00050	B776384
Total Vanadium (V)	ug/L	0.0540	B776384	0.0597	0.0626	0.0510	0.0534	0.0050	B776384
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII115		DII116	DII117	DII118	DII119		
Sampling Date		2025/04/17 10:30		2025/04/17 11:30	2025/04/17 09:00	2025/04/17 09:30	2025/04/17 10:00		
COC Number		750435-01-01		750435-01-01	750435-01-01	750435-01-01	750435-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	GLWB-T	GLWB-M	GLWB-B	RDL	QC Batch
Total Zinc (Zn)	ug/L	8.16	B776384	10.0	10.9	8.74	8.51	0.060	B776384
Total Zirconium (Zr)	ug/L	0.117	B776384	0.118	0.118	0.102	0.106	0.0080	B776384
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII120	DII121	DII122		DII123		
Sampling Date		2025/04/17 12:15	2025/04/17 13:30	2025/04/17 14:30		2025/04/18 11:00		
COC Number		750435-01-01	750435-01-01	750435-01-01		750435-01-01		
	UNITS	BRP-29A-3	BRP-29A-4	BRP-29A-5	QC Batch	BRP-32-3	RDL	QC Batch
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	ug/L	29.6	27.2	26.2	B776035	17.7	0.10	B776035
Dissolved Antimony (Sb)	ug/L	0.0377	0.0241	0.0559	B776035	0.0250	0.0030	B776035
Dissolved Arsenic (As)	ug/L	0.405	0.394	0.395	B776035	0.337	0.0050	B776035
Dissolved Barium (Ba)	ug/L	32.5	33.1	35.6	B776035	21.6	0.0080	B776035
Dissolved Beryllium (Be)	ug/L	0.0129	0.0147	0.0117	B776035	0.0064	0.0015	B776035
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	B776035	<0.0010	0.0010	B776035
Dissolved Boron (B)	ug/L	5.52	4.86	5.29	B776035	4.22	0.10	B776035
Dissolved Cadmium (Cd)	ug/L	0.0541	0.0513	0.0516	B776035	0.0158	0.0030	B776035
Dissolved Calcium (Ca)	ug/L	19500	19500	20300	B776035	12600	2.0	B776035
Dissolved Chromium (Cr)	ug/L	0.175	0.152	0.172	B776035	0.138	0.020	B776035
Dissolved Cobalt (Co)	ug/L	0.975	0.907	0.749	B776035	0.227	0.0040	B776035
Dissolved Copper (Cu)	ug/L	3.19	2.98	3.08	B776035	2.26	0.020	B776035
Dissolved Iron (Fe)	ug/L	10.9	10.0	9.2	B776035	7.9	1.0	B776035
Dissolved Lead (Pb)	ug/L	0.0626	0.0085	0.542	B776035	0.0785	0.0030	B951381
Dissolved Lithium (Li)	ug/L	2.10	2.03	2.10	B776035	1.63	0.050	B776035
Dissolved Magnesium (Mg)	ug/L	9820	9370	10200	B776035	7210	0.50	B776035
Dissolved Manganese (Mn)	ug/L	21.9	21.3	19.4	B776035	7.02	0.0040	B776035
Dissolved Molybdenum (Mo)	ug/L	0.0273	0.0222	0.0205	B776035	0.0265	0.0050	B776035
Dissolved Nickel (Ni)	ug/L	19.7	19.4	19.5	B776035	11.5	0.015	B776035
Dissolved Potassium (K)	ug/L	1720	1570	1690	B776035	1210	5.0	B776035
Dissolved Selenium (Se)	ug/L	0.089	0.072	0.068	B776035	0.053	0.010	B776035
Dissolved Silicon (Si)	ug/L	1520	1530	1670	B776035	1190	1.2	B776035
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	B776035	<0.0020	0.0020	B776035
Dissolved Sodium (Na)	ug/L	2850	2750	3190	B776035	2130	0.50	B776035
Dissolved Strontium (Sr)	ug/L	101	102	107	B776035	60.0	0.0080	B776035
Dissolved Sulphur (S)	ug/L	14900	14700	15500	B776035	11300	1.0	B776035
Dissolved Thallium (Tl)	ug/L	0.00550	0.00550	0.00440	B776035	0.00330	0.00080	B776035
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	0.0080	B776035	<0.0050	0.0050	B776035
Dissolved Titanium (Ti)	ug/L	0.062	0.085	0.065	B776035	<0.030	0.030	B776035
Dissolved Uranium (U)	ug/L	0.0140	0.0125	0.0121	B776035	0.0100	0.00050	B776035
Dissolved Vanadium (V)	ug/L	0.0526	0.0445	0.0424	B776035	0.0416	0.0050	B776035
Dissolved Zinc (Zn)	ug/L	9.92	9.35	14.3	B776035	2.88	0.060	B776035
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII120	DII121	DII122		DII123		
Sampling Date		2025/04/17 12:15	2025/04/17 13:30	2025/04/17 14:30		2025/04/18 11:00		
COC Number		750435-01-01	750435-01-01	750435-01-01		750435-01-01		
	UNITS	BRP-29A-3	BRP-29A-4	BRP-29A-5	QC Batch	BRP-32-3	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.136	0.109	0.114	B776035	0.0916	0.0080	B776035
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	39.4	34.2	38.0	B776384	22.1	0.10	B776384
Total Antimony (Sb)	ug/L	0.0323	0.0228	0.0796	B776384	0.0251	0.0030	B776384
Total Arsenic (As)	ug/L	0.419	0.374	0.432	B776384	0.338	0.0050	B776384
Total Barium (Ba)	ug/L	32.7	33.7	36.5	B776384	21.7	0.0080	B776384
Total Beryllium (Be)	ug/L	0.0142	0.0127	0.0145	B776384	0.0041	0.0015	B776384
Total Bismuth (Bi)	ug/L	0.0014	<0.0010	0.0040	B776384	<0.0010	0.0010	B776384
Total Boron (B)	ug/L	5.47	5.43	5.53	B776384	4.25	0.10	B776384
Total Cadmium (Cd)	ug/L	0.0519	0.0544	0.0509	B776384	0.0173	0.0030	B776384
Total Calcium (Ca)	ug/L	19500	19700	20600	B776384	13200	2.0	B776384
Total Chromium (Cr)	ug/L	0.199	0.165	0.244	B776384	0.145	0.020	B776384
Total Cobalt (Co)	ug/L	1.11	1.11	0.927	B776384	0.256	0.0040	B776384
Total Copper (Cu)	ug/L	3.34	3.19	3.32	B776384	2.35	0.020	B776384
Total Iron (Fe)	ug/L	28.5	21.8	32.8	B776384	14.2	1.0	B776384
Total Lead (Pb)	ug/L	0.0661	0.0140	1.46	B776384	0.210	0.0030	B776384
Total Lithium (Li)	ug/L	2.11	2.11	2.22	B776384	1.73	0.050	B776384
Total Magnesium (Mg)	ug/L	9950	10100	10500	B776384	7340	0.50	B776384
Total Manganese (Mn)	ug/L	23.6	24.1	22.0	B776384	7.75	0.0040	B776384
Total Molybdenum (Mo)	ug/L	0.0279	0.0206	0.0272	B776384	0.0266	0.0050	B776384
Total Nickel (Ni)	ug/L	19.6	20.0	20.0	B776384	11.5	0.015	B776384
Total Potassium (K)	ug/L	1640	1620	1720	B776384	1230	5.0	B776384
Total Selenium (Se)	ug/L	0.091	0.095	0.093	B776384	0.058	0.010	B776384
Total Silicon (Si)	ug/L	1530	1560	1680	B776384	1220	1.2	B776384
Total Silver (Ag)	ug/L	<0.0020	<0.0020	0.0034	B776384	<0.0020	0.0020	B776384
Total Sodium (Na)	ug/L	2820	2930	3290	B776384	2160	0.50	B776384
Total Strontium (Sr)	ug/L	101	104	108	B776384	59.9	0.0080	B776384
Total Sulphur (S)	ug/L	14900	15600	16100	B776384	11400	1.0	B776384
Total Thallium (Tl)	ug/L	0.00530	0.00550	0.00510	B776384	0.00300	0.00080	B776384
Total Tin (Sn)	ug/L	0.0077	<0.0050	0.0257	B776384	<0.0050	0.0050	B776384
Total Titanium (Ti)	ug/L	0.263	0.152	0.334	B776384	0.320	0.030	B776384
Total Uranium (U)	ug/L	0.0154	0.0145	0.0142	B776384	0.0110	0.00050	B776384
Total Vanadium (V)	ug/L	0.0636	0.0504	0.0615	B776384	0.0494	0.0050	B776384
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII120	DII121	DII122		DII123		
Sampling Date		2025/04/17 12:15	2025/04/17 13:30	2025/04/17 14:30		2025/04/18 11:00		
COC Number		750435-01-01	750435-01-01	750435-01-01		750435-01-01		
	UNITS	BRP-29A-3	BRP-29A-4	BRP-29A-5	QC Batch	BRP-32-3	RDL	QC Batch
Total Zinc (Zn)	ug/L	8.48	9.17	14.5	B776384	2.99	0.060	B776384
Total Zirconium (Zr)	ug/L	0.131	0.0997	0.117	B776384	0.0852	0.0080	B776384
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII124			DII124			DII124		
Sampling Date		2025/04/18 08:30			2025/04/18 08:30			2025/04/18 08:30		
COC Number		750435-01-01			750435-01-01			750435-01-01		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch
Dissolved Metals by ICPMS										
Dissolved Aluminum (Al)	ug/L	18.7	0.10	B776035						
Dissolved Antimony (Sb)	ug/L	0.0400	0.0030	B776035						
Dissolved Arsenic (As)	ug/L	0.350	0.0050	B776035						
Dissolved Barium (Ba)	ug/L	22.3	0.0080	B776035						
Dissolved Beryllium (Be)	ug/L	0.0047	0.0015	B776035						
Dissolved Bismuth (Bi)	ug/L	<0.0010	0.0010	B776035						
Dissolved Boron (B)	ug/L	4.29	0.10	B776035						
Dissolved Cadmium (Cd)	ug/L	0.0182	0.0030	B776035						
Dissolved Calcium (Ca)	ug/L	13000	2.0	B776035						
Dissolved Chromium (Cr)	ug/L	0.145	0.020	B776035						
Dissolved Cobalt (Co)	ug/L	0.223	0.0040	B776035						
Dissolved Copper (Cu)	ug/L	2.39	0.020	B776035						
Dissolved Iron (Fe)	ug/L	8.2	1.0	B776035						
Dissolved Lead (Pb)	ug/L	0.515	0.0030	B776035	0.0830	0.0030	B976712	1.26	0.0030	B987516
Dissolved Lithium (Li)	ug/L	1.69	0.050	B776035						
Dissolved Magnesium (Mg)	ug/L	7390	0.50	B776035						
Dissolved Manganese (Mn)	ug/L	6.92	0.0040	B776035						
Dissolved Molybdenum (Mo)	ug/L	0.0270	0.0050	B776035						
Dissolved Nickel (Ni)	ug/L	11.8	0.015	B776035						
Dissolved Potassium (K)	ug/L	1280	5.0	B776035						
Dissolved Selenium (Se)	ug/L	0.061	0.010	B776035						
Dissolved Silicon (Si)	ug/L	1210	1.2	B776035						
Dissolved Silver (Ag)	ug/L	<0.0020	0.0020	B776035						
Dissolved Sodium (Na)	ug/L	2230	0.50	B776035						
Dissolved Strontium (Sr)	ug/L	61.9	0.0080	B776035						
Dissolved Sulphur (S)	ug/L	11400	1.0	B776035						
Dissolved Thallium (Tl)	ug/L	0.00330	0.00080	B776035						
Dissolved Tin (Sn)	ug/L	0.0075	0.0050	B776035						
Dissolved Titanium (Ti)	ug/L	0.037	0.030	B776035						
Dissolved Uranium (U)	ug/L	0.00990	0.00050	B776035						
Dissolved Vanadium (V)	ug/L	0.0487	0.0050	B776035						
Dissolved Zinc (Zn)	ug/L	3.91	0.060	B776035	3.70	0.060	B976712			
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII124			DII124			DII124		
Sampling Date		2025/04/18 08:30			2025/04/18 08:30			2025/04/18 08:30		
COC Number		750435-01-01			750435-01-01			750435-01-01		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.0922	0.0080	B776035						
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	27.7	0.10	B776384						
Total Antimony (Sb)	ug/L	0.0444	0.0030	B776384	0.0482	0.0030	B976713			
Total Arsenic (As)	ug/L	0.362	0.0050	B776384						
Total Barium (Ba)	ug/L	22.2	0.0080	B776384						
Total Beryllium (Be)	ug/L	0.0052	0.0015	B776384						
Total Bismuth (Bi)	ug/L	0.0024	0.0010	B776384						
Total Boron (B)	ug/L	4.28	0.10	B776384						
Total Cadmium (Cd)	ug/L	0.0179	0.0030	B776384						
Total Calcium (Ca)	ug/L	13200	2.0	B776384						
Total Chromium (Cr)	ug/L	0.195	0.020	B776384	0.227	0.020	B976713			
Total Cobalt (Co)	ug/L	0.283	0.0040	B776384						
Total Copper (Cu)	ug/L	2.55	0.020	B776384						
Total Iron (Fe)	ug/L	21.9	1.0	B776384	30.4	1.0	B976713	36.6	1.0	B987518
Total Lead (Pb)	ug/L	0.757	0.0030	B776384	0.787	0.0030	B976713			
Total Lithium (Li)	ug/L	1.78	0.050	B776384						
Total Magnesium (Mg)	ug/L	7520	0.50	B776384						
Total Manganese (Mn)	ug/L	8.34	0.0040	B776384						
Total Molybdenum (Mo)	ug/L	0.0302	0.0050	B776384						
Total Nickel (Ni)	ug/L	12.0	0.015	B776384						
Total Potassium (K)	ug/L	1300	5.0	B776384						
Total Selenium (Se)	ug/L	0.063	0.010	B776384						
Total Silicon (Si)	ug/L	1210	1.2	B776384						
Total Silver (Ag)	ug/L	0.0022	0.0020	B776384						
Total Sodium (Na)	ug/L	2260	0.50	B776384						
Total Strontium (Sr)	ug/L	61.2	0.0080	B776384						
Total Sulphur (S)	ug/L	11600	1.0	B776384						
Total Thallium (Tl)	ug/L	0.00310	0.00080	B776384						
Total Tin (Sn)	ug/L	0.0107	0.0050	B776384						
Total Titanium (Ti)	ug/L	0.402	0.030	B776384	0.432	0.030	B976713			
Total Uranium (U)	ug/L	0.0127	0.00050	B776384						
Total Vanadium (V)	ug/L	0.0620	0.0050	B776384						
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII124			DII124			DII124		
Sampling Date		2025/04/18 08:30			2025/04/18 08:30			2025/04/18 08:30		
COC Number		750435-01-01			750435-01-01			750435-01-01		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch	BRP-32-1 REPEAT	RDL	QC Batch
Total Zinc (Zn)	ug/L	4.23	0.060	B776384	4.21	0.060	B976713			
Total Zirconium (Zr)	ug/L	0.0824	0.0080	B776384						
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII125	DII126			DII126		
Sampling Date		2025/04/18 09:45	2025/04/18 09:00			2025/04/18 09:00		
COC Number		750435-01-01	750435-01-01			750435-01-01		
	UNITS	BRP-32-2	DUP-1	RDL	QC Batch	DUP-1 REPEAT	RDL	QC Batch
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	ug/L	18.6	18.8	0.10	B776035			
Dissolved Antimony (Sb)	ug/L	0.0489	0.0433	0.0030	B776035	0.0418	0.0030	B951381
Dissolved Arsenic (As)	ug/L	0.342	0.374	0.0050	B776035			
Dissolved Barium (Ba)	ug/L	22.6	22.7	0.0080	B776035			
Dissolved Beryllium (Be)	ug/L	0.0066	0.0053	0.0015	B776035			
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	0.0010	B776035			
Dissolved Boron (B)	ug/L	4.50	4.30	0.10	B776035			
Dissolved Cadmium (Cd)	ug/L	0.0163	0.0179	0.0030	B776035			
Dissolved Calcium (Ca)	ug/L	13000	13100	2.0	B776035			
Dissolved Chromium (Cr)	ug/L	0.139	0.155	0.020	B776035			
Dissolved Cobalt (Co)	ug/L	0.240	0.191	0.0040	B776035			
Dissolved Copper (Cu)	ug/L	2.38	2.46	0.020	B776035			
Dissolved Iron (Fe)	ug/L	8.1	8.3	1.0	B776035			
Dissolved Lead (Pb)	ug/L	1.05	0.303	0.0030	B776035	0.196	0.0030	B951381
Dissolved Lithium (Li)	ug/L	1.80	1.69	0.050	B776035			
Dissolved Magnesium (Mg)	ug/L	7370	7550	0.50	B776035			
Dissolved Manganese (Mn)	ug/L	7.21	6.49	0.0040	B776035			
Dissolved Molybdenum (Mo)	ug/L	0.0265	0.0289	0.0050	B776035			
Dissolved Nickel (Ni)	ug/L	11.9	12.0	0.015	B776035			
Dissolved Potassium (K)	ug/L	1270	1290	5.0	B776035			
Dissolved Selenium (Se)	ug/L	0.063	0.058	0.010	B776035			
Dissolved Silicon (Si)	ug/L	1210	1230	1.2	B776035			
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	0.0020	B776035			
Dissolved Sodium (Na)	ug/L	2210	2270	0.50	B776035			
Dissolved Strontium (Sr)	ug/L	62.1	63.0	0.0080	B776035			
Dissolved Sulphur (S)	ug/L	11900	11600	1.0	B776035			
Dissolved Thallium (Tl)	ug/L	0.00350	0.00360	0.00080	B776035			
Dissolved Tin (Sn)	ug/L	0.0066	0.0103	0.0050	B776035			
Dissolved Titanium (Ti)	ug/L	0.032	0.057	0.030	B776035			
Dissolved Uranium (U)	ug/L	0.00990	0.0104	0.00050	B776035			
Dissolved Vanadium (V)	ug/L	0.0469	0.0494	0.0050	B776035			
Dissolved Zinc (Zn)	ug/L	4.42	4.34	0.060	B776035	4.85	0.060	B951381
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369

Report Date: 2025/06/25

B2Gold Back River Corp.

Client Project #: Ice-cover program B2Gold

Your P.O. #: 470000200

Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII125	DII126			DII126		
Sampling Date		2025/04/18 09:45	2025/04/18 09:00			2025/04/18 09:00		
COC Number		750435-01-01	750435-01-01			750435-01-01		
	UNITS	BRP-32-2	DUP-1	RDL	QC Batch	DUP-1 REPEAT	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L	0.0932	0.0979	0.0080	B776035			
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	26.8	25.0	0.10	B776384			
Total Antimony (Sb)	ug/L	0.0664	0.0306	0.0030	B776384	0.0287	0.0030	B976713
Total Arsenic (As)	ug/L	0.364	0.352	0.0050	B776384			
Total Barium (Ba)	ug/L	22.6	21.7	0.0080	B776384			
Total Beryllium (Be)	ug/L	0.0057	0.0053	0.0015	B776384			
Total Bismuth (Bi)	ug/L	0.0020	<0.0010	0.0010	B776384			
Total Boron (B)	ug/L	4.38	3.97	0.10	B776384			
Total Cadmium (Cd)	ug/L	0.0191	0.0156	0.0030	B776384			
Total Calcium (Ca)	ug/L	13300	12800	2.0	B776384			
Total Chromium (Cr)	ug/L	0.188	0.156	0.020	B776384	0.167	0.020	B976713
Total Cobalt (Co)	ug/L	0.275	0.275	0.0040	B776384			
Total Copper (Cu)	ug/L	2.56	2.36	0.020	B776384			
Total Iron (Fe)	ug/L	19.1	16.2	1.0	B776384	21.4	1.0	B976713
Total Lead (Pb)	ug/L	1.68	0.179	0.0030	B776384			
Total Lithium (Li)	ug/L	1.79	1.70	0.050	B776384			
Total Magnesium (Mg)	ug/L	7690	7020	0.50	B776384			
Total Manganese (Mn)	ug/L	8.29	8.12	0.0040	B776384			
Total Molybdenum (Mo)	ug/L	0.0313	0.0229	0.0050	B776384			
Total Nickel (Ni)	ug/L	12.1	11.6	0.015	B776384			
Total Potassium (K)	ug/L	1300	1230	5.0	B776384			
Total Selenium (Se)	ug/L	0.051	0.058	0.010	B776384			
Total Silicon (Si)	ug/L	1230	1160	1.2	B776384			
Total Silver (Ag)	ug/L	<0.0020	0.0020	0.0020	B776384			
Total Sodium (Na)	ug/L	2290	2100	0.50	B776384			
Total Strontium (Sr)	ug/L	62.8	59.8	0.0080	B776384			
Total Sulphur (S)	ug/L	11800	11100	1.0	B776384			
Total Thallium (Tl)	ug/L	0.00310	0.00320	0.00080	B776384			
Total Tin (Sn)	ug/L	0.0113	0.0130	0.0050	B776384			
Total Titanium (Ti)	ug/L	0.231	0.525	0.030	B776384	0.212	0.030	B976713
Total Uranium (U)	ug/L	0.0129	0.0116	0.00050	B776384			
Total Vanadium (V)	ug/L	0.0558	0.0543	0.0050	B776384			
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII125	DII126			DII126		
Sampling Date		2025/04/18 09:45	2025/04/18 09:00			2025/04/18 09:00		
COC Number		750435-01-01	750435-01-01			750435-01-01		
	UNITS	BRP-32-2	DUP-1	RDL	QC Batch	DUP-1 REPEAT	RDL	QC Batch
Total Zinc (Zn)	ug/L	4.44	3.04	0.060	B776384	3.10	0.060	B976713
Total Zirconium (Zr)	ug/L	0.0891	0.0749	0.0080	B776384			
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII126			DII127		DII128		
Sampling Date		2025/04/18 09:00			2025/04/18 12:15		2025/04/18 13:30		
COC Number		750435-01-01			750435-01-01		750435-01-01		
	UNITS	DUP-1 REPEAT	RDL	QC Batch	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch
Dissolved Metals by ICPMS									
Dissolved Aluminum (Al)	ug/L				17.7	B776035	18.0	0.10	B776035
Dissolved Antimony (Sb)	ug/L				0.0238	B776035	0.0240	0.0030	B776035
Dissolved Arsenic (As)	ug/L				0.323	B776035	0.348	0.0050	B776035
Dissolved Barium (Ba)	ug/L				22.3	B776035	21.8	0.0080	B776035
Dissolved Beryllium (Be)	ug/L				0.0056	B776035	0.0038	0.0015	B951381
Dissolved Bismuth (Bi)	ug/L				<0.0010	B776035	<0.0010	0.0010	B776035
Dissolved Boron (B)	ug/L				4.15	B776035	4.28	0.10	B776035
Dissolved Cadmium (Cd)	ug/L				0.0165	B776035	0.0193	0.0030	B776035
Dissolved Calcium (Ca)	ug/L				12800	B776035	13700	2.0	B776035
Dissolved Chromium (Cr)	ug/L				0.131	B776035	0.130	0.020	B776035
Dissolved Cobalt (Co)	ug/L				0.238	B776035	0.224	0.0040	B776035
Dissolved Copper (Cu)	ug/L				2.27	B776035	2.25	0.020	B776035
Dissolved Iron (Fe)	ug/L				8.1	B776035	8.3	1.0	B776035
Dissolved Lead (Pb)	ug/L	0.0847	0.0030	B976712	0.152	B776035	0.222	0.0030	B776035
Dissolved Lithium (Li)	ug/L				1.65	B776035	1.73	0.050	B776035
Dissolved Magnesium (Mg)	ug/L				7360	B776035	7400	0.50	B776035
Dissolved Manganese (Mn)	ug/L				7.53	B776035	7.13	0.0040	B776035
Dissolved Molybdenum (Mo)	ug/L				0.0244	B776035	0.0258	0.0050	B776035
Dissolved Nickel (Ni)	ug/L				11.7	B776035	11.7	0.015	B776035
Dissolved Potassium (K)	ug/L				1220	B776035	1220	5.0	B776035
Dissolved Selenium (Se)	ug/L				0.054	B776035	0.055	0.010	B776035
Dissolved Silicon (Si)	ug/L				1200	B776035	1290	1.2	B776035
Dissolved Silver (Ag)	ug/L				<0.0020	B776035	<0.0020	0.0020	B776035
Dissolved Sodium (Na)	ug/L				2170	B776035	2170	0.50	B776035
Dissolved Strontium (Sr)	ug/L				61.1	B776035	61.4	0.0080	B776035
Dissolved Sulphur (S)	ug/L				11600	B776035	11400	1.0	B776035
Dissolved Thallium (Tl)	ug/L				0.00340	B776035	0.00350	0.00080	B776035
Dissolved Tin (Sn)	ug/L				<0.0050	B776035	<0.0050	0.0050	B776035
Dissolved Titanium (Ti)	ug/L				<0.030	B776035	<0.030	0.030	B776035
Dissolved Uranium (U)	ug/L				0.0101	B776035	0.0127	0.00050	B776035
Dissolved Vanadium (V)	ug/L				0.0452	B776035	0.0470	0.0050	B776035
Dissolved Zinc (Zn)	ug/L	3.63	0.060	B976712	3.07	B776035	3.83	0.060	B776035
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII126			DII127		DII128		
Sampling Date		2025/04/18 09:00			2025/04/18 12:15		2025/04/18 13:30		
COC Number		750435-01-01			750435-01-01		750435-01-01		
	UNITS	DUP-1 REPEAT	RDL	QC Batch	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch
Dissolved Zirconium (Zr)	ug/L				0.0909	B776035	0.0939	0.0080	B776035
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L				22.2	B776384	21.7	0.10	B776384
Total Antimony (Sb)	ug/L				0.0269	B776384	0.0303	0.0030	B776384
Total Arsenic (As)	ug/L				0.339	B776384	0.362	0.0050	B776384
Total Barium (Ba)	ug/L				22.1	B776384	21.5	0.0080	B776384
Total Beryllium (Be)	ug/L				0.0048	B776384	0.0037	0.0015	B776384
Total Bismuth (Bi)	ug/L				0.0012	B776384	<0.0010	0.0010	B776384
Total Boron (B)	ug/L				4.20	B776384	4.13	0.10	B776384
Total Cadmium (Cd)	ug/L				0.0161	B776384	0.0149	0.0030	B776384
Total Calcium (Ca)	ug/L				13000	B776384	12900	2.0	B776384
Total Chromium (Cr)	ug/L				0.146	B776384	0.145	0.020	B776384
Total Cobalt (Co)	ug/L				0.269	B776384	0.260	0.0040	B776384
Total Copper (Cu)	ug/L				2.37	B776384	2.36	0.020	B776384
Total Iron (Fe)	ug/L	22.9	1.0	B987518	16.4	B776384	14.6	1.0	B776384
Total Lead (Pb)	ug/L				0.343	B776384	0.358	0.0030	B776384
Total Lithium (Li)	ug/L				1.77	B776384	1.71	0.050	B776384
Total Magnesium (Mg)	ug/L				7440	B776384	7320	0.50	B776384
Total Manganese (Mn)	ug/L				8.27	B776384	7.83	0.0040	B776384
Total Molybdenum (Mo)	ug/L				0.0238	B776384	0.0249	0.0050	B776384
Total Nickel (Ni)	ug/L				11.7	B776384	11.5	0.015	B776384
Total Potassium (K)	ug/L				1230	B776384	1220	5.0	B776384
Total Selenium (Se)	ug/L				0.056	B776384	0.055	0.010	B776384
Total Silicon (Si)	ug/L				1200	B776384	1200	1.2	B776384
Total Silver (Ag)	ug/L				<0.0020	B776384	<0.0020	0.0020	B776384
Total Sodium (Na)	ug/L				2190	B776384	2170	0.50	B776384
Total Strontium (Sr)	ug/L				60.6	B776384	60.5	0.0080	B776384
Total Sulphur (S)	ug/L				11500	B776384	11400	1.0	B776384
Total Thallium (Tl)	ug/L				0.00300	B776384	0.00310	0.00080	B776384
Total Tin (Sn)	ug/L				<0.0050	B776384	0.0051	0.0050	B776384
Total Titanium (Ti)	ug/L	0.190	0.030	B987518	0.176	B776384	0.105	0.030	B776384
Total Uranium (U)	ug/L				0.0117	B776384	0.0115	0.00050	B776384
Total Vanadium (V)	ug/L				0.0497	B776384	0.0496	0.0050	B776384
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DII126			DII127		DII128		
Sampling Date		2025/04/18 09:00			2025/04/18 12:15		2025/04/18 13:30		
COC Number		750435-01-01			750435-01-01		750435-01-01		
	UNITS	DUP-1 REPEAT	RDL	QC Batch	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch
Total Zinc (Zn)	ug/L				3.34	B776384	3.42	0.060	B776384
Total Zirconium (Zr)	ug/L				0.0839	B776384	0.0838	0.0080	B776384
RDL = Reportable Detection Limit									



GENERAL COMMENTS

Report reissued to include Equis EDD per client request 2025/05/26.

Report reissued to include results for Un-ionized Ammonia and input of field pH and temperature per attached email, client request received 2025/06/04.

Sample DII115 [BRP-29A-1] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII116 [BRP-29A-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII117 [GLWB-T] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII118 [GLWB-M] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII119 [GLWB-B] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII120 [BRP-29A-3] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).

Sample DII121 [BRP-29A-4] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII122 [BRP-29A-5] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII123 [BRP-32-3] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII124 [BRP-32-1] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Ammonia-N (Total).

Sample DII125 [BRP-32-2] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII126 [DUP-1] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past



method specified hold time for Ammonia-N (Total).

Sample DII127 [BRP-32-4] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII128 [BRP-32-5] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DII115, Elements by ICPMS Ultra-Low Level (diss): Test repeated.

Sample DII123, Elements by ICPMS Ultra-Low Level (diss): Test repeated.

Sample DII124, Elements by ICPMS Ultra-Low Level (diss): Test repeated.

Sample DII124, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Sample DII126, Elements by ICPMS Ultra-Low Level (diss): Test repeated.

Sample DII126, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Sample DII128, Elements by ICPMS Ultra-Low Level (diss): Test repeated.

Results relate only to the items tested.



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

QUALITY ASSURANCE REPORT

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B761738	Total Dissolved Solids	2025/04/24	91	80 - 120	100	80 - 120	<10	mg/L	0	20		
B761900	Total Ammonia (N)	2025/04/23	81	80 - 120	106	80 - 120	<0.0050	mg/L	0.49	20		
B762139	Total Dissolved Solids	2025/04/24	NC	80 - 120	99	80 - 120	<10	mg/L	11	20		
B762141	Turbidity	2025/04/23			101	80 - 120	<0.10	NTU	6.1	20		
B762192	Chloride (Cl)	2025/04/23	107	80 - 120	101	80 - 120	<0.50	mg/L	3.3	20		
B762192	Sulphate (SO4)	2025/04/23	101	80 - 120	101	80 - 120	<0.50	mg/L	5.0	20		
B762332	Total Suspended Solids	2025/04/23	99	80 - 120	99	80 - 120	<0.99	mg/L	NC	20		
B762582	Orthophosphate (P)	2025/04/23	97	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
B762774	Turbidity	2025/04/23			101	80 - 120	<0.10	NTU	0.70	20		
B762865	Dissolved Nitrate plus Nitrite (N)	2025/04/23	NC	80 - 120	102	80 - 120	0.0042, RDL=0.0030 (1)	mg/L	0.83	20		
B762865	Dissolved Nitrite (N)	2025/04/23	NC	80 - 120	106	80 - 120	<0.0010	mg/L	0.11	20		
B762891	Alkalinity (PP as CaCO3)	2025/04/24					<0.50	mg/L	NC	20		
B762891	Alkalinity (Total as CaCO3)	2025/04/24			97	80 - 120	<0.50	mg/L	1.3	20		
B762891	Bicarbonate (HCO3)	2025/04/24					<0.50	mg/L	1.3	20		
B762891	Carbonate (CO3)	2025/04/24					<0.50	mg/L	NC	20		
B762891	Hydroxide (OH)	2025/04/24					<0.50	mg/L	NC	20		
B762893	pH	2025/04/24			100	97 - 103			0.15	N/A		
B762895	Conductivity	2025/04/24			101	90 - 110	<2.0	uS/cm	0.50	10		
B762897	Fluoride (F)	2025/04/24	98	80 - 120	95	80 - 120	<0.010	mg/L	9.4	20		
B762930	Total Sulphide	2025/04/24	95	80 - 120	104	80 - 120	<0.0018	mg/L	NC	20		
B763432	Total Suspended Solids	2025/04/24	88	80 - 120	98	80 - 120	<1.0	mg/L	6.9	20		
B763446	Total Suspended Solids	2025/04/26	93	80 - 120	94	80 - 120	<0.99	mg/L	11	20		
B763570	Total Nitrogen (N)	2025/04/24	108	80 - 120	104	80 - 120	<0.020	mg/L	2.7	20	103	80 - 120
B763756	Strong Acid Dissoc. Cyanide (CN)	2025/04/24	98	80 - 120	101	80 - 120	<0.00050	mg/L	1.3	20		
B763803	Dissolved Organic Carbon (C)	2025/04/24	104	75 - 125	98	80 - 120	<0.50	mg/L	3.7	20		
B763904	Weak Acid Dissoc. Cyanide (CN)	2025/04/24	100	80 - 120	99	80 - 120	<0.00050	mg/L	1.4	20		
B763914	Free Free Cyanide	2025/04/24	96	80 - 120	102	80 - 120	<0.00050	mg/L	1.9	20		
B764133	Total Organic Carbon (C)	2025/04/24	NC	75 - 125	98	80 - 120	<0.50	mg/L	0.27	20		
B764456	Reactive Silica	2025/04/24	107	80 - 120	106	80 - 120	<0.050	mg/L	1.5	20		



Bureau Veritas Job #: C533369
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QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B764458	Reactive Silica	2025/04/25	103	80 - 120	105	80 - 120	<0.050	mg/L	0.17	20		
B766339	Total Dissolved Solids	2025/04/28	101	80 - 120	100	80 - 120	<10	mg/L	5.7	20		
B766596	Total Nitrogen (N)	2025/04/28	NC	80 - 120	105	80 - 120	<0.020	mg/L	2.0	20	102	80 - 120
B766599	Total Nitrogen (N)	2025/04/28	102	80 - 120	96	80 - 120	<0.020	mg/L	4.4	20	99	80 - 120
B766687	Total Phosphorus (P)	2025/04/28	102	80 - 120	98	80 - 120	<0.0010	mg/L	0.65	20	90	80 - 120
B766689	Total Organic Carbon (C)	2025/04/28	104	75 - 125	101	80 - 120	<0.50	mg/L	1.0	20		
B766690	Dissolved Phosphorus (P)	2025/04/28	96	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
B767106	Total Phosphorus (P)	2025/04/28	103	80 - 120	99	80 - 120	<0.0010	mg/L	19	20	90	80 - 120
B767113	Total Phosphorus (P)	2025/04/29	99	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
B767138	Dissolved Organic Carbon (C)	2025/04/28	97	75 - 125	102	80 - 120	<0.50	mg/L	1.2	20		
B768679	Total Mercury (Hg)	2025/04/29	105	80 - 120	100	80 - 120	<0.00010	ug/L	16	25		
B768923	Total Mercury (Hg)	2025/04/29	102	80 - 120	102	80 - 120	<0.00010	ug/L	16	25		
B776035	Dissolved Aluminum (Al)	2025/05/08	95	80 - 120	94	80 - 120	<0.10	ug/L	1.7	40		
B776035	Dissolved Antimony (Sb)	2025/05/08	96	80 - 120	97	80 - 120	<0.0030	ug/L	2.1	40		
B776035	Dissolved Arsenic (As)	2025/05/08	104	80 - 120	103	80 - 120	<0.0050	ug/L	4.1	40		
B776035	Dissolved Barium (Ba)	2025/05/08	96	80 - 120	99	80 - 120	<0.0080	ug/L	0.84	40		
B776035	Dissolved Beryllium (Be)	2025/05/08	92	80 - 120	91	80 - 120	<0.0015	ug/L	21	40		
B776035	Dissolved Bismuth (Bi)	2025/05/08	95	80 - 120	96	80 - 120	<0.0010	ug/L	NC	40		
B776035	Dissolved Boron (B)	2025/05/08	91	80 - 120	88	80 - 120	<0.10	ug/L	3.5	40		
B776035	Dissolved Cadmium (Cd)	2025/05/08	99	80 - 120	99	80 - 120	<0.0030	ug/L	1.5	40		
B776035	Dissolved Calcium (Ca)	2025/05/08	NC	80 - 120	98	80 - 120	<2.0	ug/L	0.12	40		
B776035	Dissolved Chromium (Cr)	2025/05/08	94	80 - 120	96	80 - 120	<0.020	ug/L	9.7	40		
B776035	Dissolved Cobalt (Co)	2025/05/08	93	80 - 120	94	80 - 120	<0.0040	ug/L	0.87	40		
B776035	Dissolved Copper (Cu)	2025/05/08	92	80 - 120	94	80 - 120	<0.020	ug/L	0.21	40		
B776035	Dissolved Iron (Fe)	2025/05/08	101	80 - 120	101	80 - 120	<1.0	ug/L	2.3	40		
B776035	Dissolved Lead (Pb)	2025/05/08	94	80 - 120	92	80 - 120	<0.0030	ug/L	0	40		
B776035	Dissolved Lithium (Li)	2025/05/08	93	80 - 120	94	80 - 120	<0.050	ug/L	0.76	40		
B776035	Dissolved Magnesium (Mg)	2025/05/08	NC	80 - 120	95	80 - 120	<0.50	ug/L	0.62	40		
B776035	Dissolved Manganese (Mn)	2025/05/08	96	80 - 120	98	80 - 120	<0.0040	ug/L	0.66	40		
B776035	Dissolved Molybdenum (Mo)	2025/05/08	99	80 - 120	97	80 - 120	<0.0050	ug/L	4.1	40		
B776035	Dissolved Nickel (Ni)	2025/05/08	96	80 - 120	98	80 - 120	<0.015	ug/L	0.092	40		



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776035	Dissolved Potassium (K)	2025/05/08	100	80 - 120	103	80 - 120	<5.0	ug/L	1.7	40		
B776035	Dissolved Selenium (Se)	2025/05/08	101	80 - 120	100	80 - 120	<0.010	ug/L	6.6	40		
B776035	Dissolved Silicon (Si)	2025/05/08	88	80 - 120	89	80 - 120	<1.2	ug/L	0.32	40		
B776035	Dissolved Silver (Ag)	2025/05/08	99	80 - 120	99	80 - 120	<0.0020	ug/L	NC	40		
B776035	Dissolved Sodium (Na)	2025/05/08	94	80 - 120	96	80 - 120	0.68, RDL=0.50 (2)	ug/L	0.76	40		
B776035	Dissolved Strontium (Sr)	2025/05/08	NC	80 - 120	93	80 - 120	<0.0080	ug/L	0.046	40		
B776035	Dissolved Sulphur (S)	2025/05/08	100	80 - 120	99	80 - 120	<1.0	ug/L	0.17	40		
B776035	Dissolved Thallium (Tl)	2025/05/08	97	80 - 120	95	80 - 120	<0.00080	ug/L	3.7	40		
B776035	Dissolved Tin (Sn)	2025/05/08	98	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
B776035	Dissolved Titanium (Ti)	2025/05/08	101	80 - 120	101	80 - 120	<0.030	ug/L	2.7	40		
B776035	Dissolved Uranium (U)	2025/05/08	94	80 - 120	91	80 - 120	<0.00050	ug/L	6.9	40		
B776035	Dissolved Vanadium (V)	2025/05/08	97	80 - 120	94	80 - 120	<0.0050	ug/L	0.45	40		
B776035	Dissolved Zinc (Zn)	2025/05/08	100	80 - 120	100	80 - 120	<0.060	ug/L	0.70	40		
B776035	Dissolved Zirconium (Zr)	2025/05/08	94	80 - 120	88	80 - 120	<0.0080	ug/L	4.2	40		
B776384	Total Aluminum (Al)	2025/05/09	98	80 - 120	98	80 - 120	<0.10	ug/L	2.7	40		
B776384	Total Antimony (Sb)	2025/05/09	98	80 - 120	98	80 - 120	<0.0030	ug/L	5.1	40		
B776384	Total Arsenic (As)	2025/05/09	104	80 - 120	103	80 - 120	<0.0050	ug/L	3.2	40		
B776384	Total Barium (Ba)	2025/05/09	98	80 - 120	99	80 - 120	<0.0080	ug/L	0.49	40		
B776384	Total Beryllium (Be)	2025/05/09	94	80 - 120	94	80 - 120	<0.0015	ug/L	15	40		
B776384	Total Bismuth (Bi)	2025/05/09	96	80 - 120	96	80 - 120	<0.0010	ug/L	NC	40		
B776384	Total Boron (B)	2025/05/09	95	80 - 120	93	80 - 120	<0.10	ug/L	7.6	40		
B776384	Total Cadmium (Cd)	2025/05/09	99	80 - 120	98	80 - 120	<0.0030	ug/L	0.76	40		
B776384	Total Calcium (Ca)	2025/05/09	NC	80 - 120	101	80 - 120	<2.0	ug/L	4.7	40		
B776384	Total Chromium (Cr)	2025/05/09	96	80 - 120	96	80 - 120	<0.020	ug/L	15	40		
B776384	Total Cobalt (Co)	2025/05/09	95	80 - 120	95	80 - 120	<0.0040	ug/L	0.31	40		
B776384	Total Copper (Cu)	2025/05/09	94	80 - 120	94	80 - 120	<0.020	ug/L	1.1	40		
B776384	Total Iron (Fe)	2025/05/09	102	80 - 120	102	80 - 120	<1.0	ug/L	3.3	40		
B776384	Total Lead (Pb)	2025/05/09	94	80 - 120	92	80 - 120	<0.0030	ug/L	0.45	40		
B776384	Total Lithium (Li)	2025/05/09	94	80 - 120	95	80 - 120	<0.050	ug/L	1.7	40		
B776384	Total Magnesium (Mg)	2025/05/09	NC	80 - 120	102	80 - 120	<0.50	ug/L	3.7	40		



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B776384	Total Manganese (Mn)	2025/05/09	97	80 - 120	99	80 - 120	<0.0040	ug/L	1.3	40		
B776384	Total Molybdenum (Mo)	2025/05/09	100	80 - 120	97	80 - 120	<0.0050	ug/L	6.8	40		
B776384	Total Nickel (Ni)	2025/05/09	97	80 - 120	99	80 - 120	<0.015	ug/L	1.4	40		
B776384	Total Potassium (K)	2025/05/09	102	80 - 120	102	80 - 120	<5.0	ug/L	0.28	40		
B776384	Total Selenium (Se)	2025/05/09	99	80 - 120	102	80 - 120	<0.010	ug/L	9.5	40		
B776384	Total Silicon (Si)	2025/05/09	89	80 - 120	92	80 - 120	<1.2	ug/L	5.8	40		
B776384	Total Silver (Ag)	2025/05/09	100	80 - 120	97	80 - 120	<0.0020	ug/L	4.9	40		
B776384	Total Sodium (Na)	2025/05/09	100	80 - 120	102	80 - 120	1.68, RDL=0.50 (2)	ug/L	4.3	40		
B776384	Total Strontium (Sr)	2025/05/09	NC	80 - 120	93	80 - 120	<0.0080	ug/L	0.63	40		
B776384	Total Sulphur (S)	2025/05/09	100	80 - 120	103	80 - 120	2.4, RDL=1.0 (3)	ug/L	3.7	40		
B776384	Total Thallium (Tl)	2025/05/09	97	80 - 120	95	80 - 120	<0.00080	ug/L	1.9	40		
B776384	Total Tin (Sn)	2025/05/09	98	80 - 120	97	80 - 120	<0.0050	ug/L	20	40		
B776384	Total Titanium (Ti)	2025/05/09	102	80 - 120	101	80 - 120	<0.030	ug/L	9.1	40		
B776384	Total Uranium (U)	2025/05/09	94	80 - 120	92	80 - 120	<0.00050	ug/L	0	40		
B776384	Total Vanadium (V)	2025/05/09	97	80 - 120	95	80 - 120	<0.0050	ug/L	1.7	40		
B776384	Total Zinc (Zn)	2025/05/09	100	80 - 120	100	80 - 120	<0.060	ug/L	1.7	40		
B776384	Total Zirconium (Zr)	2025/05/09	96	80 - 120	91	80 - 120	<0.0080	ug/L	1.6	40		
B783034	Dissolved Mercury (Hg)	2025/05/12	123 (4)	80 - 120	99	80 - 120	<0.00010	ug/L	29 (4)	25		
B945434	Total Mercury (Hg)	2025/05/13			106	80 - 120	<0.00010	ug/L				
B945449	Dissolved Mercury (Hg)	2025/05/13			107	80 - 120	<0.00010	ug/L				
B951381	Dissolved Antimony (Sb)	2025/05/16			97	80 - 120	<0.0030	ug/L				
B951381	Dissolved Beryllium (Be)	2025/05/16			98	80 - 120	<0.0015	ug/L				
B951381	Dissolved Lead (Pb)	2025/05/16			100	80 - 120	<0.0030	ug/L				
B951381	Dissolved Zinc (Zn)	2025/05/16			105	80 - 120	<0.060	ug/L				
B976712	Dissolved Lead (Pb)	2025/06/12			99	80 - 120	<0.0030	ug/L				
B976712	Dissolved Zinc (Zn)	2025/06/12			104	80 - 120	<0.060	ug/L				
B976713	Total Antimony (Sb)	2025/06/12			103	80 - 120	<0.0030	ug/L				
B976713	Total Chromium (Cr)	2025/06/12			100	80 - 120	<0.020	ug/L				
B976713	Total Iron (Fe)	2025/06/12			102	80 - 120	<1.0	ug/L				



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B976713	Total Lead (Pb)	2025/06/12			97	80 - 120	<0.0030	ug/L				
B976713	Total Titanium (Ti)	2025/06/12			106	80 - 120	<0.030	ug/L				
B976713	Total Zinc (Zn)	2025/06/12			105	80 - 120	<0.060	ug/L				
B987516	Dissolved Lead (Pb)	2025/06/16			101	80 - 120	<0.0030	ug/L				
B987518	Total Iron (Fe)	2025/06/16			104	80 - 120	<1.0	ug/L				
B987518	Total Titanium (Ti)	2025/06/16			104	80 - 120	<0.030	ug/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times$ RDL).

(1) Method blank exceeds acceptance limits, $2 \times$ RDL acceptable for low level analysis

(2) Na in the sample $>10 \times$ the concentration of the method blank.

(3) S in the sample $>10 \times$ the concentration of the method blank.

(4) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Bureau Veritas Job #: C533369
Report Date: 2025/06/25

B2Gold Back River Corp.
Client Project #: Ice-cover program B2Gold
Your P.O. #: 470000200
Sampler Initials: MK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Mauro Oselin, P.Chem., QP, Scientific Specialist

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 10F8

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/07/30
Report #: R3691254
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562722

Received: 2025/07/14, 15:00

Sample Matrix: Water
Samples Received: 51

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Chlorophyll and Pheophytin in Water (1)	11	2025/07/23	2025/07/24	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/07/24	2025/07/25	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/07/29	2025/07/30	CAL SOP-00273	SM 24 10150 A, B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 10F8

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/07/30
Report #: R3691254
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562722

Received: 2025/07/14, 15:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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Bureau Veritas Job #: C562722
Report Date: 2025/07/30

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC358		DPC359		DPC360		DPC361	DPC362	DPC363		
Sampling Date		2025/07/08 10:45		2025/07/08 10:45		2025/07/08 10:45		2025/07/08 11:40	2025/07/08 11:40	2025/07/08 11:40		
COC Number		1OF8		1OF8		1OF8		1OF8	1OF8	1OF8		
	UNITS	BRP-29A-1A	RDL	BRP-29A-1B	RDL	BRP-29A-1C	RDL	BRP-29A-2A	BRP-29A-2B	BRP-29A-2C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	1.2	0.54	0.95	0.53	<0.88 (1)	0.88	0.77	0.63	<0.53	0.53	C028863
Chlorophyll c	ug/L	0.63	0.54	<0.53	0.53	<0.88 (1)	0.88	<0.53	<0.53	<0.53	0.53	C028863
Pheophytin A	ug/L	<0.54	0.54	0.68	0.53	1.5 (1)	0.88	<0.53	0.79	<0.53	0.53	C028863

RDL = Reportable Detection Limit

(1) Detection limit raised due to sample volume used for analysis.

Bureau Veritas ID		DPC364	DPC365	DPC366	DPC367		DPC368		DPC369		
Sampling Date		2025/07/08 12:40	2025/07/08 12:40	2025/07/08 12:40	2025/07/08 13:40		2025/07/08 13:40		2025/07/08 13:40		
COC Number		1OF8	1OF8	1OF8	1OF8		1OF8		1OF8		
	UNITS	BRP-29A-3A	BRP-29A-3B	BRP-29A-3C	BRP-29A-4A	RDL	BRP-29A-4B	RDL	BRP-29A-4C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.79	0.69	0.58	0.85	0.53	0.71	0.54	0.54	0.53	C028863
Chlorophyll c	ug/L	<0.53	<0.53	<0.53	<0.53	0.53	<0.54	0.54	<0.53	0.53	C028863
Pheophytin A	ug/L	<0.53	<0.53	1.4	0.71	0.53	0.91	0.54	1.5	0.53	C028863

RDL = Reportable Detection Limit

Bureau Veritas ID		DPC370	DPC371	DPC372	DPC373	DPC374	DPC375	DPC376		
Sampling Date		2025/07/09 09:00	2025/07/09 09:00	2025/07/09 09:00	2025/07/09 10:00	2025/07/09 10:00	2025/07/09 10:00	2025/07/09 11:00		
COC Number		1OF8	1OF8	1OF8	1OF8	1OF8	1OF8	1OF8		
	UNITS	BRP-29A-5A	BRP-29A-5B	BRP-29A-5C	BRP-31-3A	BRP-31-3B	BRP-31-3C	BRP-31-4A	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.94	0.88	0.89	0.90	0.85	0.84	0.80	0.53	C028863
Chlorophyll c	ug/L	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53	0.53	C028863
Pheophytin A	ug/L	<0.53	<0.53	<0.53	0.81	0.71	0.72	0.85	0.53	C028863

RDL = Reportable Detection Limit



Bureau Veritas Job #: C562722
Report Date: 2025/07/30

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC377			DPC378		DPC379	DPC380		DPC381		
Sampling Date		2025/07/09 11:00			2025/07/09 11:00		2025/07/09 12:00	2025/07/09 12:00		2025/07/09 12:00		
COC Number		1OF8			1OF8		1OF8	1OF8		1OF8		
	UNITS	BRP-31-4B	RDL	QC Batch	BRP-31-4C	RDL	BRP-32-1A	BRP-32-1B	RDL	BRP-32-1C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	1.0	0.53	C028863	0.97	0.54	0.86	0.75	0.53	0.75	0.54	C032960
Chlorophyll c	ug/L	<0.53	0.53	C028863	<0.54	0.54	<0.53	<0.53	0.53	<0.54	0.54	C032960
Pheophytin A	ug/L	<0.53	0.53	C028863	1.8	0.54	1.4	1.4	0.53	0.54	0.54	C032960

RDL = Reportable Detection Limit

Bureau Veritas ID		DPC382	DPC383		DPC384		DPC385	DPC386		DPC387		
Sampling Date		2025/07/09 13:30	2025/07/09 13:30		2025/07/09 13:30		2025/07/09 14:30	2025/07/09 14:30		2025/07/09 14:30		
COC Number		1OF8	1OF8		1OF8		1OF8	1OF8		1OF8		
	UNITS	BRP-32-2A	BRP-32-2B	RDL	BRP-32-2C	RDL	BRP-32-3A	BRP-32-3B	RDL	BRP-32-3C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.82	0.91	0.54	1.0	0.53	0.87	0.83	0.54	0.98	0.53	C032960
Chlorophyll c	ug/L	<0.54	<0.54	0.54	<0.53	0.53	<0.54	<0.54	0.54	<0.53	0.53	C032960
Pheophytin A	ug/L	1.3	1.5	0.54	<0.53	0.53	1.6	1.8	0.54	1.1	0.53	C032960

RDL = Reportable Detection Limit

Bureau Veritas ID		DPC388		DPC389	DPC390		DPC391	DPC392		DPC393		
Sampling Date		2025/07/11 07:30		2025/07/11 07:30	2025/07/11 07:30		2025/07/11 08:40	2025/07/11 08:40		2025/07/11 08:40		
COC Number		1OF8		1OF8	1OF8		1OF8	1OF8		1OF8		
	UNITS	BRP-32-4A	RDL	BRP-32-4B	BRP-32-4C	RDL	BRP-32-5A	BRP-32-5B	RDL	BRP-32-5C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.56	0.54	0.77	1.1	0.53	1.1	1.1	0.54	0.77	0.53	C032960
Chlorophyll c	ug/L	<0.54	0.54	<0.53	<0.53	0.53	<0.54	<0.54	0.54	<0.53	0.53	C032960
Pheophytin A	ug/L	<0.54	0.54	2.1	1.1	0.53	1.6	<0.54	0.54	1.9	0.53	C032960

RDL = Reportable Detection Limit



Bureau Veritas Job #: C562722
Report Date: 2025/07/30

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC394		DPC395		DPC396		DPC397			DPC398		
Sampling Date		2025/07/12 14:55		2025/07/12 14:55		2025/07/12 14:55		2025/07/12 14:00			2025/07/12 14:00		
COC Number		1OF8		1OF8		1OF8		1OF8			1OF8		
	UNITS	BRP-38-1A	RDL	BRP-38-1B	RDL	BRP-38-1C	RDL	BRP-38-2A	RDL	QC Batch	BRP-38-2B	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.88	0.53	0.80	0.56	1.8	0.53	1.4	0.62	C032960	1.6 (1)	0.71	C026785
Chlorophyll c	ug/L	<0.53	0.53	<0.56	0.56	<0.53	0.53	<0.62	0.62	C032960	0.72 (1)	0.71	C026785
Pheophytin A	ug/L	1.8	0.53	1.8	0.56	0.72	0.53	1.5	0.62	C032960	<0.71 (1)	0.71	C026785

RDL = Reportable Detection Limit

(1) Detection limit raised due to sample volume used for analysis.

Bureau Veritas ID		DPC399		DPC400		DPC401		DPC402		DPC403		
Sampling Date		2025/07/12 14:00		2025/07/12 11:30		2025/07/12 11:30		2025/07/12 11:30		2025/07/12 13:10		
COC Number		1OF8		1OF8		1OF8		1OF8		1OF8		
	UNITS	BRP-38-2C	RDL	BRP-38-3A	RDL	BRP-38-3B	RDL	BRP-38-3C	RDL	BRP-38-4A	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	1.7 (1)	0.76	1.6 (1)	1.1	1.4	0.53	1.6 (1)	0.67	1.5 (1)	1.1	C026785
Chlorophyll c	ug/L	0.78 (1)	0.76	<1.1 (1)	1.1	<0.53	0.53	<0.67 (1)	0.67	<1.1 (1)	1.1	C026785
Pheophytin A	ug/L	<0.76 (1)	0.76	<1.1 (1)	1.1	<0.53	0.53	<0.67 (1)	0.67	<1.1 (1)	1.1	C026785

RDL = Reportable Detection Limit

(1) Detection limit raised due to sample volume used for analysis.

Bureau Veritas ID		DPC404	DPC405	DPC406	DPC407	DPC408		
Sampling Date		2025/07/12 13:10	2025/07/12 13:10	2025/07/12 12:30	2025/07/12 12:30	2025/07/12 12:30		
COC Number		1OF8	1OF8	1OF8	1OF8	1OF8		
	UNITS	BRP-38-4B	BRP-38-4C	BRP-38-5A	BRP-38-5B	BRP-38-5C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	1.4 (1)	1.6 (1)	1.6 (1)	1.3 (1)	<1.1 (1)	1.1	C026785
Chlorophyll c	ug/L	<1.1 (1)	1.1 (1)	<1.1 (1)	<1.1 (1)	<1.1 (1)	1.1	C026785
Pheophytin A	ug/L	<1.1 (1)	<1.1 (1)	<1.1 (1)	<1.1 (1)	<1.1 (1)	1.1	C026785

RDL = Reportable Detection Limit

(1) Detection limit raised due to sample volume used for analysis.



Bureau Veritas Job #: C562722
Report Date: 2025/07/30

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

GENERAL COMMENTS

Results relate only to the items tested.



Bureau Veritas Job #: C562722
Report Date: 2025/07/30

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

			Spiked Blank		Method Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	Value	UNITS
C026785	Chlorophyll a	2025/07/24	105	80 - 120	<0.53	ug/L
C026785	Chlorophyll c	2025/07/24			<0.53	ug/L
C026785	Pheophytin A	2025/07/24			<0.53	ug/L
C028863	Chlorophyll a	2025/07/25	102	80 - 120	<0.53	ug/L
C028863	Chlorophyll c	2025/07/25			<0.53	ug/L
C028863	Pheophytin A	2025/07/25			<0.53	ug/L
C032960	Chlorophyll a	2025/07/30	105	80 - 120	<0.54	ug/L
C032960	Chlorophyll c	2025/07/30			<0.54	ug/L
C032960	Pheophytin A	2025/07/30			<0.54	ug/L

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



Bureau Veritas Job #: C562722
Report Date: 2025/07/30

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C562722

2025/07/14 15:00

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Customer #:	C41460	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #:			
Address:	Park Place Suite 3400-660 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4	Project:	WATER QUALITY - JULY AEMP	CDC #:	Project Manager:
Tel:	(604) 681-8371	Tel:		Site #:			
Email:	BR.accounts.payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com jennifer.arnes@wsp.com	Sampled by:			
Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC):		Turnaround Time (TAT) Required:	
☐ ATI ☐ CCME ☐ Other				Chlorophyll and Pheocytin in Water		Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Rush Specific Rush TAT (if applies to entire submission) Date Required: _____ Rush Confirmation Number: _____	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS							
Sample Bottle Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Analysis Requested	Analysis Requested	Analysis Requested
1	BRP-29A-1A	25/07/25	10:45				
2	BRP-29A-1B		10:45				
3	BRP-29A-1C		10:45				
4	BRP-29A-2A		10:40				
5	BRP-29A-2B		11:40				
6	BRP-29A-2C		11:40				
7	BRP-29A-3A		12:40				
8	BRP-29A-3B		12:40				
9	BRP-29A-3C		12:40				
10	BRP-29A-4A		13:40				
RELINQUISHED BY: (Signature/Print)		Date: (YYMMDD)	Time	RECEIVED BY: (Signature/Print)		Date: (YYMMDD)	Time
Adam Feldberg CMAA		25/07/25	16:20	Charles A. Leach		25/07/25	15:00
Time Sampled		Temperature (°C) on Receipt		Custody Seal Intact on Container			
* UNLESS OTHERWISE SPECIFIED TO BE EXEMPTED, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORY/RESOURCES/DOC-TERMS-AND-CONDITIONS . * IT IS THE RESPONSIBILITY OF THE RESPONSOR TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. ** ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.							



EYK-2025-07-025

Bureau Veritas Canada (2019) Inc.

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By: J. McLean
JUL 14 2025
Temp: see ACTR
CS: _____ Ice: _____

C562722

2025/07/14 15:00

Bureau Veritas 4000 15th N.E. Calgary, Alberta Canada T2E 6P8 Tel: (403) 291-0877 Toll-free: 800-563-6286 Fax: (403) 291-9400 www.bvna.com										CHAIN OF CUSTODY RECORD										Page 2 of 6	
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:						
Company Name: #10800 B2Gold Back River Corp.					Company Name: #50378 WSP Canada Inc.					Quotation #: C41480					Bureau Veritas Job #:						
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:					Bottle Order #:						
Address: Park Place Suite 3400-666 Burrant St. VANCOUVER BC V6C 2X8					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY-JULY AEMP					COC #:						
Tel: (604) 681-8371 Fax: (604) 681-6209					Tel: Fax:					Project Name:					Project Manager:						
Email: BR.accounts@payable@b2gold.com					Email: beatriz.cupe.flores@wsp.com, jennifer.trens@wsp.com					Site #:					Stephanie Rodriguez Comacho						
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC):					Turnaround Time (TAT) Required:						
☐ ATI ☐ CCME ☐ Other					Models Field Filtered 7 (Y/N)					Chlorophyll and Phaeophytin in Water					Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT - 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission): Date Required: _____ Rush Confirmation Number: _____ (not for use)						
SAMPLES MUST BE KEPT COOL ($\approx 10^{\circ}\text{C}$) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																					
Sample Record Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Models Field Filtered 7 (Y/N)	Chlorophyll and Phaeophytin in Water															
1	BRP-29A-4B	25/07/08	13:40			✓															
2	BRP-29A-4C	25/07/08	13:40			✓															
3	BRP-29A-5A	25/07/09	9:00			✓															
4	BRP-29A-5B		9:00			✓															
5	BRP-29A-5C		9:00			✓															
6	BRP-31-3A		10:00			✓															
7	BRP-31-3B		10:00			✓															
8	BRP-31-3C		10:00			✓															
9	BRP-31-4A		11:00			✓															
10	BRP-31-4B		11:00			✓															
* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)		Time		RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)		Time		# Jars used and not submitted		Time Duration		Laboratory Use Only					
Adam Feldman		25/07/13		16:20		Charles M. Wagh		25/07/15		15:00				Temperature (°C) in Receipt		Custody Seal Intact on Receipt?					
														☐ Yes ☐ No		☐ Yes ☐ No					
* UNLESS OTHERWISE ADVISED TO IN WRITING, YOUR SUBMITTAL ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL_LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS . * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. * ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.																					

RICAL = 22 ACTR

Received in Yellowknife
By: J. McLean

JUL 14 2025

Temp: See from
CS: Ice:

Bureau Veritas Canada (2019) Inc.

C562722

2025/07/14 15:00

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Black River Corp.	Company Name:	#50378 WSP Canada Inc.	Question #:	C41400	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #:			
Address:	Park Place Suite 3400-000 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4	Project:	WATER QUALITY- JULY AEMP	COC #:	Project Manager:
Tel:	(604) 681-8371	Tel:		Site #:			
Email:	BR.accounts@b2gold.com	Email:	beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com	Sampled By:			
Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required:	
☐ ATI ☐ CCME ☐ Other				Chlorophyll and Pheophytin in Water		Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Rush Specific TAT (if applies to entire submission) Date Required: _____ Rush Confirmation Number: _____	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS							
Sample Barcode Label	Sample Location/Modification	Date Collected	Time Sampled	Matrix	Media Field Filled Y (Y/N)	# of Tubes COMMENTS	
1	BRP-31-4C	25/07/19	11:00		✓		
2	BRP-32-1A		12:00		✓		
3	BRP-32-1B		12:00		✓		
4	BRP-32-1C		12:00		✓		
5	BRP-32-2A		13:30		✓		
6	BRP-32-2B		13:30		✓		
7	BRP-32-2C		13:30		✓		
8	BRP-32-3A		14:30		✓		
9	BRP-32-3B		14:30		✓		
10	BRP-32-3C		14:30		✓		
* RELINQUISHED BY: (Signature/Print)		Date: (YYMMDD) / Time		RECEIVED BY: (Signature/Print)		Date: (YYMMDD) / Time	
Adrian Feldberg		25/07/19 10:30		Charles LA Combe		25/07/16 15:00	
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNED BY THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL LABORATORIES/RESOURCES/CCS TERMS AND CONDITIONS.		* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.		* ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.		Write Bureau Veritas Yellow Class	

MLAC = SEE ACTR

Received in Yellowknife

By: J. McQueen

JUL 14 2025

Temp: See ACTR
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

C562722

2025/07/14 15:00

Page 4 of 6

CHAIN OF CUSTODY RECORD

INVOICE TO: Company Name: #10500 B2Gold Back River Corp. Attention: Accounts Payable Address: Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 Tel: (604) 681-8377 Fax: (604) 681-6209 Email: BR.accountspayable@b2gold.com		REPORT TO: Company Name: #50378 WSP Canada Inc. Attention: Beatriz Cupe-Flores Address: Saskatoon SK S7H 0T4 Tel: Fax: Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com		PROJECT INFORMATION: Quotation #: C41460 P.O. #: Project: WATER QUALITY- JULY AEMP Project Name: Site #: Sampled By:		Laboratory Use Only: Bureau Veritas Job #: Bottle Order #: COD #: Project Manager: Stephanie Rodriguez Camacho	

Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC) Chlorophyll and Phaeocystin in Water		Turnaround Time (TAT) Required: Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission): Date Required: Rush Confirmation Number: (add lab fee if)	

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Notes	Media Field Filtered? (Y/N)
1	BRP-32-4A	25/07/11	7:30		✓
2	BRP-32-4B		7:36		✓
3	BRP-32-4C		7:30		✓
4	BRP-32-5A		8:40		✓
5	BRP-32-5B		8:40		✓
6	BRP-32-5C		8:40		✓
7	BRP-38-1A	25/07/12	14:55		✓
8	BRP-38-1B		14:55		✓
9	BRP-38-1C		14:55		✓
10	BRP-38-2A		14:00		✓

RELINQUISHED BY: (Signature/Print) Adam Feldberg		Date: (YYMMDD) 25/07/13		Time 16:28		RECEIVED BY: (Signature/Print) Charles KA		Date: (YYMMDD) 25/07/16		Time 15:00		# Jars used and not submitted ☐		Laboratory Use Only Time Signature: Temperature (°C) on Receipt: Custody Seal intact on Container? ☐ Yes ☐ No	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
 * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RISED. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
 ** ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

Received in Yellowknife
 By: *[Signature]*
 JUL 14 2025
 Temp: *see ACM*
 CS: *see ACM* Ice:

Bureau Veritas Canada (2015) Inc.

C562722

2025/07/14 15:00

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10800 B2Gold Best River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #:	C41460	Bureau Veritas Job #:	Buttle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #:			
Address:	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2K6	Address:	Saskatoon SK S7H 0T4	Project:	WATER QUALITY- JULY AEMP	CDC #:	Project Manager:
Tel:	(604) 681-6371	Tel:		Site #:			
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com	Sampled By:			
Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required:	
☐ ATI ☐ CCME ☐ Other				Chlorophyll and Pheophytin in Water		Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Date Required: ☐ Rush Confirmation Number: ☐	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS							
Sample Reference Label	Sample Location / Modification	Date Sampled	Time Sampled	Matrix	Meets Field Filled? (Y/N)		
1	BRP-38-2B	25/07/12	14:00		/		
2	BRP-38-2C		14:00		/		
3	BRP-38-3A		11:30		/		
4	BRP-38-3B		11:30		/		
5	BRP-38-3C		11:30		/		
6	BRP-38-4A		13:10		/		
7	BRP-38-4B		13:10		/		
8	BRP-38-4C		13:10		/		
9	BRP-38-5A		12:30		/		
10	BRP-38-5B		12:30		/		
* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time
Adam F. Valdes		25/07/12	16:20	Charles KA		25/07/12	15:00
* UNLESS OTHERWISE AGREED TO BY WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT: www.bv.com/environmental/laboratoryresources/coc/terms-and-conditions							
* IT IS THE RESPONSIBILITY OF THE RELINQUISHING TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL DELAYS.							
* ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER							

NICAL = SEE ACTR

Received in Yellowknife
By: J. McLeod

JUL 14 2025

Temp: See from
CS: Ice:

Bureau Veritas Canada (2019) Inc.

C562722

2025/07/14 15:00

Bureau Veritas										CHAIN OF CUSTODY RECORD										Page 6 of 6	
Bureau Veritas 4000 18th N.E., Calgary, Alberta Canada T2C 8P6 Tel: (403) 291-3077 Tel/Fax: (800) 563-4266 Fax: (403) 281-8688 www.bv.com																					
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:						
Company Name: #10500 B2Gold Back River Corp. Attention: Accounts Payable Address: Park Place Suite 3400-866 Burrard St. VANCOUVER BC V6C 2X8 Tel: (604) 681-8371 Fax: (604) 681-6209 Email: BR.accounts payable@b2gold.com					Company Name: #50378 WSP Canada Inc. Attention: Beatriz Cupe-Flores Address: Saskatoon SK S7H 0T4 Tel: Fax: Email: beatriz.cupe.flores@wsp.com, jennifer.arena@wsp.com					Quotation #: C4146D P.O. #: Project: WATER QUALITY- JULY AEMP Project Name: Site #: Sampled By:					Bureau Veritas Job #: Matrix Order #: COC #: Project Manager: Stephanie Rodriguez Camacho						
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Turnaround Time (TAT) Required:						
☐ ATI ☐ CCME ☐ Other										Chlorophyll and Phaeophytin in Water Mesite Field Filed # (V/N)					Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified). Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Date Required: Rush Confirmation Number: (call us for it)						
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																					
Sample Service Label		Sample (Location) Identification		Date Sampled		Time Sampled		Matrix		Mesite Field Filed # (V/N)		Chlorophyll and Phaeophytin in Water		TAT Required		Comments					
1		BRP-3B-5C		25/07/24		12:30															
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
* RELINQUISHED BY: (Signature/Print)					Date: (YYMMDD)		Time		RECEIVED BY: (Signature/Print)					Date: (YYMMDD)		Time		# Jars used and not submitted			
Adam Field & Co. Inc.					25/07/24		16:20		Charles Palombi					25/07/24		15:00					
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS . * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. * ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.										Temperature (°C) on Receipt: Custom Seal (attach on Cooler): ☐ Yes ☐ No										White: Bureau Veritas Yellow: Client	

MCAL - SEE ACTR

 Received in Yellowknife
 By: J. Mace

JUL 14 2025

 Temp: see Actr
 CS: ice

Bureau Veritas Canada (2018) Inc.



Your P.O. #: 470000200
 Your Project #: WATER QUALITY- JULY AEMP
 Site Location: 176233659
 Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/08/11
 Report #: R3697203
 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

Sample Matrix: Water
 # Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	12	N/A	2025/07/12	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	12	N/A	2025/07/14	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	12	N/A	2025/07/14	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) -Lab Filtered (1, 3)	2	N/A	2025/07/15	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 3)	10	N/A	2025/07/17	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	12	N/A	2025/07/14	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	11	N/A	2025/07/16		Auto Calc
Sulphide (as H2S) (1)	1	N/A	2025/07/17		Auto Calc
Hardness Total (calculated as CaCO3) (1, 4)	12	N/A	2025/07/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	12	N/A	2025/07/29	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	12	N/A	2025/07/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	12	2025/07/22	2025/07/22	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	12	N/A	2025/07/26	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	12	N/A	2025/07/29	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N	10	N/A	2025/08/01		Auto Calc
Ammonia-N Low Level (Preserved) (1)	12	N/A	2025/07/14	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	12	N/A	2025/07/14		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	12	N/A	2025/07/12	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	12	2025/07/11	2025/07/14		Auto Calc
pH @25°C (1, 5)	12	N/A	2025/07/13	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	10	N/A	2025/08/01	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 6)	12	N/A	2025/07/12	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	12	2025/07/15	2025/07/16	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	12	N/A	2025/07/17	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	10	2025/07/12	2025/07/13	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	2	2025/07/17	2025/07/18	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	12	N/A	2025/07/29		Auto Calc
Temperature (Field) (1)	10	N/A	2025/08/01	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	11	N/A	2025/07/15		Auto Calc



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/11
Report #: R3697203
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/07/16		Auto Calc
Nitrogen (Total) (1)	11	2025/07/15	2025/07/15	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/07/17	2025/07/17	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 7)	10	N/A	2025/07/16	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 7)	2	N/A	2025/07/21	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 8)	9	2025/07/14	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 8)	1	2025/07/17	2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus-Dis-Low-Lab Filtered (1, 8)	2	2025/07/13	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	10	2025/07/14	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/17	2025/07/17	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/18	2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	10	2025/07/12	2025/07/12	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	2	2025/07/12	2025/07/13	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	12	N/A	2025/07/12	CAL SOP-00081	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/11
Report #: R3697203
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(7) TOC present in the sample should be considered as non-purgeable TOC.

(8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV923			DOV924		
Sampling Date		2025/07/08 10:00			2025/07/08 11:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	42.6	0.50	C016855	42.8	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	43.5	0.50	C016911	44.2	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.9	0.20	C015793	1.9	0.20	C015793
Nitrate (NO ₃)	mg/L	8.6	0.89	C016686	8.4	0.89	C016686
Nitrite (NO ₂)	mg/L	0.022	0.0033	C016686	0.028	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	66	10	C016746	67	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.26	0.20	C016551	0.45	0.20	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	6.57	N/A	ONSITE	6.62	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.67	N/A	ONSITE	14.16	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	120	2.0	C017489	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00215 (1)	0.00050	C018231	0.00245	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00234	0.00050	C018601	0.00242	0.00050	C018601
Fluoride (F)	mg/L	0.027	0.010	C017490	0.027	0.010	C017490
Free Free Cyanide	mg/L	0.00231	0.00050	C018602	0.00298	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	4.3	0.50	C021795			
pH	pH	6.53	N/A	C017488	6.52	N/A	C017488
Reactive Silica	mg/L	1.3	0.050	C021524	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.59	0.50	C017487	3.63	0.50	C017487
Total Organic Carbon (C)	mg/L	4.7	0.50	C020594	4.5	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.38	0.50	C017487	4.43	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	76	10	C016958	72	10	C016958
RDL = Reportable Detection Limit N/A = Not Applicable (1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV923			DOV924		
Sampling Date		2025/07/08 10:00			2025/07/08 11:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Total Suspended Solids	mg/L	<1.0	1.0	C016955	<0.99	0.99	C016955
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L				3.9 (1)	0.50	C019352
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018855	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	11	0.50	C017204	12	0.50	C017204
Sulphate (SO4)	mg/L	25	0.50	C017204	26	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465			
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.25	0.0050	C017821	0.25	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0067	0.0010	C017271	0.0084	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	2.0	0.20	C017271	1.9	0.20	C017271
Total Nitrogen (N)	mg/L	2.2	0.10	C018820	2.4	0.10	C018820
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L				<0.0010	0.0010	C017527
Physical Properties							
Turbidity	NTU	<0.10	0.10	C017130	<0.10	0.10	C017130
RDL = Reportable Detection Limit							
(1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV925			DOV926		
Sampling Date		2025/07/08 12:15			2025/07/08 13:35		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-29A-4	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	44.5	0.50	C016855	43.7	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	45.2	0.50	C016911	43.6	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.9	0.20	C015793	1.7	0.20	C015793
Nitrate (NO ₃)	mg/L	8.6	0.89	C016686	7.5	0.89	C016686
Nitrite (NO ₂)	mg/L	0.023	0.0033	C016686	0.022	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	68	10	C016746	65	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.52	0.20	C016551	0.60	0.20	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	6.53	N/A	ONSITE	6.72	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.97	N/A	ONSITE	14.37	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	120	2.0	C017489	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00321 (1)	0.00050	C018231	0.00200	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00333	0.00050	C018601	0.00190	0.00050	C018601
Fluoride (F)	mg/L	0.027	0.010	C017490	0.026	0.010	C017490
Free Free Cyanide	mg/L	0.00326	0.00050	C018602	0.00212	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	4.5	0.50	C021795	5.6	0.50	C021795
pH	pH	6.46	N/A	C017488	6.49	N/A	C017488
Reactive Silica	mg/L	1.2	0.050	C021524	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.29	0.50	C017487	3.72	0.50	C017487
Total Organic Carbon (C)	mg/L	3.8	0.50	C024758	4.6	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.01	0.50	C017487	4.54	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	76	10	C016958	72	10	C016958
RDL = Reportable Detection Limit							
N/A = Not Applicable							
(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV925			DOV926		
Sampling Date		2025/07/08 12:15			2025/07/08 13:35		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-29A-4	RDL	QC Batch
Total Suspended Solids	mg/L	1.4	0.99	C016956	<1.0	1.0	C016956
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018855
Chloride (Cl)	mg/L	11	0.50	C017209	11	0.50	C017204
Sulphate (SO4)	mg/L	26	0.50	C017209	25	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0012	0.0010	C018465	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010 (1)	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.28	0.0050	C017821	0.24	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0069	0.0010	C017271	0.0066	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	1.9	0.20	C017271	1.7	0.20	C017271
Total Nitrogen (N)	mg/L	2.5	0.10	C018820	2.3	0.10	C018820
Physical Properties							
Turbidity	NTU	<0.10	0.10	C017130	<0.10	0.10	C017130
RDL = Reportable Detection Limit							
(1) TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV927		DOV928		DOV929		
Sampling Date		2025/07/08 08:30		2025/07/08 09:40		2025/07/08 10:45		
COC Number		C#759289-01-01-03		C#759289-01-01-03		C#759289-01-01-03		
	UNITS	BRP-29A-5	QC Batch	BRP-31-3	RDL	BRP-31-4	RDL	QC Batch

Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	40.9	C016855	42.7	0.50	42.6	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	42.0	C016911	43.1	0.50	43.1	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.8	C015793	1.8	0.20	1.7	0.20	C015793
Nitrate (NO ₃)	mg/L	7.9	C016686	8.0	0.89	7.5	0.89	C016686
Nitrite (NO ₂)	mg/L	0.022	C016686	0.023	0.0033	0.023	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	C016897	<0.0020	0.0020	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	64	C016746	65	10	63	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.41	C016551	0.36	0.20	0.47	0.20	C016551
Un-Ionized Ammonia	mg/L	0.00059	C037090	<0.00050	0.00050	<0.00050	0.00050	C037090

Field Parameters								
Field pH	pH	6.95	ONSITE	6.73	N/A	6.25	N/A	ONSITE
Field Temperature (Fd)	deg. C	15.07	ONSITE	15.31	N/A	15.31	N/A	ONSITE

Misc. Inorganics								
Conductivity	uS/cm	120	C017489	120	2.0	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00204 (1)	C018231	0.00156 (1)	0.00050	0.00157	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00205	C018601	0.00161	0.00050	0.00155	0.00050	C018601
Fluoride (F)	mg/L	0.026	C017490	0.026	0.010	0.025	0.010	C017490
Free Free Cyanide	mg/L	0.00253	C018602	0.00166	0.00050	0.00177	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.3	C021795	4.7	0.50	4.1	0.50	C021795
pH	pH	6.56	C017488	6.52	N/A	6.45	N/A	C017488
Reactive Silica	mg/L	1.2	C021524	1.2	0.050	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.59	C017487	3.76	0.50	3.14	0.50	C017487
Total Organic Carbon (C)	mg/L	5.0	C020594	4.6	0.50	4.7	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.38	C017487	4.59	0.50	3.83	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	72	C016958	76	10	68	10	C016958
Total Suspended Solids	mg/L	<1.0	C016956	<1.0	1.0	1.3	0.99	C016956

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV927		DOV928		DOV929		
Sampling Date		2025/07/08 08:30		2025/07/08 09:40		2025/07/08 10:45		
COC Number		C#759289-01-01-03		C#759289-01-01-03		C#759289-01-01-03		
	UNITS	BRP-29A-5	QC Batch	BRP-31-3	RDL	BRP-31-4	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C017299	<0.0010	0.0010	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	C018859	<0.0018	0.0018	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	11	C017204	11	0.50	9.7	0.50	C017209
Sulphate (SO4)	mg/L	25	C017204	25	0.50	25	0.50	C017209
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C018465	<0.0010	0.0010	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	C018456	<0.0010	0.0010	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.24	C017821	0.23	0.0050	0.24	0.0050	C017820
Dissolved Nitrite (N)	mg/L	0.0066	C017271	0.0070	0.0010	0.0070	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	1.8	C017271	1.8	0.20	1.7	0.20	C017271
Total Nitrogen (N)	mg/L	2.2	C018820	2.2	0.10	2.2	0.10	C018820
Physical Properties								
Turbidity	NTU	0.12	C017130	0.13	0.10	<0.10	0.10	C017130
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV930			DOV931		
Sampling Date		2025/07/08 11:45			2025/07/08 13:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	28.3	0.50	C016855	28.1	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	28.7	0.50	C016911	28.4	0.50	C016911
Dissolved Nitrate (N)	mg/L	0.56	0.040	C015793	0.54	0.040	C015793
Nitrate (NO ₃)	mg/L	2.5	0.18	C016686	2.4	0.18	C016686
Nitrite (NO ₂)	mg/L	0.0060	0.0033	C016686	0.0060	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	43	10	C016746	40	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.34	0.040	C016551	0.32	0.040	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	7.31	N/A	ONSITE	7.3	N/A	ONSITE
Field Temperature (Fd)	deg. C	14.98	N/A	ONSITE	14.84	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	85	2.0	C017489	74	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231	<0.00050	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601	<0.00050	0.00050	C018601
Fluoride (F)	mg/L	0.025	0.010	C017490	0.025	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602	<0.00050	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.2	0.50	C021795	3.8	0.50	C021795
pH	pH	7.14	N/A	C017488	6.60	N/A	C017488
Reactive Silica	mg/L	0.99	0.050	C021524	1.1	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	9.89	0.50	C017487	4.37	0.50	C017487
Total Organic Carbon (C)	mg/L	4.3	0.50	C020594	4.2	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	12.1	0.50	C017487	5.33	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	44 (1)	10	C021938	36	10	C016959
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV930			DOV931		
Sampling Date		2025/07/08 11:45			2025/07/08 13:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-2	RDL	QC Batch
Total Suspended Solids	mg/L	1.3	1.0	C016956	<0.99	0.99	C016956
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018855
Chloride (Cl)	mg/L	5.6	0.50	C017204	5.5	0.50	C017204
Sulphate (SO ₄)	mg/L	17	0.50	C017204	17	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.076	0.0050	C017821	0.039	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0018	0.0010	C017271	0.0018	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	0.57	0.040	C017271	0.55	0.040	C017271
Total Nitrogen (N)	mg/L	0.91	0.020	C018831	0.87	0.020	C018820
Physical Properties							
Turbidity	NTU	0.11	0.10	C017130	0.13	0.10	C017130
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV932			DOV933		
Sampling Date		2025/07/08 14:15			2025/07/08 12:20		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-3	RDL	QC Batch	FD	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	27.7	0.50	C016855	44.9	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	28.2	0.50	C016911	44.7	0.50	C016911
Dissolved Nitrate (N)	mg/L	0.55	0.040	C015793	1.9	0.20	C015793
Nitrate (NO ₃)	mg/L	2.4	0.18	C016686	8.6	0.89	C016686
Nitrite (NO ₂)	mg/L	0.0060	0.0033	C016686	0.023	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	39	10	C016746	69	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.31	0.040	C016551	0.64	0.20	C016551
Un-ionized Ammonia	mg/L	<0.00050	0.00050	C037090			
Field Parameters							
Field pH	pH	7.17	N/A	ONSITE			
Field Temperature (Fd)	deg. C	14.89	N/A	ONSITE			
Misc. Inorganics							
Conductivity	uS/cm	74	2.0	C017489	130	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231	0.00343	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601	0.00336	0.00050	C018601
Fluoride (F)	mg/L	0.023	0.010	C017490	0.026	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602	0.00421	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.1	0.50	C021795			
pH	pH	6.52	N/A	C017488	6.50	N/A	C017488
Reactive Silica	mg/L	0.99	0.050	C021524	1.4	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	4.01	0.50	C017487	3.55	0.50	C017487
Total Organic Carbon (C)	mg/L	4.1	0.50	C020594	4.2	0.50	C024758
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.89	0.50	C017487	4.33	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	36	10	C016959	80	10	C016959
Total Suspended Solids	mg/L	<1.0	1.0	C016956	<0.99	0.99	C016956
RDL = Reportable Detection Limit							
N/A = Not Applicable							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV932			DOV933		
Sampling Date		2025/07/08 14:15			2025/07/08 12:20		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-3	RDL	QC Batch	FD	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L				4.3 (1)	0.50	C019352
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	5.2	0.50	C017209	12	0.50	C017204
Sulphate (SO4)	mg/L	17	0.50	C017209	26	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989			
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C022776	0.0016	0.0010	C021269
Total Ammonia (N)	mg/L	0.029	0.0050	C017821	0.29	0.0050	C017820
Dissolved Nitrite (N)	mg/L	0.0017	0.0010	C017271	0.0071	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	0.55	0.040	C017271	1.9	0.20	C017271
Total Nitrogen (N)	mg/L	0.86	0.020	C018820	2.6	0.10	C021575
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L				<0.0010	0.0010	C017527
Physical Properties							
Turbidity	NTU	0.16	0.10	C017130	0.16	0.10	C017130
RDL = Reportable Detection Limit							
(1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV934		
Sampling Date		2025/07/08 12:20		
COC Number		C#759289-01-01-03		
	UNITS	EB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C016911
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C015793
Nitrate (NO ₃)	mg/L	<0.013	0.013	C016686
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	<10	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.020	0.020	C016551
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601
Fluoride (F)	mg/L	<0.010	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	C021795
pH	pH	5.99	N/A	C017488
Reactive Silica	mg/L	<0.050	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	0.87	0.50	C017487
Total Organic Carbon (C)	mg/L	<0.50	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	1.06	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	<10 (1)	10	C021938
Total Suspended Solids	mg/L	<1.0	1.0	C016956
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.				



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV934		
Sampling Date		2025/07/08 12:20		
COC Number		C#759289-01-01-03		
	UNITS	EB	RDL	QC Batch
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	<0.50	0.50	C017204
Sulphate (SO4)	mg/L	<0.50	0.50	C017204
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	<0.0050	0.0050	C017820
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C017271
Total Nitrogen (N)	mg/L	0.020	0.020	C018820
Physical Properties				
Turbidity	NTU	<0.10	0.10	C017130
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
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Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00193	0.00201	0.00203	0.00154	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00137	0.00134	0.00140	0.00133	0.00010	C028535
RDL = Reportable Detection Limit							

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00197	0.00199	0.00190	0.00151	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00121	0.00115	0.00130	0.00103	0.00010	C028535
RDL = Reportable Detection Limit							

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00156	0.00147	0.00195	<0.00010	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00088	0.00091	0.00141	0.00012	0.00010	C028535
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	32.7	32.4	33.5	34.1	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0173	0.0179	0.0185	0.0198	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.361	0.359	0.353	0.355	0.0050	C031041
Dissolved Barium (Ba)	ug/L	16.6	16.5	17.0	16.9	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0072	0.0070	0.0067	0.0069	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	3.70	3.70	3.73	3.81	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0195	0.0182	0.0255	0.0228	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	9610	9810	10100	9780	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.178	0.152	0.164	0.152	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.869	0.950	1.00	0.911	0.0040	C031041
Dissolved Copper (Cu)	ug/L	2.67	2.53	2.58	2.61	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.1	6.7	6.6	6.5	1.0	C031041
Dissolved Lead (Pb)	ug/L	0.0056	0.0044	0.0044	0.0035	0.0030	C031041
Dissolved Lithium (Li)	ug/L	1.26	1.32	1.35	1.33	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	4510	4440	4690	4680	0.50	C031041
Dissolved Manganese (Mn)	ug/L	13.0	13.8	14.6	13.5	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0274	0.0343	0.0312	0.0279	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	8.66	8.79	9.01	8.77	0.015	C031041
Dissolved Potassium (K)	ug/L	1290	1280	1310	1300	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.069	0.071	0.071	0.062	0.010	C031041
Dissolved Silicon (Si)	ug/L	487	497	479	483	1.2	C031041
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1900	1880	1990	1960	0.50	C031041
Dissolved Strontium (Sr)	ug/L	49.9	50.1	51.8	50.8	0.0080	C031041
Dissolved Sulphur (S)	ug/L	8380	8500	8840	9050	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00636	0.00528	0.00547	0.00565	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.332	0.487	0.215	0.218	0.030	C031041
Dissolved Uranium (U)	ug/L	0.0138	0.0144	0.0138	0.0150	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0311	0.0246	0.0324	0.0369	0.0050	C031041
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	2.47	2.38	2.53	2.38	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.104	0.105	0.105	0.105	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	45.2	45.6	46.8	44.9	0.10	C031047
Total Antimony (Sb)	ug/L	0.0230	0.0245	0.0272	0.0211	0.0030	C031047
Total Arsenic (As)	ug/L	0.360	0.387	0.395	0.390	0.0050	C031047
Total Barium (Ba)	ug/L	16.9	17.0	17.3	16.8	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0084	0.0075	0.0070	0.0076	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	3.88	3.96	4.01	3.69	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0219	0.0251	0.0257	0.0251	0.0030	C031047
Total Calcium (Ca)	ug/L	9850	10100	10200	9910	2.0	C031047
Total Chromium (Cr)	ug/L	0.204	0.222	0.207	0.208	0.020	C031047
Total Cobalt (Co)	ug/L	0.940	1.05	1.07	0.970	0.0040	C031047
Total Copper (Cu)	ug/L	2.90	2.86	2.91	2.76	0.020	C031047
Total Iron (Fe)	ug/L	33.3	33.6	33.5	33.6	1.0	C031047
Total Lead (Pb)	ug/L	0.0138	0.0144	0.0153	0.0117	0.0030	C031047
Total Lithium (Li)	ug/L	1.29	1.25	1.32	1.20	0.050	C031047
Total Magnesium (Mg)	ug/L	4580	4630	4770	4570	0.50	C031047
Total Manganese (Mn)	ug/L	14.0	14.9	15.5	14.2	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0315	0.0355	0.0343	0.0286	0.0050	C031047
Total Nickel (Ni)	ug/L	8.82	9.14	9.30	8.83	0.015	C031047
Total Potassium (K)	ug/L	1300	1320	1330	1290	5.0	C031047
Total Selenium (Se)	ug/L	0.055	0.047	0.050	0.054	0.010	C031047
Total Silicon (Si)	ug/L	499	496	481	484	1.2	C031047
Total Silver (Ag)	ug/L	0.0027	0.0036	<0.0020	0.0062	0.0020	C031047
Total Sodium (Na)	ug/L	1920	1930	2020	1910	0.50	C031047
Total Strontium (Sr)	ug/L	50.2	51.1	52.0	50.0	0.0080	C031047
Total Sulphur (S)	ug/L	8680	8860	9050	8790	1.0	C031047
Total Thallium (Tl)	ug/L	0.00528	0.00612	0.00620	0.00535	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	0.0245	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.337	0.373	0.313	0.273	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Total Uranium (U)	ug/L	0.0155	0.0175	0.0161	0.0161	0.00050	C031047
Total Vanadium (V)	ug/L	0.0703	0.0704	0.0694	0.0687	0.0050	C031047
Total Zinc (Zn)	ug/L	2.64	2.64	2.88	2.43	0.060	C031047
Total Zirconium (Zr)	ug/L	0.116	0.114	0.118	0.115	0.0080	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	31.5	32.2	33.1	18.0	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0170	0.0199	0.0202	0.0098	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.338	0.342	0.374	0.265	0.0050	C031041
Dissolved Barium (Ba)	ug/L	15.8	16.4	16.7	10.3	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0070	0.0069	0.0057	0.0033	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	3.46	3.69	3.77	2.46	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0186	0.0202	0.0210	0.0053	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	9090	9600	9600	5900	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.166	0.168	0.153	0.108	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.702	0.768	0.769	0.152	0.0040	C031041
Dissolved Copper (Cu)	ug/L	2.48	2.53	2.55	1.69	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.3	6.9	7.1	8.4	1.0	C031041
Dissolved Lead (Pb)	ug/L	0.0033	0.0032	0.0040	<0.0030	0.0030	C031041
Dissolved Lithium (Li)	ug/L	1.24	1.32	1.36	0.958	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	4410	4560	4520	3290	0.50	C031041
Dissolved Manganese (Mn)	ug/L	10.5	11.5	11.7	2.99	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0344	0.0299	0.0320	0.0184	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	7.99	8.33	8.27	6.07	0.015	C031041
Dissolved Potassium (K)	ug/L	1210	1280	1280	646	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.047	0.075	0.074	0.030	0.010	C031041
Dissolved Silicon (Si)	ug/L	451	474	481	390	1.2	C031041
Dissolved Silver (Ag)	ug/L	0.0030	<0.0020	<0.0020	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1840	1910	1910	1100	0.50	C031041
Dissolved Strontium (Sr)	ug/L	46.6	48.4	49.2	26.6	0.0080	C031041
Dissolved Sulphur (S)	ug/L	8340	8350	8510	5940	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00536	0.00597	0.00527	0.00353	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.191	0.295	0.170	0.259	0.030	C031041
Dissolved Uranium (U)	ug/L	0.0142	0.0140	0.0140	0.00979	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0342	0.0354	0.0308	0.0341	0.0050	C031041
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	2.22	2.32	2.39	1.05	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.103	0.107	0.108	0.0773	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	44.8	44.4	45.4	26.6	0.10	C031047
Total Antimony (Sb)	ug/L	0.0200	0.0202	0.0201	0.0088	0.0030	C031047
Total Arsenic (As)	ug/L	0.362	0.386	0.370	0.257	0.0050	C031047
Total Barium (Ba)	ug/L	16.1	17.1	16.6	10.5	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0072	0.0072	0.0067	0.0039	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	3.87	3.90	3.82	2.72	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0219	0.0229	0.0241	0.0077	0.0030	C031047
Total Calcium (Ca)	ug/L	9380	9720	9660	5970	2.0	C031047
Total Chromium (Cr)	ug/L	0.197	0.194	0.192	0.162	0.020	C031047
Total Cobalt (Co)	ug/L	0.803	0.852	0.865	0.261	0.0040	C031047
Total Copper (Cu)	ug/L	2.75	2.80	2.76	1.89	0.020	C031047
Total Iron (Fe)	ug/L	34.4	32.8	33.4	34.2	1.0	C031047
Total Lead (Pb)	ug/L	0.0179	0.0132	0.0125	0.0067	0.0030	C031047
Total Lithium (Li)	ug/L	1.22	1.18	1.24	0.903	0.050	C031047
Total Magnesium (Mg)	ug/L	4500	4570	4610	3350	0.50	C031047
Total Manganese (Mn)	ug/L	11.9	12.7	12.7	4.61	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0322	0.0292	0.0279	0.0154	0.0050	C031047
Total Nickel (Ni)	ug/L	8.36	8.54	8.50	6.28	0.015	C031047
Total Potassium (K)	ug/L	1240	1300	1290	655	5.0	C031047
Total Selenium (Se)	ug/L	0.073	0.068	0.051	0.027	0.010	C031047
Total Silicon (Si)	ug/L	466	484	467	392	1.2	C031047
Total Silver (Ag)	ug/L	0.0045	0.0031	0.0020	<0.0020	0.0020	C031047
Total Sodium (Na)	ug/L	1870	1890	1920	1120	0.50	C031047
Total Strontium (Sr)	ug/L	47.1	49.7	48.9	26.9	0.0080	C031047
Total Sulphur (S)	ug/L	8600	8680	8750	6110	1.0	C031047
Total Thallium (Tl)	ug/L	0.00554	0.00504	0.00622	0.00392	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.304	0.564	0.272	0.207	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch
Total Uranium (U)	ug/L	0.0147	0.0157	0.0171	0.0115	0.00050	C031047
Total Vanadium (V)	ug/L	0.0702	0.0693	0.0710	0.0671	0.0050	C031047
Total Zinc (Zn)	ug/L	2.51	2.46	2.48	1.09	0.060	C031047
Total Zirconium (Zr)	ug/L	0.115	0.123	0.118	0.0881	0.0080	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	17.8	17.7	34.1	0.20	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0122	0.0133	0.0160	<0.0030	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.237	0.248	0.339	<0.0050	0.0050	C031041
Dissolved Barium (Ba)	ug/L	9.94	10.2	17.1	<0.0080	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0038	0.0035	0.0072	<0.0015	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	2.33	2.37	3.82	<0.10	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0095	0.0055	0.0262	<0.0030	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	5820	5750	10200	2.7	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.115	0.123	0.182	0.031	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.136	0.137	1.04	<0.0040	0.0040	C031041
Dissolved Copper (Cu)	ug/L	1.64	1.65	2.65	<0.020	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.7	7.7	6.6	<1.0	1.0	C031041
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	0.0036	<0.0030	0.0030	C031041
Dissolved Lithium (Li)	ug/L	0.937	0.910	1.35	<0.050	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	3300	3230	4730	<0.50	0.50	C031041
Dissolved Manganese (Mn)	ug/L	2.72	2.60	15.2	<0.0040	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0171	0.0201	0.0406	<0.0050	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	6.03	6.02	9.19	<0.015	0.015	C031041
Dissolved Potassium (K)	ug/L	632	631	1330	7.9	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.015	0.027	0.059	<0.010	0.010	C031041
Dissolved Silicon (Si)	ug/L	390	390	479	<1.2	1.2	C031041
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	0.0022	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1090	1070	2010	<0.50	0.50	C031041
Dissolved Strontium (Sr)	ug/L	25.9	25.9	52.4	<0.0080	0.0080	C031041
Dissolved Sulphur (S)	ug/L	5970	5890	8810	<1.0	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00252	0.00256	0.00599	<0.00080	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.351	0.449	0.237	0.069	0.030	C031041
Dissolved Uranium (U)	ug/L	0.00966	0.00994	0.0140	<0.00050	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0244	0.0261	0.0359	<0.0050	0.0050	C031041
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	1.01	1.11	2.42	<0.060	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.0750	0.0790	0.105	<0.0080	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	25.8	25.7	46.2	0.16	0.10	C031047
Total Antimony (Sb)	ug/L	0.0103	0.0092	0.0239	<0.0030	0.0030	C031047
Total Arsenic (As)	ug/L	0.246	0.255	0.374	<0.0050	0.0050	C031047
Total Barium (Ba)	ug/L	10.1	10.3	17.3	0.0159	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0040	0.0038	0.0075	<0.0015	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	2.75	2.66	3.98	<0.10	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0071	0.0059	0.0196	<0.0030	0.0030	C031047
Total Calcium (Ca)	ug/L	5890	5910	10200	3.3	2.0	C031047
Total Chromium (Cr)	ug/L	0.147	0.151	0.192	<0.020	0.020	C031047
Total Cobalt (Co)	ug/L	0.250	0.254	1.11	<0.0040	0.0040	C031047
Total Copper (Cu)	ug/L	1.95	1.86	2.87	<0.020	0.020	C031047
Total Iron (Fe)	ug/L	34.2	34.6	32.9	<1.0	1.0	C031047
Total Lead (Pb)	ug/L	0.0084	0.0092	0.0154	<0.0030	0.0030	C031047
Total Lithium (Li)	ug/L	0.876	0.865	1.23	<0.050	0.050	C031047
Total Magnesium (Mg)	ug/L	3320	3270	4670	<0.50	0.50	C031047
Total Manganese (Mn)	ug/L	4.36	4.40	15.8	0.0047	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0198	0.0203	0.0329	<0.0050	0.0050	C031047
Total Nickel (Ni)	ug/L	6.19	6.30	9.38	<0.015	0.015	C031047
Total Potassium (K)	ug/L	640	642	1350	<5.0	5.0	C031047
Total Selenium (Se)	ug/L	0.019	0.025	0.068	<0.010	0.010	C031047
Total Silicon (Si)	ug/L	395	401	489	<1.2	1.2	C031047
Total Silver (Ag)	ug/L	0.0020	0.0040	0.0028	<0.0020	0.0020	C031047
Total Sodium (Na)	ug/L	1100	1070	1950	<0.50	0.50	C031047
Total Strontium (Sr)	ug/L	26.2	26.3	52.7	<0.0080	0.0080	C031047
Total Sulphur (S)	ug/L	6190	6010	8950	1.7	1.0	C031047
Total Thallium (Tl)	ug/L	0.00222	0.00264	0.00678	<0.00080	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.210	0.401	0.301	0.041	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch
Total Uranium (U)	ug/L	0.0111	0.0104	0.0173	<0.00050	0.00050	C031047
Total Vanadium (V)	ug/L	0.0681	0.0644	0.0696	<0.0050	0.0050	C031047
Total Zinc (Zn)	ug/L	1.11	1.13	2.56	<0.060	0.060	C031047
Total Zirconium (Zr)	ug/L	0.0856	0.0847	0.115	<0.0080	0.0080	C031047
RDL = Reportable Detection Limit							



GENERAL COMMENTS

Report reissued to include results for unionized ammonia as per client request received 2025/07/31.

Sample DOV923 [BRP-29A-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV924 [BRP-29A-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV925 [BRP-29A-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV926 [BRP-29A-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV927 [BRP-29A-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV928 [BRP-31-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV929 [BRP-31-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV930 [BRP-32-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).

Sample DOV931 [BRP-32-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV932 [BRP-32-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV933 [FD] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV934 [EB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

Results relate only to the items tested.



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C016955	Total Suspended Solids	2025/07/13	94	80 - 120	96	80 - 120	<1.0	mg/L	12	20		
C016956	Total Suspended Solids	2025/07/12	93	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C016958	Total Dissolved Solids	2025/07/13	NC	80 - 120	94	80 - 120	<10	mg/L	0	20		
C016959	Total Dissolved Solids	2025/07/13	99	80 - 120	95	80 - 120	<10	mg/L	3.4	20		
C017130	Turbidity	2025/07/12			101	80 - 120	<0.10	NTU	13	20		
C017204	Chloride (Cl)	2025/07/12	NC	80 - 120	103	80 - 120	0.69, RDL=0.50	mg/L	1.1	20		
C017204	Sulphate (SO4)	2025/07/12	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.90	20		
C017209	Chloride (Cl)	2025/07/12	100	80 - 120	101	80 - 120	<0.50	mg/L	0.86	20		
C017209	Sulphate (SO4)	2025/07/12	86	80 - 120	99	80 - 120	<0.50	mg/L				
C017271	Dissolved Nitrate plus Nitrite (N)	2025/07/12	NC	80 - 120	106	80 - 120	<0.0030	mg/L	4.8	20		
C017271	Dissolved Nitrite (N)	2025/07/12	107	80 - 120	107	80 - 120	<0.0010	mg/L	5.1	20		
C017299	Orthophosphate (P)	2025/07/12	91	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C017487	Alkalinity (PP as CaCO3)	2025/07/13					<0.50	mg/L	NC	20		
C017487	Alkalinity (Total as CaCO3)	2025/07/13			100	80 - 120	<0.50	mg/L	10	20		
C017487	Bicarbonate (HCO3)	2025/07/13					<0.50	mg/L	10	20		
C017487	Carbonate (CO3)	2025/07/13					<0.50	mg/L	NC	20		
C017487	Hydroxide (OH)	2025/07/13					<0.50	mg/L	NC	20		
C017488	pH	2025/07/13			100	97 - 103			1.6	N/A		
C017489	Conductivity	2025/07/13			102	90 - 110	<2.0	uS/cm	0.66	10		
C017490	Fluoride (F)	2025/07/13	109	80 - 120	91	80 - 120	<0.010	mg/L	3.8	20		
C017527	Dissolved Phosphorus (P)	2025/07/16	101	80 - 120	89	80 - 120	<0.0010	mg/L	NC	20	90	80 - 120
C017820	Total Ammonia (N)	2025/07/14	109	80 - 120	107	80 - 120	<0.0050	mg/L	0.64	20		
C017821	Total Ammonia (N)	2025/07/14	108	80 - 120	109	80 - 120	<0.0050	mg/L	3.2	20		
C018231	Strong Acid Dissoc. Cyanide (CN)	2025/07/14	98	80 - 120	97	80 - 120	<0.00050	mg/L	0.93	20		
C018456	Total Phosphorus (P)	2025/07/16	96	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C018465	Dissolved Phosphorus (P)	2025/07/16	119	80 - 120	96	80 - 120	<0.0010	mg/L	9.6	20	85	80 - 120
C018601	Weak Acid Dissoc. Cyanide (CN)	2025/07/14	101	80 - 120	100	80 - 120	<0.00050	mg/L	2.6	20		
C018602	Free Free Cyanide	2025/07/14	102	80 - 120	101	80 - 120	<0.00050	mg/L	1.3	20		
C018820	Total Nitrogen (N)	2025/07/15	NC	80 - 120	109	80 - 120	<0.020	mg/L	4.4	20	107	80 - 120
C018831	Total Nitrogen (N)	2025/07/15	105	80 - 120	109	80 - 120	<0.020	mg/L	9.9	20	108	80 - 120



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C018855	Total Sulphide	2025/07/16	23 (1)	80 - 120	103	80 - 120	<0.0018	mg/L	NC	20		
C018859	Total Sulphide	2025/07/16	113	80 - 120	110	80 - 120	<0.0018	mg/L	NC	20		
C019352	Dissolved Organic Carbon (C)	2025/07/16	NC	75 - 125	98	80 - 120	<0.50	mg/L	2.0	20		
C020594	Total Organic Carbon (C)	2025/07/16	NC (2)	75 - 125	107	80 - 120	<0.50	mg/L	0.48	20		
C021269	Total Phosphorus (P)	2025/07/17	103	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
C021524	Reactive Silica	2025/07/17	96	80 - 120	105	80 - 120	<0.050	mg/L	0.77	20		
C021575	Total Nitrogen (N)	2025/07/17	103	80 - 120	103	80 - 120	<0.020	mg/L	3.3	20	104	80 - 120
C021795	Dissolved Organic Carbon (C)	2025/07/18	82	75 - 125	104	80 - 120	<0.50	mg/L	NC	20		
C021938	Total Dissolved Solids	2025/07/18	NC	80 - 120	95	80 - 120	<10	mg/L	0.48	20		
C021989	Dissolved Phosphorus (P)	2025/07/18	95	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	91	80 - 120
C022776	Total Phosphorus (P)	2025/07/18	107	80 - 120	103	80 - 120	<0.0010	mg/L	11	20	90	80 - 120
C024758	Total Organic Carbon (C)	2025/07/21	85	75 - 125	95	80 - 120	<0.50	mg/L	20	20		
C025625	Total Mercury (Hg)	2025/07/22	107	80 - 120	106	80 - 120	<0.00010	ug/L	12	25		
C028535	Dissolved Mercury (Hg)	2025/07/24	101	80 - 120	104	80 - 120	<0.00010	ug/L	2.8	25		
C031041	Dissolved Aluminum (Al)	2025/07/26	90	80 - 120	92	80 - 120	0.19, RDL=0.10 (3)	ug/L	0.22	40		
C031041	Dissolved Antimony (Sb)	2025/07/26	104	80 - 120	106	80 - 120	<0.0030	ug/L	0	40		
C031041	Dissolved Arsenic (As)	2025/07/26	99	80 - 120	99	80 - 120	<0.0050	ug/L	1.9	40		
C031041	Dissolved Barium (Ba)	2025/07/26	99	80 - 120	98	80 - 120	<0.0080	ug/L	0.90	40		
C031041	Dissolved Beryllium (Be)	2025/07/26	89	80 - 120	92	80 - 120	<0.0015	ug/L	10	40		
C031041	Dissolved Bismuth (Bi)	2025/07/26	97	80 - 120	99	80 - 120	<0.0010	ug/L	NC	40		
C031041	Dissolved Boron (B)	2025/07/26	96	80 - 120	97	80 - 120	<0.10	ug/L	0.24	40		
C031041	Dissolved Cadmium (Cd)	2025/07/26	106	80 - 120	105	80 - 120	<0.0030	ug/L	19	40		
C031041	Dissolved Calcium (Ca)	2025/07/26	NC	80 - 120	104	80 - 120	<2.0	ug/L	0.76	40		
C031041	Dissolved Chromium (Cr)	2025/07/26	100	80 - 120	99	80 - 120	0.024, RDL=0.020 (3)	ug/L	5.5	40		
C031041	Dissolved Cobalt (Co)	2025/07/26	100	80 - 120	99	80 - 120	<0.0040	ug/L	0.29	40		
C031041	Dissolved Copper (Cu)	2025/07/26	100	80 - 120	99	80 - 120	<0.020	ug/L	1.9	40		
C031041	Dissolved Iron (Fe)	2025/07/26	94	80 - 120	96	80 - 120	<1.0	ug/L	2.0	40		
C031041	Dissolved Lead (Pb)	2025/07/26	97	80 - 120	97	80 - 120	<0.0030	ug/L	3.8	40		
C031041	Dissolved Lithium (Li)	2025/07/26	90	80 - 120	93	80 - 120	<0.050	ug/L	3.0	40		
C031041	Dissolved Magnesium (Mg)	2025/07/26	101	80 - 120	99	80 - 120	<0.50	ug/L	2.0	40		



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031041	Dissolved Manganese (Mn)	2025/07/26	96	80 - 120	97	80 - 120	<0.0040	ug/L	1.2	40		
C031041	Dissolved Molybdenum (Mo)	2025/07/26	107	80 - 120	107	80 - 120	0.0060, RDL=0.0050 (3)	ug/L	1.6	40		
C031041	Dissolved Nickel (Ni)	2025/07/26	100	80 - 120	99	80 - 120	<0.015	ug/L	0.48	40		
C031041	Dissolved Potassium (K)	2025/07/26	106	80 - 120	104	80 - 120	5.6, RDL=5.0 (3)	ug/L	2.2	40		
C031041	Dissolved Selenium (Se)	2025/07/26	96	80 - 120	96	80 - 120	<0.010	ug/L	15	40		
C031041	Dissolved Silicon (Si)	2025/07/26	97	80 - 120	97	80 - 120	<1.2	ug/L	2.0	40		
C031041	Dissolved Silver (Ag)	2025/07/26	100	80 - 120	99	80 - 120	<0.0020	ug/L	NC	40		
C031041	Dissolved Sodium (Na)	2025/07/26	95	80 - 120	98	80 - 120	<0.50	ug/L	1.5	40		
C031041	Dissolved Strontium (Sr)	2025/07/26	NC	80 - 120	98	80 - 120	<0.0080	ug/L	1.3	40		
C031041	Dissolved Sulphur (S)	2025/07/26	106	80 - 120	109	80 - 120	<1.0	ug/L	1.4	40		
C031041	Dissolved Thallium (Tl)	2025/07/26	99	80 - 120	100	80 - 120	<0.00080	ug/L	17	40		
C031041	Dissolved Tin (Sn)	2025/07/26	100	80 - 120	101	80 - 120	<0.0050	ug/L	NC	40		
C031041	Dissolved Titanium (Ti)	2025/07/26	98	80 - 120	100	80 - 120	<0.030	ug/L	14	40		
C031041	Dissolved Uranium (U)	2025/07/26	100	80 - 120	100	80 - 120	<0.00050	ug/L	8.8	40		
C031041	Dissolved Vanadium (V)	2025/07/26	99	80 - 120	98	80 - 120	<0.0050	ug/L	22	40		
C031041	Dissolved Zinc (Zn)	2025/07/26	99	80 - 120	99	80 - 120	<0.060	ug/L	1.2	40		
C031041	Dissolved Zirconium (Zr)	2025/07/26	97	80 - 120	98	80 - 120	<0.0080	ug/L	1.3	40		
C031047	Total Aluminum (Al)	2025/07/29	87	80 - 120	88	80 - 120	<0.10	ug/L	1.1	40		
C031047	Total Antimony (Sb)	2025/07/29	105	80 - 120	106	80 - 120	<0.0030	ug/L	22	40		
C031047	Total Arsenic (As)	2025/07/29	99	80 - 120	99	80 - 120	<0.0050	ug/L	2.9	40		
C031047	Total Barium (Ba)	2025/07/29	98	80 - 120	98	80 - 120	<0.0080	ug/L	0.53	40		
C031047	Total Beryllium (Be)	2025/07/29	85	80 - 120	88	80 - 120	<0.0015	ug/L	24	40		
C031047	Total Bismuth (Bi)	2025/07/29	97	80 - 120	97	80 - 120	<0.0010	ug/L	NC	40		
C031047	Total Boron (B)	2025/07/29	94	80 - 120	96	80 - 120	0.12, RDL=0.10 (3)	ug/L	0.26	40		
C031047	Total Cadmium (Cd)	2025/07/29	106	80 - 120	105	80 - 120	<0.0030	ug/L	8.6	40		
C031047	Total Calcium (Ca)	2025/07/29	NC	80 - 120	105	80 - 120	<2.0	ug/L	1.4	40		
C031047	Total Chromium (Cr)	2025/07/29	99	80 - 120	99	80 - 120	0.030, RDL=0.020 (3)	ug/L	2.4	40		



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031047	Total Cobalt (Co)	2025/07/29	100	80 - 120	99	80 - 120	<0.0040	ug/L	0.64	40		
C031047	Total Copper (Cu)	2025/07/29	100	80 - 120	99	80 - 120	<0.020	ug/L	4.7	40		
C031047	Total Iron (Fe)	2025/07/29	92	80 - 120	95	80 - 120	<1.0	ug/L	0.78	40		
C031047	Total Lead (Pb)	2025/07/29	96	80 - 120	96	80 - 120	<0.0030	ug/L	11	40		
C031047	Total Lithium (Li)	2025/07/29	90	80 - 120	92	80 - 120	<0.050	ug/L	0.23	40		
C031047	Total Magnesium (Mg)	2025/07/29	99	80 - 120	99	80 - 120	<0.50	ug/L	0.22	40		
C031047	Total Manganese (Mn)	2025/07/29	93	80 - 120	96	80 - 120	<0.0040	ug/L	0.57	40		
C031047	Total Molybdenum (Mo)	2025/07/29	107	80 - 120	106	80 - 120	<0.0050	ug/L	11	40		
C031047	Total Nickel (Ni)	2025/07/29	100	80 - 120	99	80 - 120	<0.015	ug/L	0.93	40		
C031047	Total Potassium (K)	2025/07/29	105	80 - 120	105	80 - 120	<5.0	ug/L	0.46	40		
C031047	Total Selenium (Se)	2025/07/29	94	80 - 120	97	80 - 120	<0.010	ug/L	12	40		
C031047	Total Silicon (Si)	2025/07/29	96	80 - 120	97	80 - 120	<1.2	ug/L	2.9	40		
C031047	Total Silver (Ag)	2025/07/29	100	80 - 120	102	80 - 120	<0.0020	ug/L	30	40		
C031047	Total Sodium (Na)	2025/07/29	95	80 - 120	98	80 - 120	<0.50	ug/L	0.52	40		
C031047	Total Strontium (Sr)	2025/07/29	NC	80 - 120	96	80 - 120	<0.0080	ug/L	1.4	40		
C031047	Total Sulphur (S)	2025/07/29	107	80 - 120	109	80 - 120	1.8, RDL=1.0 (3)	ug/L	2.1	40		
C031047	Total Thallium (Tl)	2025/07/29	99	80 - 120	98	80 - 120	<0.00080	ug/L	6.2	40		
C031047	Total Tin (Sn)	2025/07/29	99	80 - 120	99	80 - 120	<0.0050	ug/L	NC	40		
C031047	Total Titanium (Ti)	2025/07/29	102	80 - 120	97	80 - 120	0.045, RDL=0.030 (3)	ug/L	0.72	40		
C031047	Total Uranium (U)	2025/07/29	100	80 - 120	100	80 - 120	<0.00050	ug/L	4.0	40		
C031047	Total Vanadium (V)	2025/07/29	98	80 - 120	104	80 - 120	<0.0050	ug/L	1.8	40		
C031047	Total Zinc (Zn)	2025/07/29	98	80 - 120	99	80 - 120	<0.060	ug/L	3.7	40		



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031047	Total Zirconium (Zr)	2025/07/29	98	80 - 120	98	80 - 120	<0.0080	ug/L	2.3	40		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Matrix Spike exceeds acceptance limits due to matrix interference. Reanalysis yields similar results.

(3) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maria Magdalena Florescu, Ph.D., P.Chem., QP, Laboratory Manager SR

Neenu Jose, Project Solutions Representative

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas 4000 19th N.E., Calgary, Alberta Canada T2E 6P6 Tel: (403) 291-3077 Toll-free 800-563-0206 Fax: (403) 291-3668 www.bv.com										Page 1 of 3			
CHAIN OF CUSTODY RECORD													
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50376 WSP Canada Inc.					Quotation #: C41460		Bureau Veritas Job #:	
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:		Bottle Order #:	
Address: Park Place Suite 3400-666 Burrard St. VANCOUVER BC V5C 2X8					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP		COC #:	
Tel: (604) 681-8371 Fax: (604) 681-8209					Tel: Fax:					Project Name:		Project Manager:	
Email: BR.accounts payable@b2gold.com					Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com					Site #:		Molissa McIntosh	
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required:	
☐ AT ☐ CCME ☐ Other										☐ AEMP-Routine Parameters ☐ AEMP - Nutrients ☐ AEMP - Other Conventional ☐ Ultra Low Level Total Metals + Hg ☐ Ultra Low Level Dissolved Metals + Hg (Lab In) ☐ Radium-226 (Low Level)		Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are + 5 days - contact your Project Manager for details. Rush Confirmation Number: _____ (not for 6)	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS													
Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Media Field Filtered T (Y/N)								
1	BRP-29A-1	25/07/08	10:00										
2	BRP-29A-2	25/07/08	11:15										
3	BRP-29A-3	25/07/08	12:15										
4	BRP-29A-4	25/07/08	13:35										
5	BRP-29A-5	25/07/09	8:30										
6	BRP-31-1												
7	BRP-31-2												
8	BRP-31-3	25/07/09	9:40										
9	BRP-31-4	25/07/09	10:45										
10	BRP-31-5												
* RELEASED BY: (Signature/Print)		Date: (YYMMDD)	Time	RECEIVED BY: (Signature/Print)		Date: (YYMMDD)	Time	# Jars used and not submitted	Laboratory Use Only				
Adam Feldman		25/07/10	6:30	Jaskirat Rehal		2025/07/11	15:03		Temperature (°C) on Receipt: ACTR Custody Seal (Inlet on Cooler)? ☐ Yes ☐ No				
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNATURE OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/RESOURCES/RESOURCES/COC-TERMS-AND-CONDITIONS. ** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. *** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.													



EYK-2025-07-015

Bureau Veritas 400 1st N.E. Calgary, Alberta Canada T2E 6P4 Tel: (403) 261-3077 Toll-free 800-563-6264 Fax: (403) 261-6468 www.bvna.com										Page 2 of 3																													
INVOICE TO:										REPORT TO:										PROJECT INFORMATION:										Laboratory Use Only:									
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50378 WSP Canada Inc.					Quotation #: C41460					Bureau Veritas Job #:					Battle Order #:																			
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:																													
Address: Park Place Suite 3400-066 Burrard St.					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP					COC #:					Project Manager:																			
VANCOUVER BC V6C 2X8										Project Name:										Malissa McIntosh																			
Tel: (604) 681-8371 Fax: (604) 681-6209					Tel: Fax:					Site #:																													
Email: BR.accounts payable@b2gold.com					Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com					Sampled By:																													
Regulatory Criteria: ☐ AT1 ☐ CCME ☐ Other										Special Instructions										ANALYSIS REQUESTED (PLEASE BE SPECIFIC) Metals Field Filtered ? (Y/N)										Turnaround Time (TAT) Required: Please provide advance notice for rush projects Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Date Required:									
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																																							
Sample Barcode Label		Sample (Location) Identification		Date Sampled		Time Sampled		Matrix		Metals Field Filtered ? (Y/N)		AEMP-Routine Parameters		AEMP - Nutrients		AEMP- Other Conventional		Ultra Low Level Total Metals + Hg		Ultra Low Level Dissolved Metals + Hg (Lab filter)		Radium-226 Low Level		Chlorophyll and Phytoplankton Water		F of Bottles		Comments											
1		BRP-32-1		25/07/09		11:45						☒		☒		☒		☒		☒		☒																	
2		BRP-32-2		25/07/09		13:15						☒		☒		☒		☒		☒		☒																	
3		BRP-32-3		25/07/09		14:15						☒		☒		☒		☒		☒		☒																	
4		BRP-32-4																																					
5		BRP-32-5																																					
6		BRP-38-1																																					
7		BRP-38-2																																					
8		BRP-38-3																																					
9		BRP-38-4																																					
10		BRP-38-5																																					
RELINQUISHED BY: (Signature/Print)										RECEIVED BY: (Signature/Print)										Date: (YY/MM/DD) Time: # Jars used and not submitted 25/07/10 6:40 Taskirat Begol 02 2025/07/11 15:05										Laboratory Use Only Two Samples: ☐ Temperature (°C) on Receipt: ACTR Cavity Seal Intact on Delivery? ☐ Yes ☐ No									
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/DOC-TERMS-AND-CONDITIONS * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL LAT DELAYS. ** ALL SAMPLES ARE HELD FOR 30 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER																																							

Bureau Veritas 4000 19th N.E., Calgary, Alberta Canada T2E 8P6 Tel: (403) 291-3077 Toll free 800-563-6266 Fax: (403) 291-8468 www.bv.ca										CHAIN OF CUSTODY RECORD										Page 3 of 3	
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:						
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50376 WSP Canada Inc.					Quotation #: C41460					Bureau Veritas Job #						
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:					Bottle Order #:						
Address: Park Place Suite 3400-500 Burrard St.					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP					COC #:						
VANCOUVER BC V6C 2X8										Project Name:					Project Manager:						
Tel: (604) 681-8371 Fax: (604) 681-8209					Tel: Fax:					Site #:					Molissa McInosh						
Email: BR.accounts@b2gold.com					Email: beatriz.cupe.flores@wsp.com jennifer.arenas@wsp.com					Sampled By:					C4150239-02-01						
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Turnaround Time (TAT) Required:						
☐ AT										AEMP-Routine Parameters					Regular (Standard) TAT:						
☐ CCME										AEMP - Nutrients					(will be applied if Rush TAT is not specified)						
☐ Other										AEMP- Other Conventional					Standard TAT - 5-7 Working days for most tests.						
										Ultra Low Level Total Metals + Hg					Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details						
										Ultra Low Level Dissolved Metals + Hg (Lab fil)					Job Specific Rush TAT (if applies to entire submission)						
										Radium-226 Low Level					Date Required:						
										Chlorophyll and Phaeophytin in Water					Rush Confirmation Number:						
															(add fee for it)						
															# of Bottles						
															Comments						
SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																					
Sample Records Label		Sample (Location) Identification		Date Sampled		Time Sampled		Status		Metal Field Filtered ? (Y/N)											
1		FD		25/07/09		12:20															
2		FB		25/07/09		12:20															
3		EB		25/07/09		12:20															
4		TB																			
5																					
6																					
7																					
8																					
9																					
10																					
* RELINQUISHED BY: (Signature/Print)					Date: (YYMMDD)		Time:		RECEIVED BY: (Signature/Print)					Date: (YYMMDD)		Time:		# jars used and not submitted			
Adam Feldberg					25/07/10		6:30		Tasleat Begol					25/07/11		15:05					
UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. BEARING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS .										Laboratory Use Only											
IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAY.										Time Selected: ☐											
** ALL SAMPLES ARE HELD FOR 66 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER										Temperature (°C) on Receipt: ACTR											
										Custody Seal Intact in Container? ☐ Yes ☐ No											



Your P.O. #: 470000200
 Your Project #: WATER QUALITY- JULY AEMP
 Site Location: 176233659
 Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/08/11
 Report #: R3697203
 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

Sample Matrix: Water
 # Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	12	N/A	2025/07/12	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	12	N/A	2025/07/14	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	12	N/A	2025/07/14	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) -Lab Filtered (1, 3)	2	N/A	2025/07/15	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 3)	10	N/A	2025/07/17	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	12	N/A	2025/07/13	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	12	N/A	2025/07/14	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	11	N/A	2025/07/16		Auto Calc
Sulphide (as H2S) (1)	1	N/A	2025/07/17		Auto Calc
Hardness Total (calculated as CaCO3) (1, 4)	12	N/A	2025/07/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	12	N/A	2025/07/29	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	12	N/A	2025/07/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	12	2025/07/22	2025/07/22	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	12	N/A	2025/07/26	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	12	N/A	2025/07/29	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N	10	N/A	2025/08/01		Auto Calc
Ammonia-N Low Level (Preserved) (1)	12	N/A	2025/07/14	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	12	N/A	2025/07/14		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	12	N/A	2025/07/12	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	12	2025/07/11	2025/07/14		Auto Calc
pH @25°C (1, 5)	12	N/A	2025/07/13	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	10	N/A	2025/08/01	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 6)	12	N/A	2025/07/12	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	12	2025/07/15	2025/07/16	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	12	N/A	2025/07/17	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	10	2025/07/12	2025/07/13	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	2	2025/07/17	2025/07/18	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	12	N/A	2025/07/29		Auto Calc
Temperature (Field) (1)	10	N/A	2025/08/01	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	11	N/A	2025/07/15		Auto Calc



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/11
Report #: R3697203
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/07/16		Auto Calc
Nitrogen (Total) (1)	11	2025/07/15	2025/07/15	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/07/17	2025/07/17	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 7)	10	N/A	2025/07/16	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 7)	2	N/A	2025/07/21	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 8)	9	2025/07/14	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 8)	1	2025/07/17	2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus-Dis-Low-Lab Filtered (1, 8)	2	2025/07/13	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	10	2025/07/14	2025/07/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/17	2025/07/17	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/18	2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	10	2025/07/12	2025/07/12	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	2	2025/07/12	2025/07/13	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	12	N/A	2025/07/12	CAL SOP-00081	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: C#759289-01-01-03

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/11
Report #: R3697203
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C561674

Received: 2025/07/10, 13:00

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(7) TOC present in the sample should be considered as non-purgeable TOC.

(8) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV923			DOV924		
Sampling Date		2025/07/08 10:00			2025/07/08 11:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	42.6	0.50	C016855	42.8	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	43.5	0.50	C016911	44.2	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.9	0.20	C015793	1.9	0.20	C015793
Nitrate (NO ₃)	mg/L	8.6	0.89	C016686	8.4	0.89	C016686
Nitrite (NO ₂)	mg/L	0.022	0.0033	C016686	0.028	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	66	10	C016746	67	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.26	0.20	C016551	0.45	0.20	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	6.57	N/A	ONSITE	6.62	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.67	N/A	ONSITE	14.16	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	120	2.0	C017489	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00215 (1)	0.00050	C018231	0.00245	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00234	0.00050	C018601	0.00242	0.00050	C018601
Fluoride (F)	mg/L	0.027	0.010	C017490	0.027	0.010	C017490
Free Free Cyanide	mg/L	0.00231	0.00050	C018602	0.00298	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	4.3	0.50	C021795			
pH	pH	6.53	N/A	C017488	6.52	N/A	C017488
Reactive Silica	mg/L	1.3	0.050	C021524	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.59	0.50	C017487	3.63	0.50	C017487
Total Organic Carbon (C)	mg/L	4.7	0.50	C020594	4.5	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.38	0.50	C017487	4.43	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	76	10	C016958	72	10	C016958
RDL = Reportable Detection Limit							
N/A = Not Applicable							
(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV923			DOV924		
Sampling Date		2025/07/08 10:00			2025/07/08 11:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Total Suspended Solids	mg/L	<1.0	1.0	C016955	<0.99	0.99	C016955
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L				3.9 (1)	0.50	C019352
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018855	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	11	0.50	C017204	12	0.50	C017204
Sulphate (SO4)	mg/L	25	0.50	C017204	26	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465			
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.25	0.0050	C017821	0.25	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0067	0.0010	C017271	0.0084	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	2.0	0.20	C017271	1.9	0.20	C017271
Total Nitrogen (N)	mg/L	2.2	0.10	C018820	2.4	0.10	C018820
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L				<0.0010	0.0010	C017527
Physical Properties							
Turbidity	NTU	<0.10	0.10	C017130	<0.10	0.10	C017130
RDL = Reportable Detection Limit							
(1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV925			DOV926		
Sampling Date		2025/07/08 12:15			2025/07/08 13:35		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-29A-4	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	44.5	0.50	C016855	43.7	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	45.2	0.50	C016911	43.6	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.9	0.20	C015793	1.7	0.20	C015793
Nitrate (NO ₃)	mg/L	8.6	0.89	C016686	7.5	0.89	C016686
Nitrite (NO ₂)	mg/L	0.023	0.0033	C016686	0.022	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	68	10	C016746	65	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.52	0.20	C016551	0.60	0.20	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	6.53	N/A	ONSITE	6.72	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.97	N/A	ONSITE	14.37	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	120	2.0	C017489	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00321 (1)	0.00050	C018231	0.00200	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00333	0.00050	C018601	0.00190	0.00050	C018601
Fluoride (F)	mg/L	0.027	0.010	C017490	0.026	0.010	C017490
Free Free Cyanide	mg/L	0.00326	0.00050	C018602	0.00212	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	4.5	0.50	C021795	5.6	0.50	C021795
pH	pH	6.46	N/A	C017488	6.49	N/A	C017488
Reactive Silica	mg/L	1.2	0.050	C021524	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.29	0.50	C017487	3.72	0.50	C017487
Total Organic Carbon (C)	mg/L	3.8	0.50	C024758	4.6	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.01	0.50	C017487	4.54	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	76	10	C016958	72	10	C016958
RDL = Reportable Detection Limit							
N/A = Not Applicable							
(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV925			DOV926		
Sampling Date		2025/07/08 12:15			2025/07/08 13:35		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-29A-4	RDL	QC Batch
Total Suspended Solids	mg/L	1.4	0.99	C016956	<1.0	1.0	C016956
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018855
Chloride (Cl)	mg/L	11	0.50	C017209	11	0.50	C017204
Sulphate (SO4)	mg/L	26	0.50	C017209	25	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0012	0.0010	C018465	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010 (1)	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.28	0.0050	C017821	0.24	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0069	0.0010	C017271	0.0066	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	1.9	0.20	C017271	1.7	0.20	C017271
Total Nitrogen (N)	mg/L	2.5	0.10	C018820	2.3	0.10	C018820
Physical Properties							
Turbidity	NTU	<0.10	0.10	C017130	<0.10	0.10	C017130
RDL = Reportable Detection Limit							
(1) TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV927		DOV928		DOV929		
Sampling Date		2025/07/08 08:30		2025/07/08 09:40		2025/07/08 10:45		
COC Number		C#759289-01-01-03		C#759289-01-01-03		C#759289-01-01-03		
	UNITS	BRP-29A-5	QC Batch	BRP-31-3	RDL	BRP-31-4	RDL	QC Batch

Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	40.9	C016855	42.7	0.50	42.6	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	42.0	C016911	43.1	0.50	43.1	0.50	C016911
Dissolved Nitrate (N)	mg/L	1.8	C015793	1.8	0.20	1.7	0.20	C015793
Nitrate (NO ₃)	mg/L	7.9	C016686	8.0	0.89	7.5	0.89	C016686
Nitrite (NO ₂)	mg/L	0.022	C016686	0.023	0.0033	0.023	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	C016897	<0.0020	0.0020	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	64	C016746	65	10	63	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.41	C016551	0.36	0.20	0.47	0.20	C016551
Un-Ionized Ammonia	mg/L	0.00059	C037090	<0.00050	0.00050	<0.00050	0.00050	C037090

Field Parameters								
Field pH	pH	6.95	ONSITE	6.73	N/A	6.25	N/A	ONSITE
Field Temperature (Fd)	deg. C	15.07	ONSITE	15.31	N/A	15.31	N/A	ONSITE

Misc. Inorganics								
Conductivity	uS/cm	120	C017489	120	2.0	120	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00204 (1)	C018231	0.00156 (1)	0.00050	0.00157	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00205	C018601	0.00161	0.00050	0.00155	0.00050	C018601
Fluoride (F)	mg/L	0.026	C017490	0.026	0.010	0.025	0.010	C017490
Free Free Cyanide	mg/L	0.00253	C018602	0.00166	0.00050	0.00177	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.3	C021795	4.7	0.50	4.1	0.50	C021795
pH	pH	6.56	C017488	6.52	N/A	6.45	N/A	C017488
Reactive Silica	mg/L	1.2	C021524	1.2	0.050	1.2	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	3.59	C017487	3.76	0.50	3.14	0.50	C017487
Total Organic Carbon (C)	mg/L	5.0	C020594	4.6	0.50	4.7	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.38	C017487	4.59	0.50	3.83	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	C017487	<0.50	0.50	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	72	C016958	76	10	68	10	C016958
Total Suspended Solids	mg/L	<1.0	C016956	<1.0	1.0	1.3	0.99	C016956

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV927		DOV928		DOV929		
Sampling Date		2025/07/08 08:30		2025/07/08 09:40		2025/07/08 10:45		
COC Number		C#759289-01-01-03		C#759289-01-01-03		C#759289-01-01-03		
	UNITS	BRP-29A-5	QC Batch	BRP-31-3	RDL	BRP-31-4	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C017299	<0.0010	0.0010	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	C018859	<0.0018	0.0018	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	11	C017204	11	0.50	9.7	0.50	C017209
Sulphate (SO4)	mg/L	25	C017204	25	0.50	25	0.50	C017209
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C018465	<0.0010	0.0010	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	C018456	<0.0010	0.0010	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.24	C017821	0.23	0.0050	0.24	0.0050	C017820
Dissolved Nitrite (N)	mg/L	0.0066	C017271	0.0070	0.0010	0.0070	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	1.8	C017271	1.8	0.20	1.7	0.20	C017271
Total Nitrogen (N)	mg/L	2.2	C018820	2.2	0.10	2.2	0.10	C018820
Physical Properties								
Turbidity	NTU	0.12	C017130	0.13	0.10	<0.10	0.10	C017130
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C561674

Report Date: 2025/08/11

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV930			DOV931		
Sampling Date		2025/07/08 11:45			2025/07/08 13:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	28.3	0.50	C016855	28.1	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	28.7	0.50	C016911	28.4	0.50	C016911
Dissolved Nitrate (N)	mg/L	0.56	0.040	C015793	0.54	0.040	C015793
Nitrate (NO ₃)	mg/L	2.5	0.18	C016686	2.4	0.18	C016686
Nitrite (NO ₂)	mg/L	0.0060	0.0033	C016686	0.0060	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	43	10	C016746	40	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.34	0.040	C016551	0.32	0.040	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090
Field Parameters							
Field pH	pH	7.31	N/A	ONSITE	7.3	N/A	ONSITE
Field Temperature (Fd)	deg. C	14.98	N/A	ONSITE	14.84	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	85	2.0	C017489	74	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231	<0.00050	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601	<0.00050	0.00050	C018601
Fluoride (F)	mg/L	0.025	0.010	C017490	0.025	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602	<0.00050	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.2	0.50	C021795	3.8	0.50	C021795
pH	pH	7.14	N/A	C017488	6.60	N/A	C017488
Reactive Silica	mg/L	0.99	0.050	C021524	1.1	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	9.89	0.50	C017487	4.37	0.50	C017487
Total Organic Carbon (C)	mg/L	4.3	0.50	C020594	4.2	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	12.1	0.50	C017487	5.33	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	44 (1)	10	C021938	36	10	C016959
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV930			DOV931		
Sampling Date		2025/07/08 11:45			2025/07/08 13:15		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-1	RDL	QC Batch	BRP-32-2	RDL	QC Batch
Total Suspended Solids	mg/L	1.3	1.0	C016956	<0.99	0.99	C016956
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018855
Chloride (Cl)	mg/L	5.6	0.50	C017204	5.5	0.50	C017204
Sulphate (SO ₄)	mg/L	17	0.50	C017204	17	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	0.076	0.0050	C017821	0.039	0.0050	C017821
Dissolved Nitrite (N)	mg/L	0.0018	0.0010	C017271	0.0018	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	0.57	0.040	C017271	0.55	0.040	C017271
Total Nitrogen (N)	mg/L	0.91	0.020	C018831	0.87	0.020	C018820
Physical Properties							
Turbidity	NTU	0.11	0.10	C017130	0.13	0.10	C017130
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV932			DOV933		
Sampling Date		2025/07/08 14:15			2025/07/08 12:20		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-3	RDL	QC Batch	FD	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	27.7	0.50	C016855	44.9	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	28.2	0.50	C016911	44.7	0.50	C016911
Dissolved Nitrate (N)	mg/L	0.55	0.040	C015793	1.9	0.20	C015793
Nitrate (NO ₃)	mg/L	2.4	0.18	C016686	8.6	0.89	C016686
Nitrite (NO ₂)	mg/L	0.0060	0.0033	C016686	0.023	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	39	10	C016746	69	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.31	0.040	C016551	0.64	0.20	C016551
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090			
Field Parameters							
Field pH	pH	7.17	N/A	ONSITE			
Field Temperature (Fd)	deg. C	14.89	N/A	ONSITE			
Misc. Inorganics							
Conductivity	uS/cm	74	2.0	C017489	130	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231	0.00343	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601	0.00336	0.00050	C018601
Fluoride (F)	mg/L	0.023	0.010	C017490	0.026	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602	0.00421	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	5.1	0.50	C021795			
pH	pH	6.52	N/A	C017488	6.50	N/A	C017488
Reactive Silica	mg/L	0.99	0.050	C021524	1.4	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	4.01	0.50	C017487	3.55	0.50	C017487
Total Organic Carbon (C)	mg/L	4.1	0.50	C020594	4.2	0.50	C024758
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	4.89	0.50	C017487	4.33	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	36	10	C016959	80	10	C016959
Total Suspended Solids	mg/L	<1.0	1.0	C016956	<0.99	0.99	C016956
RDL = Reportable Detection Limit N/A = Not Applicable							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV932			DOV933		
Sampling Date		2025/07/08 14:15			2025/07/08 12:20		
COC Number		C#759289-01-01-03			C#759289-01-01-03		
	UNITS	BRP-32-3	RDL	QC Batch	FD	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L				4.3 (1)	0.50	C019352
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	5.2	0.50	C017209	12	0.50	C017204
Sulphate (SO4)	mg/L	17	0.50	C017209	26	0.50	C017204
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989			
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C022776	0.0016	0.0010	C021269
Total Ammonia (N)	mg/L	0.029	0.0050	C017821	0.29	0.0050	C017820
Dissolved Nitrite (N)	mg/L	0.0017	0.0010	C017271	0.0071	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	0.55	0.040	C017271	1.9	0.20	C017271
Total Nitrogen (N)	mg/L	0.86	0.020	C018820	2.6	0.10	C021575
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L				<0.0010	0.0010	C017527
Physical Properties							
Turbidity	NTU	0.16	0.10	C017130	0.16	0.10	C017130
RDL = Reportable Detection Limit							
(1) Sample filtered and preserved past method specified hold time							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV934		
Sampling Date		2025/07/08 12:20		
COC Number		C#759289-01-01-03		
	UNITS	EB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C016855
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C016911
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C015793
Nitrate (NO ₃)	mg/L	<0.013	0.013	C016686
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C016686
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C016897
Calculated Total Dissolved Solids	mg/L	<10	10	C016746
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.020	0.020	C016551
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C017489
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018231
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C018601
Fluoride (F)	mg/L	<0.010	0.010	C017490
Free Free Cyanide	mg/L	<0.00050	0.00050	C018602
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	C021795
pH	pH	5.99	N/A	C017488
Reactive Silica	mg/L	<0.050	0.050	C021524
Alkalinity (Total as CaCO ₃)	mg/L	0.87	0.50	C017487
Total Organic Carbon (C)	mg/L	<0.50	0.50	C020594
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C017487
Bicarbonate (HCO ₃)	mg/L	1.06	0.50	C017487
Carbonate (CO ₃)	mg/L	<0.50	0.50	C017487
Hydroxide (OH)	mg/L	<0.50	0.50	C017487
Total Dissolved Solids	mg/L	<10 (1)	10	C021938
Total Suspended Solids	mg/L	<1.0	1.0	C016956
RDL = Reportable Detection Limit N/A = Not Applicable (1) Sample was originally processed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.				



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DOV934		
Sampling Date		2025/07/08 12:20		
COC Number		C#759289-01-01-03		
	UNITS	EB	RDL	QC Batch
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C017299
Total Sulphide	mg/L	<0.0018	0.0018	C018859
Chloride (Cl)	mg/L	<0.50	0.50	C017204
Sulphate (SO4)	mg/L	<0.50	0.50	C017204
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C018465
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C018456
Total Ammonia (N)	mg/L	<0.0050	0.0050	C017820
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C017271
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C017271
Total Nitrogen (N)	mg/L	0.020	0.020	C018820
Physical Properties				
Turbidity	NTU	<0.10	0.10	C017130
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00193	0.00201	0.00203	0.00154	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00137	0.00134	0.00140	0.00133	0.00010	C028535
RDL = Reportable Detection Limit							

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00197	0.00199	0.00190	0.00151	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00121	0.00115	0.00130	0.00103	0.00010	C028535
RDL = Reportable Detection Limit							

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	0.00156	0.00147	0.00195	<0.00010	0.00010	C025625
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	0.00088	0.00091	0.00141	0.00012	0.00010	C028535
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	32.7	32.4	33.5	34.1	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0173	0.0179	0.0185	0.0198	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.361	0.359	0.353	0.355	0.0050	C031041
Dissolved Barium (Ba)	ug/L	16.6	16.5	17.0	16.9	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0072	0.0070	0.0067	0.0069	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	3.70	3.70	3.73	3.81	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0195	0.0182	0.0255	0.0228	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	9610	9810	10100	9780	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.178	0.152	0.164	0.152	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.869	0.950	1.00	0.911	0.0040	C031041
Dissolved Copper (Cu)	ug/L	2.67	2.53	2.58	2.61	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.1	6.7	6.6	6.5	1.0	C031041
Dissolved Lead (Pb)	ug/L	0.0056	0.0044	0.0044	0.0035	0.0030	C031041
Dissolved Lithium (Li)	ug/L	1.26	1.32	1.35	1.33	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	4510	4440	4690	4680	0.50	C031041
Dissolved Manganese (Mn)	ug/L	13.0	13.8	14.6	13.5	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0274	0.0343	0.0312	0.0279	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	8.66	8.79	9.01	8.77	0.015	C031041
Dissolved Potassium (K)	ug/L	1290	1280	1310	1300	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.069	0.071	0.071	0.062	0.010	C031041
Dissolved Silicon (Si)	ug/L	487	497	479	483	1.2	C031041
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1900	1880	1990	1960	0.50	C031041
Dissolved Strontium (Sr)	ug/L	49.9	50.1	51.8	50.8	0.0080	C031041
Dissolved Sulphur (S)	ug/L	8380	8500	8840	9050	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00636	0.00528	0.00547	0.00565	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.332	0.487	0.215	0.218	0.030	C031041
Dissolved Uranium (U)	ug/L	0.0138	0.0144	0.0138	0.0150	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0311	0.0246	0.0324	0.0369	0.0050	C031041
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	2.47	2.38	2.53	2.38	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.104	0.105	0.105	0.105	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	45.2	45.6	46.8	44.9	0.10	C031047
Total Antimony (Sb)	ug/L	0.0230	0.0245	0.0272	0.0211	0.0030	C031047
Total Arsenic (As)	ug/L	0.360	0.387	0.395	0.390	0.0050	C031047
Total Barium (Ba)	ug/L	16.9	17.0	17.3	16.8	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0084	0.0075	0.0070	0.0076	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	3.88	3.96	4.01	3.69	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0219	0.0251	0.0257	0.0251	0.0030	C031047
Total Calcium (Ca)	ug/L	9850	10100	10200	9910	2.0	C031047
Total Chromium (Cr)	ug/L	0.204	0.222	0.207	0.208	0.020	C031047
Total Cobalt (Co)	ug/L	0.940	1.05	1.07	0.970	0.0040	C031047
Total Copper (Cu)	ug/L	2.90	2.86	2.91	2.76	0.020	C031047
Total Iron (Fe)	ug/L	33.3	33.6	33.5	33.6	1.0	C031047
Total Lead (Pb)	ug/L	0.0138	0.0144	0.0153	0.0117	0.0030	C031047
Total Lithium (Li)	ug/L	1.29	1.25	1.32	1.20	0.050	C031047
Total Magnesium (Mg)	ug/L	4580	4630	4770	4570	0.50	C031047
Total Manganese (Mn)	ug/L	14.0	14.9	15.5	14.2	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0315	0.0355	0.0343	0.0286	0.0050	C031047
Total Nickel (Ni)	ug/L	8.82	9.14	9.30	8.83	0.015	C031047
Total Potassium (K)	ug/L	1300	1320	1330	1290	5.0	C031047
Total Selenium (Se)	ug/L	0.055	0.047	0.050	0.054	0.010	C031047
Total Silicon (Si)	ug/L	499	496	481	484	1.2	C031047
Total Silver (Ag)	ug/L	0.0027	0.0036	<0.0020	0.0062	0.0020	C031047
Total Sodium (Na)	ug/L	1920	1930	2020	1910	0.50	C031047
Total Strontium (Sr)	ug/L	50.2	51.1	52.0	50.0	0.0080	C031047
Total Sulphur (S)	ug/L	8680	8860	9050	8790	1.0	C031047
Total Thallium (Tl)	ug/L	0.00528	0.00612	0.00620	0.00535	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	0.0245	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.337	0.373	0.313	0.273	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV923	DOV924	DOV925	DOV926		
Sampling Date		2025/07/08 10:00	2025/07/08 11:15	2025/07/08 12:15	2025/07/08 13:35		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Total Uranium (U)	ug/L	0.0155	0.0175	0.0161	0.0161	0.00050	C031047
Total Vanadium (V)	ug/L	0.0703	0.0704	0.0694	0.0687	0.0050	C031047
Total Zinc (Zn)	ug/L	2.64	2.64	2.88	2.43	0.060	C031047
Total Zirconium (Zr)	ug/L	0.116	0.114	0.118	0.115	0.0080	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	31.5	32.2	33.1	18.0	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0170	0.0199	0.0202	0.0098	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.338	0.342	0.374	0.265	0.0050	C031041
Dissolved Barium (Ba)	ug/L	15.8	16.4	16.7	10.3	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0070	0.0069	0.0057	0.0033	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	3.46	3.69	3.77	2.46	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0186	0.0202	0.0210	0.0053	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	9090	9600	9600	5900	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.166	0.168	0.153	0.108	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.702	0.768	0.769	0.152	0.0040	C031041
Dissolved Copper (Cu)	ug/L	2.48	2.53	2.55	1.69	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.3	6.9	7.1	8.4	1.0	C031041
Dissolved Lead (Pb)	ug/L	0.0033	0.0032	0.0040	<0.0030	0.0030	C031041
Dissolved Lithium (Li)	ug/L	1.24	1.32	1.36	0.958	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	4410	4560	4520	3290	0.50	C031041
Dissolved Manganese (Mn)	ug/L	10.5	11.5	11.7	2.99	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0344	0.0299	0.0320	0.0184	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	7.99	8.33	8.27	6.07	0.015	C031041
Dissolved Potassium (K)	ug/L	1210	1280	1280	646	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.047	0.075	0.074	0.030	0.010	C031041
Dissolved Silicon (Si)	ug/L	451	474	481	390	1.2	C031041
Dissolved Silver (Ag)	ug/L	0.0030	<0.0020	<0.0020	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1840	1910	1910	1100	0.50	C031041
Dissolved Strontium (Sr)	ug/L	46.6	48.4	49.2	26.6	0.0080	C031041
Dissolved Sulphur (S)	ug/L	8340	8350	8510	5940	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00536	0.00597	0.00527	0.00353	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.191	0.295	0.170	0.259	0.030	C031041
Dissolved Uranium (U)	ug/L	0.0142	0.0140	0.0140	0.00979	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0342	0.0354	0.0308	0.0341	0.0050	C031041

RDL = Reportable Detection Limit



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	2.22	2.32	2.39	1.05	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.103	0.107	0.108	0.0773	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	44.8	44.4	45.4	26.6	0.10	C031047
Total Antimony (Sb)	ug/L	0.0200	0.0202	0.0201	0.0088	0.0030	C031047
Total Arsenic (As)	ug/L	0.362	0.386	0.370	0.257	0.0050	C031047
Total Barium (Ba)	ug/L	16.1	17.1	16.6	10.5	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0072	0.0072	0.0067	0.0039	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	3.87	3.90	3.82	2.72	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0219	0.0229	0.0241	0.0077	0.0030	C031047
Total Calcium (Ca)	ug/L	9380	9720	9660	5970	2.0	C031047
Total Chromium (Cr)	ug/L	0.197	0.194	0.192	0.162	0.020	C031047
Total Cobalt (Co)	ug/L	0.803	0.852	0.865	0.261	0.0040	C031047
Total Copper (Cu)	ug/L	2.75	2.80	2.76	1.89	0.020	C031047
Total Iron (Fe)	ug/L	34.4	32.8	33.4	34.2	1.0	C031047
Total Lead (Pb)	ug/L	0.0179	0.0132	0.0125	0.0067	0.0030	C031047
Total Lithium (Li)	ug/L	1.22	1.18	1.24	0.903	0.050	C031047
Total Magnesium (Mg)	ug/L	4500	4570	4610	3350	0.50	C031047
Total Manganese (Mn)	ug/L	11.9	12.7	12.7	4.61	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0322	0.0292	0.0279	0.0154	0.0050	C031047
Total Nickel (Ni)	ug/L	8.36	8.54	8.50	6.28	0.015	C031047
Total Potassium (K)	ug/L	1240	1300	1290	655	5.0	C031047
Total Selenium (Se)	ug/L	0.073	0.068	0.051	0.027	0.010	C031047
Total Silicon (Si)	ug/L	466	484	467	392	1.2	C031047
Total Silver (Ag)	ug/L	0.0045	0.0031	0.0020	<0.0020	0.0020	C031047
Total Sodium (Na)	ug/L	1870	1890	1920	1120	0.50	C031047
Total Strontium (Sr)	ug/L	47.1	49.7	48.9	26.9	0.0080	C031047
Total Sulphur (S)	ug/L	8600	8680	8750	6110	1.0	C031047
Total Thallium (Tl)	ug/L	0.00554	0.00504	0.00622	0.00392	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.304	0.564	0.272	0.207	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV927	DOV928	DOV929	DOV930		
Sampling Date		2025/07/08 08:30	2025/07/08 09:40	2025/07/08 10:45	2025/07/08 11:45		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-29A-5	BRP-31-3	BRP-31-4	BRP-32-1	RDL	QC Batch
Total Uranium (U)	ug/L	0.0147	0.0157	0.0171	0.0115	0.00050	C031047
Total Vanadium (V)	ug/L	0.0702	0.0693	0.0710	0.0671	0.0050	C031047
Total Zinc (Zn)	ug/L	2.51	2.46	2.48	1.09	0.060	C031047
Total Zirconium (Zr)	ug/L	0.115	0.123	0.118	0.0881	0.0080	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	ug/L	17.8	17.7	34.1	0.20	0.10	C031041
Dissolved Antimony (Sb)	ug/L	0.0122	0.0133	0.0160	<0.0030	0.0030	C031041
Dissolved Arsenic (As)	ug/L	0.237	0.248	0.339	<0.0050	0.0050	C031041
Dissolved Barium (Ba)	ug/L	9.94	10.2	17.1	<0.0080	0.0080	C031041
Dissolved Beryllium (Be)	ug/L	0.0038	0.0035	0.0072	<0.0015	0.0015	C031041
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031041
Dissolved Boron (B)	ug/L	2.33	2.37	3.82	<0.10	0.10	C031041
Dissolved Cadmium (Cd)	ug/L	0.0095	0.0055	0.0262	<0.0030	0.0030	C031041
Dissolved Calcium (Ca)	ug/L	5820	5750	10200	2.7	2.0	C031041
Dissolved Chromium (Cr)	ug/L	0.115	0.123	0.182	0.031	0.020	C031041
Dissolved Cobalt (Co)	ug/L	0.136	0.137	1.04	<0.0040	0.0040	C031041
Dissolved Copper (Cu)	ug/L	1.64	1.65	2.65	<0.020	0.020	C031041
Dissolved Iron (Fe)	ug/L	7.7	7.7	6.6	<1.0	1.0	C031041
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	0.0036	<0.0030	0.0030	C031041
Dissolved Lithium (Li)	ug/L	0.937	0.910	1.35	<0.050	0.050	C031041
Dissolved Magnesium (Mg)	ug/L	3300	3230	4730	<0.50	0.50	C031041
Dissolved Manganese (Mn)	ug/L	2.72	2.60	15.2	<0.0040	0.0040	C031041
Dissolved Molybdenum (Mo)	ug/L	0.0171	0.0201	0.0406	<0.0050	0.0050	C031041
Dissolved Nickel (Ni)	ug/L	6.03	6.02	9.19	<0.015	0.015	C031041
Dissolved Potassium (K)	ug/L	632	631	1330	7.9	5.0	C031041
Dissolved Selenium (Se)	ug/L	0.015	0.027	0.059	<0.010	0.010	C031041
Dissolved Silicon (Si)	ug/L	390	390	479	<1.2	1.2	C031041
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	0.0022	<0.0020	0.0020	C031041
Dissolved Sodium (Na)	ug/L	1090	1070	2010	<0.50	0.50	C031041
Dissolved Strontium (Sr)	ug/L	25.9	25.9	52.4	<0.0080	0.0080	C031041
Dissolved Sulphur (S)	ug/L	5970	5890	8810	<1.0	1.0	C031041
Dissolved Thallium (Tl)	ug/L	0.00252	0.00256	0.00599	<0.00080	0.00080	C031041
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031041
Dissolved Titanium (Ti)	ug/L	0.351	0.449	0.237	0.069	0.030	C031041
Dissolved Uranium (U)	ug/L	0.00966	0.00994	0.0140	<0.00050	0.00050	C031041
Dissolved Vanadium (V)	ug/L	0.0244	0.0261	0.0359	<0.0050	0.0050	C031041
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	1.01	1.11	2.42	<0.060	0.060	C031041
Dissolved Zirconium (Zr)	ug/L	0.0750	0.0790	0.105	<0.0080	0.0080	C031041
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	25.8	25.7	46.2	0.16	0.10	C031047
Total Antimony (Sb)	ug/L	0.0103	0.0092	0.0239	<0.0030	0.0030	C031047
Total Arsenic (As)	ug/L	0.246	0.255	0.374	<0.0050	0.0050	C031047
Total Barium (Ba)	ug/L	10.1	10.3	17.3	0.0159	0.0080	C031047
Total Beryllium (Be)	ug/L	0.0040	0.0038	0.0075	<0.0015	0.0015	C031047
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031047
Total Boron (B)	ug/L	2.75	2.66	3.98	<0.10	0.10	C031047
Total Cadmium (Cd)	ug/L	0.0071	0.0059	0.0196	<0.0030	0.0030	C031047
Total Calcium (Ca)	ug/L	5890	5910	10200	3.3	2.0	C031047
Total Chromium (Cr)	ug/L	0.147	0.151	0.192	<0.020	0.020	C031047
Total Cobalt (Co)	ug/L	0.250	0.254	1.11	<0.0040	0.0040	C031047
Total Copper (Cu)	ug/L	1.95	1.86	2.87	<0.020	0.020	C031047
Total Iron (Fe)	ug/L	34.2	34.6	32.9	<1.0	1.0	C031047
Total Lead (Pb)	ug/L	0.0084	0.0092	0.0154	<0.0030	0.0030	C031047
Total Lithium (Li)	ug/L	0.876	0.865	1.23	<0.050	0.050	C031047
Total Magnesium (Mg)	ug/L	3320	3270	4670	<0.50	0.50	C031047
Total Manganese (Mn)	ug/L	4.36	4.40	15.8	0.0047	0.0040	C031047
Total Molybdenum (Mo)	ug/L	0.0198	0.0203	0.0329	<0.0050	0.0050	C031047
Total Nickel (Ni)	ug/L	6.19	6.30	9.38	<0.015	0.015	C031047
Total Potassium (K)	ug/L	640	642	1350	<5.0	5.0	C031047
Total Selenium (Se)	ug/L	0.019	0.025	0.068	<0.010	0.010	C031047
Total Silicon (Si)	ug/L	395	401	489	<1.2	1.2	C031047
Total Silver (Ag)	ug/L	0.0020	0.0040	0.0028	<0.0020	0.0020	C031047
Total Sodium (Na)	ug/L	1100	1070	1950	<0.50	0.50	C031047
Total Strontium (Sr)	ug/L	26.2	26.3	52.7	<0.0080	0.0080	C031047
Total Sulphur (S)	ug/L	6190	6010	8950	1.7	1.0	C031047
Total Thallium (Tl)	ug/L	0.00222	0.00264	0.00678	<0.00080	0.00080	C031047
Total Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031047
Total Titanium (Ti)	ug/L	0.210	0.401	0.301	0.041	0.030	C031047
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DOV931	DOV932	DOV933	DOV934		
Sampling Date		2025/07/08 13:15	2025/07/08 14:15	2025/07/08 12:20	2025/07/08 12:20		
COC Number		C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03	C#759289-01-01-03		
	UNITS	BRP-32-2	BRP-32-3	FD	EB	RDL	QC Batch
Total Uranium (U)	ug/L	0.0111	0.0104	0.0173	<0.00050	0.00050	C031047
Total Vanadium (V)	ug/L	0.0681	0.0644	0.0696	<0.0050	0.0050	C031047
Total Zinc (Zn)	ug/L	1.11	1.13	2.56	<0.060	0.060	C031047
Total Zirconium (Zr)	ug/L	0.0856	0.0847	0.115	<0.0080	0.0080	C031047
RDL = Reportable Detection Limit							



GENERAL COMMENTS

Report reissued to include results for unionized ammonia as per client request received 2025/07/31.

Sample DOV923 [BRP-29A-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV924 [BRP-29A-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV925 [BRP-29A-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV926 [BRP-29A-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV927 [BRP-29A-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV928 [BRP-31-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV929 [BRP-31-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV930 [BRP-32-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).

Sample DOV931 [BRP-32-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV932 [BRP-32-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV933 [FD] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DOV934 [EB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Dissolved Solids (Filt. Residue).



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

Results relate only to the items tested.



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C016955	Total Suspended Solids	2025/07/13	94	80 - 120	96	80 - 120	<1.0	mg/L	12	20		
C016956	Total Suspended Solids	2025/07/12	93	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C016958	Total Dissolved Solids	2025/07/13	NC	80 - 120	94	80 - 120	<10	mg/L	0	20		
C016959	Total Dissolved Solids	2025/07/13	99	80 - 120	95	80 - 120	<10	mg/L	3.4	20		
C017130	Turbidity	2025/07/12			101	80 - 120	<0.10	NTU	13	20		
C017204	Chloride (Cl)	2025/07/12	NC	80 - 120	103	80 - 120	0.69, RDL=0.50	mg/L	1.1	20		
C017204	Sulphate (SO4)	2025/07/12	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.90	20		
C017209	Chloride (Cl)	2025/07/12	100	80 - 120	101	80 - 120	<0.50	mg/L	0.86	20		
C017209	Sulphate (SO4)	2025/07/12	86	80 - 120	99	80 - 120	<0.50	mg/L				
C017271	Dissolved Nitrate plus Nitrite (N)	2025/07/12	NC	80 - 120	106	80 - 120	<0.0030	mg/L	4.8	20		
C017271	Dissolved Nitrite (N)	2025/07/12	107	80 - 120	107	80 - 120	<0.0010	mg/L	5.1	20		
C017299	Orthophosphate (P)	2025/07/12	91	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C017487	Alkalinity (PP as CaCO3)	2025/07/13					<0.50	mg/L	NC	20		
C017487	Alkalinity (Total as CaCO3)	2025/07/13			100	80 - 120	<0.50	mg/L	10	20		
C017487	Bicarbonate (HCO3)	2025/07/13					<0.50	mg/L	10	20		
C017487	Carbonate (CO3)	2025/07/13					<0.50	mg/L	NC	20		
C017487	Hydroxide (OH)	2025/07/13					<0.50	mg/L	NC	20		
C017488	pH	2025/07/13			100	97 - 103			1.6	N/A		
C017489	Conductivity	2025/07/13			102	90 - 110	<2.0	uS/cm	0.66	10		
C017490	Fluoride (F)	2025/07/13	109	80 - 120	91	80 - 120	<0.010	mg/L	3.8	20		
C017527	Dissolved Phosphorus (P)	2025/07/16	101	80 - 120	89	80 - 120	<0.0010	mg/L	NC	20	90	80 - 120
C017820	Total Ammonia (N)	2025/07/14	109	80 - 120	107	80 - 120	<0.0050	mg/L	0.64	20		
C017821	Total Ammonia (N)	2025/07/14	108	80 - 120	109	80 - 120	<0.0050	mg/L	3.2	20		
C018231	Strong Acid Dissoc. Cyanide (CN)	2025/07/14	98	80 - 120	97	80 - 120	<0.00050	mg/L	0.93	20		
C018456	Total Phosphorus (P)	2025/07/16	96	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C018465	Dissolved Phosphorus (P)	2025/07/16	119	80 - 120	96	80 - 120	<0.0010	mg/L	9.6	20	85	80 - 120
C018601	Weak Acid Dissoc. Cyanide (CN)	2025/07/14	101	80 - 120	100	80 - 120	<0.00050	mg/L	2.6	20		
C018602	Free Free Cyanide	2025/07/14	102	80 - 120	101	80 - 120	<0.00050	mg/L	1.3	20		
C018820	Total Nitrogen (N)	2025/07/15	NC	80 - 120	109	80 - 120	<0.020	mg/L	4.4	20	107	80 - 120
C018831	Total Nitrogen (N)	2025/07/15	105	80 - 120	109	80 - 120	<0.020	mg/L	9.9	20	108	80 - 120



Bureau Veritas Job #: C561674
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C018855	Total Sulphide	2025/07/16	23 (1)	80 - 120	103	80 - 120	<0.0018	mg/L	NC	20		
C018859	Total Sulphide	2025/07/16	113	80 - 120	110	80 - 120	<0.0018	mg/L	NC	20		
C019352	Dissolved Organic Carbon (C)	2025/07/16	NC	75 - 125	98	80 - 120	<0.50	mg/L	2.0	20		
C020594	Total Organic Carbon (C)	2025/07/16	NC (2)	75 - 125	107	80 - 120	<0.50	mg/L	0.48	20		
C021269	Total Phosphorus (P)	2025/07/17	103	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
C021524	Reactive Silica	2025/07/17	96	80 - 120	105	80 - 120	<0.050	mg/L	0.77	20		
C021575	Total Nitrogen (N)	2025/07/17	103	80 - 120	103	80 - 120	<0.020	mg/L	3.3	20	104	80 - 120
C021795	Dissolved Organic Carbon (C)	2025/07/18	82	75 - 125	104	80 - 120	<0.50	mg/L	NC	20		
C021938	Total Dissolved Solids	2025/07/18	NC	80 - 120	95	80 - 120	<10	mg/L	0.48	20		
C021989	Dissolved Phosphorus (P)	2025/07/18	95	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	91	80 - 120
C022776	Total Phosphorus (P)	2025/07/18	107	80 - 120	103	80 - 120	<0.0010	mg/L	11	20	90	80 - 120
C024758	Total Organic Carbon (C)	2025/07/21	85	75 - 125	95	80 - 120	<0.50	mg/L	20	20		
C025625	Total Mercury (Hg)	2025/07/22	107	80 - 120	106	80 - 120	<0.00010	ug/L	12	25		
C028535	Dissolved Mercury (Hg)	2025/07/24	101	80 - 120	104	80 - 120	<0.00010	ug/L	2.8	25		
C031041	Dissolved Aluminum (Al)	2025/07/26	90	80 - 120	92	80 - 120	0.19, RDL=0.10 (3)	ug/L	0.22	40		
C031041	Dissolved Antimony (Sb)	2025/07/26	104	80 - 120	106	80 - 120	<0.0030	ug/L	0	40		
C031041	Dissolved Arsenic (As)	2025/07/26	99	80 - 120	99	80 - 120	<0.0050	ug/L	1.9	40		
C031041	Dissolved Barium (Ba)	2025/07/26	99	80 - 120	98	80 - 120	<0.0080	ug/L	0.90	40		
C031041	Dissolved Beryllium (Be)	2025/07/26	89	80 - 120	92	80 - 120	<0.0015	ug/L	10	40		
C031041	Dissolved Bismuth (Bi)	2025/07/26	97	80 - 120	99	80 - 120	<0.0010	ug/L	NC	40		
C031041	Dissolved Boron (B)	2025/07/26	96	80 - 120	97	80 - 120	<0.10	ug/L	0.24	40		
C031041	Dissolved Cadmium (Cd)	2025/07/26	106	80 - 120	105	80 - 120	<0.0030	ug/L	19	40		
C031041	Dissolved Calcium (Ca)	2025/07/26	NC	80 - 120	104	80 - 120	<2.0	ug/L	0.76	40		
C031041	Dissolved Chromium (Cr)	2025/07/26	100	80 - 120	99	80 - 120	0.024, RDL=0.020 (3)	ug/L	5.5	40		
C031041	Dissolved Cobalt (Co)	2025/07/26	100	80 - 120	99	80 - 120	<0.0040	ug/L	0.29	40		
C031041	Dissolved Copper (Cu)	2025/07/26	100	80 - 120	99	80 - 120	<0.020	ug/L	1.9	40		
C031041	Dissolved Iron (Fe)	2025/07/26	94	80 - 120	96	80 - 120	<1.0	ug/L	2.0	40		
C031041	Dissolved Lead (Pb)	2025/07/26	97	80 - 120	97	80 - 120	<0.0030	ug/L	3.8	40		
C031041	Dissolved Lithium (Li)	2025/07/26	90	80 - 120	93	80 - 120	<0.050	ug/L	3.0	40		
C031041	Dissolved Magnesium (Mg)	2025/07/26	101	80 - 120	99	80 - 120	<0.50	ug/L	2.0	40		



Bureau Veritas Job #: C561674
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031041	Dissolved Manganese (Mn)	2025/07/26	96	80 - 120	97	80 - 120	<0.0040	ug/L	1.2	40		
C031041	Dissolved Molybdenum (Mo)	2025/07/26	107	80 - 120	107	80 - 120	0.0060, RDL=0.0050 (3)	ug/L	1.6	40		
C031041	Dissolved Nickel (Ni)	2025/07/26	100	80 - 120	99	80 - 120	<0.015	ug/L	0.48	40		
C031041	Dissolved Potassium (K)	2025/07/26	106	80 - 120	104	80 - 120	5.6, RDL=5.0 (3)	ug/L	2.2	40		
C031041	Dissolved Selenium (Se)	2025/07/26	96	80 - 120	96	80 - 120	<0.010	ug/L	15	40		
C031041	Dissolved Silicon (Si)	2025/07/26	97	80 - 120	97	80 - 120	<1.2	ug/L	2.0	40		
C031041	Dissolved Silver (Ag)	2025/07/26	100	80 - 120	99	80 - 120	<0.0020	ug/L	NC	40		
C031041	Dissolved Sodium (Na)	2025/07/26	95	80 - 120	98	80 - 120	<0.50	ug/L	1.5	40		
C031041	Dissolved Strontium (Sr)	2025/07/26	NC	80 - 120	98	80 - 120	<0.0080	ug/L	1.3	40		
C031041	Dissolved Sulphur (S)	2025/07/26	106	80 - 120	109	80 - 120	<1.0	ug/L	1.4	40		
C031041	Dissolved Thallium (Tl)	2025/07/26	99	80 - 120	100	80 - 120	<0.00080	ug/L	17	40		
C031041	Dissolved Tin (Sn)	2025/07/26	100	80 - 120	101	80 - 120	<0.0050	ug/L	NC	40		
C031041	Dissolved Titanium (Ti)	2025/07/26	98	80 - 120	100	80 - 120	<0.030	ug/L	14	40		
C031041	Dissolved Uranium (U)	2025/07/26	100	80 - 120	100	80 - 120	<0.00050	ug/L	8.8	40		
C031041	Dissolved Vanadium (V)	2025/07/26	99	80 - 120	98	80 - 120	<0.0050	ug/L	22	40		
C031041	Dissolved Zinc (Zn)	2025/07/26	99	80 - 120	99	80 - 120	<0.060	ug/L	1.2	40		
C031041	Dissolved Zirconium (Zr)	2025/07/26	97	80 - 120	98	80 - 120	<0.0080	ug/L	1.3	40		
C031047	Total Aluminum (Al)	2025/07/29	87	80 - 120	88	80 - 120	<0.10	ug/L	1.1	40		
C031047	Total Antimony (Sb)	2025/07/29	105	80 - 120	106	80 - 120	<0.0030	ug/L	22	40		
C031047	Total Arsenic (As)	2025/07/29	99	80 - 120	99	80 - 120	<0.0050	ug/L	2.9	40		
C031047	Total Barium (Ba)	2025/07/29	98	80 - 120	98	80 - 120	<0.0080	ug/L	0.53	40		
C031047	Total Beryllium (Be)	2025/07/29	85	80 - 120	88	80 - 120	<0.0015	ug/L	24	40		
C031047	Total Bismuth (Bi)	2025/07/29	97	80 - 120	97	80 - 120	<0.0010	ug/L	NC	40		
C031047	Total Boron (B)	2025/07/29	94	80 - 120	96	80 - 120	0.12, RDL=0.10 (3)	ug/L	0.26	40		
C031047	Total Cadmium (Cd)	2025/07/29	106	80 - 120	105	80 - 120	<0.0030	ug/L	8.6	40		
C031047	Total Calcium (Ca)	2025/07/29	NC	80 - 120	105	80 - 120	<2.0	ug/L	1.4	40		
C031047	Total Chromium (Cr)	2025/07/29	99	80 - 120	99	80 - 120	0.030, RDL=0.020 (3)	ug/L	2.4	40		



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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031047	Total Cobalt (Co)	2025/07/29	100	80 - 120	99	80 - 120	<0.0040	ug/L	0.64	40		
C031047	Total Copper (Cu)	2025/07/29	100	80 - 120	99	80 - 120	<0.020	ug/L	4.7	40		
C031047	Total Iron (Fe)	2025/07/29	92	80 - 120	95	80 - 120	<1.0	ug/L	0.78	40		
C031047	Total Lead (Pb)	2025/07/29	96	80 - 120	96	80 - 120	<0.0030	ug/L	11	40		
C031047	Total Lithium (Li)	2025/07/29	90	80 - 120	92	80 - 120	<0.050	ug/L	0.23	40		
C031047	Total Magnesium (Mg)	2025/07/29	99	80 - 120	99	80 - 120	<0.50	ug/L	0.22	40		
C031047	Total Manganese (Mn)	2025/07/29	93	80 - 120	96	80 - 120	<0.0040	ug/L	0.57	40		
C031047	Total Molybdenum (Mo)	2025/07/29	107	80 - 120	106	80 - 120	<0.0050	ug/L	11	40		
C031047	Total Nickel (Ni)	2025/07/29	100	80 - 120	99	80 - 120	<0.015	ug/L	0.93	40		
C031047	Total Potassium (K)	2025/07/29	105	80 - 120	105	80 - 120	<5.0	ug/L	0.46	40		
C031047	Total Selenium (Se)	2025/07/29	94	80 - 120	97	80 - 120	<0.010	ug/L	12	40		
C031047	Total Silicon (Si)	2025/07/29	96	80 - 120	97	80 - 120	<1.2	ug/L	2.9	40		
C031047	Total Silver (Ag)	2025/07/29	100	80 - 120	102	80 - 120	<0.0020	ug/L	30	40		
C031047	Total Sodium (Na)	2025/07/29	95	80 - 120	98	80 - 120	<0.50	ug/L	0.52	40		
C031047	Total Strontium (Sr)	2025/07/29	NC	80 - 120	96	80 - 120	<0.0080	ug/L	1.4	40		
C031047	Total Sulphur (S)	2025/07/29	107	80 - 120	109	80 - 120	1.8, RDL=1.0 (3)	ug/L	2.1	40		
C031047	Total Thallium (Tl)	2025/07/29	99	80 - 120	98	80 - 120	<0.00080	ug/L	6.2	40		
C031047	Total Tin (Sn)	2025/07/29	99	80 - 120	99	80 - 120	<0.0050	ug/L	NC	40		
C031047	Total Titanium (Ti)	2025/07/29	102	80 - 120	97	80 - 120	0.045, RDL=0.030 (3)	ug/L	0.72	40		
C031047	Total Uranium (U)	2025/07/29	100	80 - 120	100	80 - 120	<0.00050	ug/L	4.0	40		
C031047	Total Vanadium (V)	2025/07/29	98	80 - 120	104	80 - 120	<0.0050	ug/L	1.8	40		
C031047	Total Zinc (Zn)	2025/07/29	98	80 - 120	99	80 - 120	<0.060	ug/L	3.7	40		



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031047	Total Zirconium (Zr)	2025/07/29	98	80 - 120	98	80 - 120	<0.0080	ug/L	2.3	40		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Matrix Spike exceeds acceptance limits due to matrix interference. Reanalysis yields similar results.

(3) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis



Bureau Veritas Job #: C561674
Report Date: 2025/08/11

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maria Magdalena Florescu, Ph.D., P.Chem., QP, Laboratory Manager SR

Neenu Jose, Project Solutions Representative

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas 4000 19th N.E., Calgary, Alberta Canada T2E 6P6 Tel: (403) 291-3077 Toll-free 800-563-0206 Fax: (403) 291-3668 www.bv.com										Page 1 of 3			
CHAIN OF CUSTODY RECORD													
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50376 WSP Canada Inc.					Quotation #: C41460		Bureau Veritas Job #:	
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:		Bottle Order #:	
Address: Park Place Suite 3400-666 Burrard St. VANCOUVER BC V5C 2X8					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP		COC #:	
Tel: (604) 681-8371 Fax: (604) 681-8209					Tel: Fax:					Project Name:		Project Manager:	
Email: BR.accounts payable@b2gold.com					Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com					Site #:		Molissa McIntosh	
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required:	
☐ AT ☐ CCME ☐ Other										☐ AEMP-Routine Parameters ☐ AEMP - Nutrients ☐ AEMP - Other Conventional ☐ Ultra Low Level Total Metals + Hg ☐ Ultra Low Level Dissolved Metals + Hg (Lab In) ☐ Radium-226 (Low Level)		Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are + 5 days - contact your Project Manager for details. Rush Confirmation Number: _____ (not for 6)	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS													
Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Media Field Filtered T (Y/N)							# of Bottles	Comments
1	BRP-29A-1	25/07/08	10:00			☒	☒	☒	☒	☒	☒		
2	BRP-29A-2	25/07/08	11:15			☒	☒	☒	☒	☒	☒		
3	BRP-29A-3	25/07/08	12:15			☒	☒	☒	☒	☒	☒		
4	BRP-29A-4	25/07/08	13:35			☒	☒	☒	☒	☒	☒		
5	BRP-29A-5	25/07/09	8:30			☒	☒	☒	☒	☒	☒		
6	BRP-31-1												
7	BRP-31-2												
8	BRP-31-3	25/07/09	9:40			☒	☒	☒	☒	☒	☒		
9	BRP-31-4	25/07/09	10:45			☒	☒	☒	☒	☒	☒		
10	BRP-31-5												
* RELEASED BY: (Signature/Print)		Date: (YYMMDD)	Time	RECEIVED BY: (Signature/Print)		Date: (YYMMDD)	Time	# Jars used and not submitted	Laboratory Use Only				
Adam Feldberg CEM		25/07/10	6:30	Jaskirat Rehal		2025/07/11	15:03		Temperature (°C) on Receipt: ACTR Custody Seal (Inlet on Cooler?) ☐ Yes ☐ No				
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS' STANDARD TERMS AND CONDITIONS. SIGNATURE OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/RESOURCES/RESOURCES/COC-TERMS-AND-CONDITIONS. ** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. *** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.													



EYK-2025-07-015

Bureau Veritas 4000 1st N.E. Calgary, Alberta Canada T2E 6P4 Tel: (403) 261-3077 Toll-free 800-563-6264 Fax: (403) 261-6468 www.bvna.com										Page 2 of 3																																																																																				
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INVOICE TO: Company Name: #10600 B2Gold Back River Corp. Attention: Accounts Payable Address: Park Place Suite 3400-066 Burrard St. VANCOUVER BC V6C 2X8 Tel: (604) 681-8371 Fax: (604) 681-6209 Email: BR.accounts.payable@b2gold.com					REPORT TO: Company Name: #50378 WSP Canada Inc. Attention: Beatriz Cupe-Flores Address: Saskatoon SK S7H 0T4 Tel: Fax: Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com					PROJECT INFORMATION: Quotation #: C41460 P.O. #: Project: WATER QUALITY- JULY AEMP Project Name: Site #: Sampled By:					Laboratory Use Only: Bureau Veritas Job #: Bottle Order #: CQC #: Project Manager: Malissa Mcintosh																																																																															
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Bureau Veritas 4000 19th N.E., Calgary, Alberta Canada T2E 8P6 Tel: (403) 291-3077 Toll free 800-563-6266 Fax: (403) 291-8468 www.bv.ca										CHAIN OF CUSTODY RECORD										Page 3 of 3																													
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:																																		
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50376 WSP Canada Inc.					Quotation #: C41460					Bureau Veritas Job #																																		
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:					Bottle Order #:																																		
Address: Park Place Suite 3400-500 Burrard St.					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP					COC #:																																		
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Email: BR.accounts@b2gold.com					Email: beatriz.cupe.flores@wsp.com jennifer.arenas@wsp.com					Sampled By:					C4150239-02-01																																		
Regulatory Criteria: ☐ AT1 ☐ CCME ☐ Other					Special Instructions					ANALYSIS REQUESTED (PLEASE BE SPECIFIC) AEMP-Routine Parameters AEMP - Nutrients AEMP- Other Conventional Ultra Low Level Total Metals + Hg Ultra Low Level Dissolved Metals + Hg (Lab fil) Radium-226 Low Level Chlorophyll and Phosphorus in Water					Turnaround Time (TAT) Required: Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT - 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Date Required: Rush Confirmation Number: (call lab for it)																																		
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* RELINQUISHED BY: (Signature/Print) Adam Feldberg					Date: (YYMMDD) 25/07/10					Time: 6:30					RECEIVED BY: (Signature/Print) Tasleem Begal					Date: (YYMMDD) 25/07/11					Time: 15:05					# jars used and not submitted					Time Selected: ☐					Temperature (°C) on Receipt: ACTR					Custody Seal Intact in Container? ☐ Yes ☐ No				
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. BEARING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS .																																																	
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Your P.O. #: 470000200
 Your Project #: WATER QUALITY- JULY AEMP
 Site Location: 176233659
 Your C.O.C. #: 759289-02-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/08/12
 Report #: R3698037
 Version: 5 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562731

Received: 2025/07/14, 15:00

Sample Matrix: Water
 # Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	9	N/A	2025/07/17	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	9	N/A	2025/07/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	9	N/A	2025/07/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	6	N/A	2025/07/22	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 4)	3	N/A	2025/07/24	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	9	N/A	2025/07/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	9	N/A	2025/07/18		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	9	N/A	2025/08/07	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	9	N/A	2025/08/07	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	9	N/A	2025/07/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	9	2025/07/24	2025/07/24	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	9	N/A	2025/08/05	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	9	N/A	2025/08/05	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N	6	N/A	2025/08/01		Auto Calc
Ammonia-N Low Level (Preserved) (1)	8	N/A	2025/07/18	AB SOP-00007	SM 24 4500 NH3 A G m
Ammonia-N Low Level (Preserved) (1)	1	N/A	2025/07/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	8	N/A	2025/07/17		Auto Calc
Nitrate and Nitrite (1)	1	N/A	2025/07/18		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	9	N/A	2025/07/17	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	8	2025/07/16	2025/07/17		Auto Calc
Nitrate (as N) (Low Level) (1)	1	2025/07/16	2025/07/18		Auto Calc
pH @25°C (1, 6)	9	N/A	2025/07/20	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	6	N/A	2025/08/01	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	8	N/A	2025/07/17	AB SOP-00025	SM 24 4500-P A, F m
Orthophosphate LL by Automated Analyzer (1, 7)	1	N/A	2025/07/23	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	9	2025/07/18	2025/07/18	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	8	N/A	2025/07/17	AB SOP-00011	EPA 370.1 R1978 m
Silica (Reactive) (1)	1	N/A	2025/07/18	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	9	2025/07/17	2025/07/18	AB SOP-00065	SM 24 2540 C m



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 759289-02-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/12
Report #: R3698037
Version: 5 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562731

Received: 2025/07/14, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted Analyzed		
Total Dissolved Solids (Calculated) (1)	9	N/A 2025/08/07		Auto Calc
Temperature (Field) (1)	6	N/A 2025/08/01	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	1	N/A 2025/07/18		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	7	N/A 2025/07/21		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A 2025/07/24		Auto Calc
Nitrogen (Total) (1)	1	2025/07/17 2025/07/18	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	7	2025/07/18 2025/07/21	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/07/23 2025/07/23	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 8)	1	N/A 2025/07/21	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 8)	8	N/A 2025/07/22	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	9	2025/07/17 2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	7	2025/07/17 2025/07/22	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/18 2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/23 2025/07/23	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	6	2025/07/17 2025/07/17	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	3	2025/07/17 2025/07/18	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	9	N/A 2025/07/17	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	6	N/A 2025/08/08	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 759289-02-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/08/12
Report #: R3698037
Version: 5 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562731

Received: 2025/07/14, 15:00

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9

(4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(8) TOC present in the sample should be considered as non-purgeable TOC.

(9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC482		DPC483			DPC484		
Sampling Date		2025/07/11 07:30		2025/07/11 08:20			2025/07/12 14:35		
COC Number		759289-02-01		759289-02-01			759289-02-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	BRP-38-1	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	28.1	C020057	28.0	0.50	C020057	13.4	0.50	C020057
Total Hardness (CaCO ₃)	mg/L	28.0	C020435	27.9	0.50	C020435	13.4	0.50	C020435
Dissolved Nitrate (N)	mg/L	0.51	C021010	0.51	0.040	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	2.3	C020456	2.2	0.18	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	0.0080	C020456	0.0080	0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	C020940	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	39	C020620	39	10	C020620	16	10	C020620
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.35	C020566	0.33	0.040	C020566	0.26	0.020	C020566
Un-Ionized Ammonia	mg/L	<0.00050	C037090	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090

Field Parameters									
Field pH	pH	7.0	ONSITE	7.0	N/A	ONSITE	7.38	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.05	ONSITE	13.06	N/A	ONSITE	12.39	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	72	C022262	72	2.0	C022262	31	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050 (1)	C025741	0.00060	0.00050	C025741	0.00052	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00051	C025745	0.00058	0.00050	C025745	<0.00050	0.00050	C025745
Fluoride (F)	mg/L	0.024	C022257	0.028	0.010	C022257	0.022	0.010	C022257
Free Free Cyanide	mg/L	0.00053	C025757	0.00066	0.00050	C025757	0.00060	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.7	C025819	3.9	0.50	C026802	3.2	0.50	C026802
pH	pH	6.07	C022261	6.13	N/A	C022261	6.35	N/A	C022261
Reactive Silica	mg/L	0.95	C021937	0.97	0.050	C021942	0.36	0.050	C021942
Alkalinity (Total as CaCO ₃)	mg/L	4.47	C022259	4.90	0.50	C022259	8.52	0.50	C022259
Total Organic Carbon (C)	mg/L	3.7	C025725	3.6	0.50	C025725	2.9	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	5.46	C022259	5.97	0.50	C022259	10.4	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	52	C021264	52	10	C021264	24	10	C021264
Total Suspended Solids	mg/L	<1.0	C021258	<1.0	1.0	C021258	2.3	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC482		DPC483			DPC484		
Sampling Date		2025/07/11 07:30		2025/07/11 08:20			2025/07/12 14:35		
COC Number		759289-02-01		759289-02-01			759289-02-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	BRP-38-1	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	C027278	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	C022855	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	4.9	C021895	5.4	0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	17	C021895	17	0.50	C021895	4.8	0.50	C021895
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C021989	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0049	C022001	<0.0010	0.0010	C022001	0.0014	0.0010	C022776
Total Ammonia (N)	mg/L	0.024	C022701	0.025	0.0050	C022701	0.0077	0.0050	C022701
Dissolved Nitrite (N)	mg/L	0.0026	C021680	0.0023	0.0010	C021680	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	0.51	C021680	0.51	0.040	C021680	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.87	C022916	0.84	0.020	C022916	0.26	0.020	C021971
RADIONUCLIDE									
Radium 226	Bq/l						<0.0050	0.0050	C043101
Physical Properties									
Turbidity	NTU	0.15	C021640	<0.10	0.10	C021640	0.11	0.10	C021640
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC485			DPC486		DPC487		
Sampling Date		2025/07/12 13:45			2025/07/12 11:10		2025/07/12 12:50		
COC Number		759289-02-01			759289-02-01		759289-02-01		
	UNITS	BRP-38-2	RDL	QC Batch	BRP-38-3	QC Batch	BRP-38-4	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	13.3	0.50	C020057	13.5	C020057	13.3	0.50	C020057
Total Hardness (CaCO ₃)	mg/L	13.1	0.50	C020435	13.3	C020435	13.3	0.50	C020435
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C021010	0.0040	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	<0.013	0.013	C020456	0.017	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C020456	<0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C020940	<0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	15	10	C020620	15	C020620	15	10	C020620
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.25	0.020	C020566	0.26	C020566	0.26	0.020	C020566
Un-Ionized Ammonia	mg/L				<0.00050	C037090	<0.00050	0.00050	C037090

Field Parameters									
Field pH	pH				7.35	ONSITE	7.36	N/A	ONSITE
Field Temperature (Fd)	deg. C				12.41	ONSITE	12.38	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	31	2.0	C022262	31	C022262	31	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00064	0.00050	C025741	0.00059 (1)	C025741	0.00071 (1)	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00064	0.00050	C025745	0.00065	C025745	0.00083	0.00050	C025745
Fluoride (F)	mg/L	0.022	0.010	C022257	0.022	C022257	0.022	0.010	C022257
Free Free Cyanide	mg/L	0.00062	0.00050	C025757	0.00055	C025757	0.00067	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.3	0.50	C025819	3.1	C025819	3.3	0.50	C025819
pH	pH	6.32	N/A	C022261	6.32	C022261	6.35	N/A	C022261
Reactive Silica	mg/L	0.38	0.050	C021937	0.39	C022404	0.37	0.050	C021937
Alkalinity (Total as CaCO ₃)	mg/L	7.94	0.50	C022259	8.34	C022259	8.40	0.50	C022259
Total Organic Carbon (C)	mg/L	2.9	0.50	C025725	2.6	C025725	3.0	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	9.68	0.50	C022259	10.2	C022259	10.3	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	20	10	C021264	24	C021264	24	10	C021264
Total Suspended Solids	mg/L	<1.0	1.0	C021260	<1.0	C021260	1.8	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC485			DPC486		DPC487		
Sampling Date		2025/07/12 13:45			2025/07/12 11:10		2025/07/12 12:50		
COC Number		759289-02-01			759289-02-01		759289-02-01		
	UNITS	BRP-38-2	RDL	QC Batch	BRP-38-3	QC Batch	BRP-38-4	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	C022165	<0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	0.0018	C022855	<0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	<0.50	0.50	C021895	<0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	5.0	0.50	C021895	4.9	C021895	4.8	0.50	C021895
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989	<0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0017	0.0010	C026716	0.0020	C022001	0.0028	0.0010	C022001
Total Ammonia (N)	mg/L	0.0080	0.0050	C026699	0.0063	C022701	0.067	0.0050	C022701
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C021680	<0.0010	C021688	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C021680	0.0040	C021688	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.25	0.020	C027347	0.27	C022916	0.26	0.020	C022916
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	0.0050	C043101	<0.0050	C043101	<0.0050	0.0050	C043101
Physical Properties									
Turbidity	NTU	0.12	0.10	C021640	0.11	C021640	<0.10	0.10	C021640
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC488			DPC491			DPC492		
Sampling Date		2025/07/12 12:10			2025/07/11 09:00			2025/07/12 00:00		
COC Number		759289-02-01			759289-02-01			759289-02-01		
	UNITS	BRP-38-5	RDL	QC Batch	FB-1	RDL	QC Batch	TB-1	RDL	QC Batch

Calculated Parameters										
Dissolved Hardness (CaCO ₃)	mg/L	13.3	0.50	C020057	<0.50	0.50	C021135	<0.50	0.50	C021135
Total Hardness (CaCO ₃)	mg/L	13.5	0.50	C020435	<0.50	0.50	C020435	<0.50	0.50	C020435
Dissolved Nitrate (N)	mg/L	0.0048	0.0030	C021010	0.0038	0.0030	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	0.021	0.013	C020456	0.017	0.013	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C020456	<0.0033	0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	16	10	C020620	<10	10	C020620	<10	10	C021136
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.28	0.020	C020566	<0.020	0.020	C020566	<0.020	0.020	C020566
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090						

Field Parameters										
Field pH	pH	7.36	N/A	ONSITE						
Field Temperature (Fd)	deg. C	12.44	N/A	ONSITE						

Misc. Inorganics										
Conductivity	uS/cm	31	2.0	C022262	<2.0	2.0	C022262	<2.0	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063 (1)	0.00050	C025741	<0.00050	0.00050	C025741	<0.00050	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00076	0.00050	C025745	<0.00050	0.00050	C025745	<0.00050	0.00050	C025745
Fluoride (F)	mg/L	0.022	0.010	C022257	<0.010	0.010	C022257	<0.010	0.010	C022257
Free Free Cyanide	mg/L	0.00074	0.00050	C025757	<0.00050	0.00050	C025757	<0.00050	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.0	0.50	C025819	<0.50	0.50	C025819	<0.50	0.50	C026802
pH	pH	6.32	N/A	C022261	5.73	N/A	C022261	5.54	N/A	C022261
Reactive Silica	mg/L	1.1	0.050	C021942	<0.050	0.050	C021942	<0.050	0.050	C021942
Alkalinity (Total as CaCO ₃)	mg/L	8.15	0.50	C022259	0.84	0.50	C022259	<0.50	0.50	C022259
Total Organic Carbon (C)	mg/L	3.0	0.50	C025725	<0.50	0.50	C024934	<0.50	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	9.94	0.50	C022259	1.03	0.50	C022259	<0.50	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	20	10	C021264	<10	10	C021264	<10	10	C021264
Total Suspended Solids	mg/L	1.7	0.99	C021260	<1.0	1.0	C021258	<1.0	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC488			DPC491			DPC492		
Sampling Date		2025/07/12 12:10			2025/07/11 09:00			2025/07/12 00:00		
COC Number		759289-02-01			759289-02-01			759289-02-01		
	UNITS	BRP-38-5	RDL	QC Batch	FB-1	RDL	QC Batch	TB-1	RDL	QC Batch
Anions										
Orthophosphate (P)	mg/L	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	<0.50	0.50	C021895	<0.50	0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	4.9	0.50	C021895	<0.50	0.50	C021895	<0.50	0.50	C021895
Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0024	0.0010	C022001	<0.0010	0.0010	C022001	<0.0010	0.0010	C022001
Total Ammonia (N)	mg/L	0.018	0.0050	C022701	<0.0050	0.0050	C022701	0.0091	0.0050	C022701
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C021680	<0.0010	0.0010	C021680	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	0.0048	0.0030	C021680	0.0038	0.0030	C021680	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.28	0.020	C022916	<0.020 (1)	0.020	C022916	<0.020 (2)	0.020	C022916
RADIONUCLIDE										
Radium 226	Bq/l	<0.0050	0.0050	C043101				<0.0050	0.0050	C043101
Physical Properties										
Turbidity	NTU	0.14	0.10	C021640	<0.10	0.10	C021640	<0.10	0.10	C021640
RDL = Reportable Detection Limit										
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.										
(2) Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.										



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Elements									
Total Mercury (Hg)	ug/L	0.00153	0.00154	0.00092	0.00105	0.00096	0.00118	0.00010	C028529
Lab Filtered Elements									
Dissolved Mercury (Hg)	ug/L	0.00085	0.00089	0.00065	0.00046	0.00042	0.00041	0.00010	C028535
RDL = Reportable Detection Limit									

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch

Elements						
Total Mercury (Hg)	ug/L	0.00099	<0.00010	0.00015 (1)	0.00010	C028529
Lab Filtered Elements						
Dissolved Mercury (Hg)	ug/L	0.00044	<0.00010	<0.00010	0.00010	C028546
RDL = Reportable Detection Limit						
(1) Reanalysis confirms results >RDL.						



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Dissolved Metals by ICPMS									
Dissolved Aluminum (Al)	ug/L	17.3	17.9	4.10	4.21	4.24	4.07	0.10	C031049
Dissolved Antimony (Sb)	ug/L	0.0087	0.0116	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Arsenic (As)	ug/L	0.226	0.230	0.132	0.151	0.149	0.137	0.0050	C031049
Dissolved Barium (Ba)	ug/L	10.3	10.3	3.81	3.71	3.83	3.76	0.0080	C031049
Dissolved Beryllium (Be)	ug/L	0.0024	0.0023	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	C031049
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031049
Dissolved Boron (B)	ug/L	2.18	2.18	1.00	0.97	1.01	0.94	0.10	C031049
Dissolved Cadmium (Cd)	ug/L	0.0044	0.0060	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Calcium (Ca)	ug/L	5680	5650	2290	2260	2300	2280	2.0	C031049
Dissolved Chromium (Cr)	ug/L	0.086	0.094	0.033	0.027	0.047	0.031	0.020	C031049
Dissolved Cobalt (Co)	ug/L	0.101	0.110	0.0131	0.0140	0.0153	0.0138	0.0040	C031049
Dissolved Copper (Cu)	ug/L	1.75	1.69	0.617	0.573	0.627	0.601	0.020	C031049
Dissolved Iron (Fe)	ug/L	7.4	7.0	16.6	16.7	16.8	15.7	1.0	C031049
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Lithium (Li)	ug/L	1.01	1.03	0.510	0.523	0.530	0.529	0.050	C031049
Dissolved Magnesium (Mg)	ug/L	3370	3380	1860	1850	1870	1850	0.50	C031049
Dissolved Manganese (Mn)	ug/L	2.43	2.35	0.209	0.224	0.279	0.161	0.0040	C031049
Dissolved Molybdenum (Mo)	ug/L	0.0173	0.0194	<0.0050	0.0052	<0.0050	<0.0050	0.0050	C031049
Dissolved Nickel (Ni)	ug/L	6.13	6.19	1.01	1.00	1.05	1.01	0.015	C031049
Dissolved Potassium (K)	ug/L	631	626	333	330	334	330	5.0	C031049
Dissolved Selenium (Se)	ug/L	0.025	0.036	0.024	0.012	0.017	0.020	0.010	C031049
Dissolved Silicon (Si)	ug/L	373	369	134	129	132	133	1.2	C031049
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	C031049
Dissolved Sodium (Na)	ug/L	1090	1100	611	597	608	605	0.50	C031049
Dissolved Strontium (Sr)	ug/L	25.4	25.1	7.23	7.28	7.23	7.24	0.0080	C031049
Dissolved Sulphur (S)	ug/L	4880	4980	1590	1620	1590	1580	1.0	C031049
Dissolved Thallium (Tl)	ug/L	0.00280	0.00304	0.00109	0.00146	<0.00080	0.00134	0.00080	C031049
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031049
Dissolved Titanium (Ti)	ug/L	0.061	0.112	<0.030	<0.030	<0.030	0.050	0.030	C031049
Dissolved Uranium (U)	ug/L	0.00897	0.00989	0.00281	0.00308	0.00334	0.00377	0.00050	C031049
Dissolved Vanadium (V)	ug/L	0.0343	0.0323	0.0088	0.0052	0.0085	0.0093	0.0050	C031049
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	0.856	0.886	0.068	<0.060	<0.060	0.065	0.060	C031049
Dissolved Zirconium (Zr)	ug/L	0.0657	0.0645	0.0168	0.0150	0.0166	0.0146	0.0080	C031049
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	34.8	35.2	10.9	9.39	8.89	9.86	0.10	C036971
Total Antimony (Sb)	ug/L	0.0081	0.0132	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Arsenic (As)	ug/L	0.295	0.272	0.161	0.165	0.166	0.159	0.0050	C036971
Total Barium (Ba)	ug/L	10.8	10.5	3.98	4.09	4.19	4.08	0.0080	C036971
Total Beryllium (Be)	ug/L	0.0053	0.0036	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	C036971
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C036971
Total Boron (B)	ug/L	2.18	2.14	1.17	0.96	0.96	0.96	0.10	C036971
Total Cadmium (Cd)	ug/L	0.0080	0.0076	<0.0030	<0.0030	0.0059	<0.0030	0.0030	C036971
Total Calcium (Ca)	ug/L	5720	5650	2330	2300	2330	2300	2.0	C036971
Total Chromium (Cr)	ug/L	0.164	0.139	0.030	0.080	0.081	0.073	0.020	C036971
Total Cobalt (Co)	ug/L	0.260	0.290	0.0879	0.0636	0.0636	0.0616	0.0040	C036971
Total Copper (Cu)	ug/L	2.09	1.94	0.647	0.726	0.765	0.727	0.020	C036971
Total Iron (Fe)	ug/L	44.2	49.9	104	84.2	79.8	86.2	1.0	C036971
Total Lead (Pb)	ug/L	0.0099	0.0112	0.0083	0.0064	0.0060	0.0063	0.0030	C036971
Total Lithium (Li)	ug/L	1.03	0.990	0.453	0.439	0.400	0.438	0.050	C036971
Total Magnesium (Mg)	ug/L	3320	3340	1840	1790	1830	1840	0.50	C036971
Total Manganese (Mn)	ug/L	4.91	5.32	3.90	2.79	2.80	2.63	0.0040	C036971
Total Molybdenum (Mo)	ug/L	0.0164	0.0171	<0.0050	<0.0050	0.0097	<0.0050	0.0050	C036971
Total Nickel (Ni)	ug/L	6.45	6.37	1.10	1.14	1.22	1.17	0.015	C036971
Total Potassium (K)	ug/L	631	623	334	325	358	334	5.0	C036971
Total Selenium (Se)	ug/L	<0.010	0.024	<0.010	<0.010	0.017	0.025	0.010	C036971
Total Silicon (Si)	ug/L	389	378	140	138	145	139	1.2	C036971
Total Silver (Ag)	ug/L	0.0035	0.0037	0.0028	<0.0020	<0.0020	<0.0020	0.0020	C036971
Total Sodium (Na)	ug/L	1100	1090	606	591	605	603	0.50	C036971
Total Strontium (Sr)	ug/L	25.4	25.0	7.36	7.24	7.34	7.23	0.0080	C036971
Total Sulphur (S)	ug/L	5000	4920	1660	1650	1710	1600	1.0	C036971
Total Thallium (Tl)	ug/L	0.00345	0.00300	0.00138	0.00124	0.00211	0.00118	0.00080	C036971
Total Tin (Sn)	ug/L	0.0297	0.0265	0.0354	0.0224	0.0211	0.0353	0.0050	C036971
Total Titanium (Ti)	ug/L	0.308	0.441	0.220	0.227	0.188	0.150	0.030	C036971
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Total Uranium (U)	ug/L	0.0139	0.0130	0.00400	0.00516	0.00543	0.00538	0.00050	C036971
Total Vanadium (V)	ug/L	0.0684	0.0699	0.0395	0.0319	0.0306	0.0344	0.0050	C036971
Total Zinc (Zn)	ug/L	1.24	1.04	0.151	0.202	0.228	0.198	0.060	C036971
Total Zirconium (Zr)	ug/L	0.0826	0.0769	0.0189	0.0180	0.0148	0.0195	0.0080	C036971
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	ug/L	3.84	<0.10	<0.10	0.10	C031049
Dissolved Antimony (Sb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Arsenic (As)	ug/L	0.148	0.0059	0.0083	0.0050	C031049
Dissolved Barium (Ba)	ug/L	3.85	<0.0080	<0.0080	0.0080	C031049
Dissolved Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	0.0015	C031049
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	0.0010	C031049
Dissolved Boron (B)	ug/L	0.96	<0.10	<0.10	0.10	C031049
Dissolved Cadmium (Cd)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Calcium (Ca)	ug/L	2280	<2.0	3.0	2.0	C031049
Dissolved Chromium (Cr)	ug/L	0.046	<0.020	<0.020	0.020	C031049
Dissolved Cobalt (Co)	ug/L	0.0106	<0.0040	<0.0040	0.0040	C031049
Dissolved Copper (Cu)	ug/L	0.605	0.022	0.031	0.020	C031049
Dissolved Iron (Fe)	ug/L	16.1	<1.0	<1.0	1.0	C031049
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Lithium (Li)	ug/L	0.512	<0.050	<0.050	0.050	C031049
Dissolved Magnesium (Mg)	ug/L	1850	<0.50	<0.50	0.50	C031049
Dissolved Manganese (Mn)	ug/L	0.175	0.0044	<0.0040	0.0040	C031049
Dissolved Molybdenum (Mo)	ug/L	0.0671	<0.0050	<0.0050	0.0050	C031049
Dissolved Nickel (Ni)	ug/L	1.04	<0.015	<0.015	0.015	C031049
Dissolved Potassium (K)	ug/L	331	<5.0	<5.0	5.0	C031049
Dissolved Selenium (Se)	ug/L	0.020	<0.010	<0.010	0.010	C031049
Dissolved Silicon (Si)	ug/L	131	<1.2	<1.2	1.2	C031049
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	0.0020	C031049
Dissolved Sodium (Na)	ug/L	606	<0.50	<0.50	0.50	C031049
Dissolved Strontium (Sr)	ug/L	7.16	<0.0080	<0.0080	0.0080	C031049
Dissolved Sulphur (S)	ug/L	1600	<1.0	<1.0	1.0	C031049
Dissolved Thallium (Tl)	ug/L	0.00133	<0.00080	<0.00080	0.00080	C031049
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	0.0050	C031049
Dissolved Titanium (Ti)	ug/L	<0.030	<0.030	<0.030	0.030	C031049
Dissolved Uranium (U)	ug/L	0.00284	<0.00050	<0.00050	0.00050	C031049
Dissolved Vanadium (V)	ug/L	0.0066	<0.0050	<0.0050	0.0050	C031049
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C562731

Report Date: 2025/08/12

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	0.067	<0.060	<0.060	0.060	C031049
Dissolved Zirconium (Zr)	ug/L	0.0152	<0.0080	<0.0080	0.0080	C031049
Total Metals by ICPMS						
Total Aluminum (Al)	ug/L	9.22	0.17	0.13	0.10	C036971
Total Antimony (Sb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Arsenic (As)	ug/L	0.173	<0.0050	0.0065	0.0050	C036971
Total Barium (Ba)	ug/L	4.21	<0.0080	<0.0080	0.0080	C036971
Total Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	0.0015	C036971
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	0.0010	C036971
Total Boron (B)	ug/L	0.97	<0.10	<0.10	0.10	C036971
Total Cadmium (Cd)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Calcium (Ca)	ug/L	2370	<2.0	<2.0	2.0	C036971
Total Chromium (Cr)	ug/L	0.082	<0.020	<0.020	0.020	C036971
Total Cobalt (Co)	ug/L	0.0523	<0.0040	<0.0040	0.0040	C036971
Total Copper (Cu)	ug/L	0.779	0.027	<0.020	0.020	C036971
Total Iron (Fe)	ug/L	77.7	<1.0	<1.0	1.0	C036971
Total Lead (Pb)	ug/L	0.0050	0.0051	<0.0030	0.0030	C036971
Total Lithium (Li)	ug/L	0.435	<0.050	<0.050	0.050	C036971
Total Magnesium (Mg)	ug/L	1840	<0.50	<0.50	0.50	C036971
Total Manganese (Mn)	ug/L	2.39	<0.0040	<0.0040	0.0040	C036971
Total Molybdenum (Mo)	ug/L	<0.0050	<0.0050	<0.0050	0.0050	C036971
Total Nickel (Ni)	ug/L	1.26	<0.015	<0.015	0.015	C036971
Total Potassium (K)	ug/L	335	<5.0	<5.0	5.0	C036971
Total Selenium (Se)	ug/L	<0.010	<0.010	<0.010	0.010	C036971
Total Silicon (Si)	ug/L	143	<1.2	<1.2	1.2	C036971
Total Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	0.0020	C036971
Total Sodium (Na)	ug/L	603	<0.50	<0.50	0.50	C036971
Total Strontium (Sr)	ug/L	7.41	<0.0080	<0.0080	0.0080	C036971
Total Sulphur (S)	ug/L	1680	<1.0	<1.0	1.0	C036971
Total Thallium (Tl)	ug/L	0.00180	<0.00080	<0.00080	0.00080	C036971
Total Tin (Sn)	ug/L	0.0161	<0.0050	<0.0050	0.0050	C036971
Total Titanium (Ti)	ug/L	0.166	0.036	<0.030	0.030	C036971
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Total Uranium (U)	ug/L	0.00577	<0.00050	<0.00050	0.00050	C036971
Total Vanadium (V)	ug/L	0.0287	<0.0050	<0.0050	0.0050	C036971
Total Zinc (Zn)	ug/L	0.241	<0.060	<0.060	0.060	C036971
Total Zirconium (Zr)	ug/L	0.0206	<0.0080	<0.0080	0.0080	C036971
RDL = Reportable Detection Limit						



GENERAL COMMENTS

Report reissued to include results for un-ionized ammonia as per client request received 2025/07/31.

Sample DPC482 [BRP-32-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC483 [BRP-32-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC484 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC485 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC486 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC487 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC488 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC491 [FB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC492 [TB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Results relate only to the items tested.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C021258	Total Suspended Solids	2025/07/18	100	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C021260	Total Suspended Solids	2025/07/17	91	80 - 120	100	80 - 120	<1.0	mg/L	NC	20		
C021264	Total Dissolved Solids	2025/07/18	98	80 - 120	95	80 - 120	<10	mg/L				
C021640	Turbidity	2025/07/17			100	80 - 120	<0.10	NTU	7.5	20		
C021680	Dissolved Nitrate plus Nitrite (N)	2025/07/17	137 (1)	80 - 120	114	80 - 120	0.0041, RDL=0.0030 (2)	mg/L	NC	20		
C021680	Dissolved Nitrite (N)	2025/07/17	108	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20		
C021688	Dissolved Nitrate plus Nitrite (N)	2025/07/17	NC	80 - 120	110	80 - 120	0.0057, RDL=0.0030 (2)	mg/L	0.70	20		
C021688	Dissolved Nitrite (N)	2025/07/17	NC	80 - 120	109	80 - 120	<0.0010	mg/L	0.30	20		
C021895	Chloride (Cl)	2025/07/17	107	80 - 120	102	80 - 120	<0.50	mg/L	5.1	20		
C021895	Sulphate (SO4)	2025/07/17	99	80 - 120	99	80 - 120	<0.50	mg/L	0.45	20		
C021937	Reactive Silica	2025/07/17	94	80 - 120	108	80 - 120	<0.050	mg/L	2.4	20		
C021942	Reactive Silica	2025/07/17	NC	80 - 120	104	80 - 120	<0.050	mg/L	2.6	20		
C021971	Total Nitrogen (N)	2025/07/18	NC	80 - 120	105	80 - 120	<0.020	mg/L	1.0	20	105	80 - 120
C021989	Dissolved Phosphorus (P)	2025/07/18	95	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	91	80 - 120
C022001	Total Phosphorus (P)	2025/07/22	105	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
C022165	Orthophosphate (P)	2025/07/17	155 (1)	80 - 120	109	80 - 120	<0.0010	mg/L				
C022257	Fluoride (F)	2025/07/20	115	80 - 120	112	80 - 120	<0.010	mg/L	10	20		
C022259	Alkalinity (PP as CaCO3)	2025/07/20					<0.50	mg/L	NC	20		
C022259	Alkalinity (Total as CaCO3)	2025/07/20			101	80 - 120	<0.50	mg/L	12	20		
C022259	Bicarbonate (HCO3)	2025/07/20					<0.50	mg/L	12	20		
C022259	Carbonate (CO3)	2025/07/20					<0.50	mg/L	NC	20		
C022259	Hydroxide (OH)	2025/07/20					<0.50	mg/L	NC	20		
C022261	pH	2025/07/20			100	97 - 103			1.5	N/A		
C022262	Conductivity	2025/07/20			101	90 - 110	<2.0	uS/cm	0.27	10		
C022404	Reactive Silica	2025/07/18	98	80 - 120	106	80 - 120	<0.050	mg/L	10	20		
C022701	Total Ammonia (N)	2025/07/18	104	80 - 120	107	80 - 120	<0.0050	mg/L	NC	20		
C022776	Total Phosphorus (P)	2025/07/18	107	80 - 120	103	80 - 120	<0.0010	mg/L	11	20	90	80 - 120
C022855	Total Sulphide	2025/07/18	92	80 - 120	90	80 - 120	<0.0018	mg/L	NC	20		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C022916	Total Nitrogen (N)	2025/07/21	115	80 - 120	108	80 - 120	<0.020	mg/L	NC	20	110	80 - 120
C024934	Total Organic Carbon (C)	2025/07/21	89	75 - 125	98	80 - 120	<0.50	mg/L	NC	20		
C025725	Total Organic Carbon (C)	2025/07/22	98	75 - 125	95	80 - 120	<0.50	mg/L	3.5	20		
C025741	Strong Acid Dissoc. Cyanide (CN)	2025/07/22	99	80 - 120	102	80 - 120	<0.00050	mg/L	0	20		
C025745	Weak Acid Dissoc. Cyanide (CN)	2025/07/22	103	80 - 120	100	80 - 120	<0.00050	mg/L	2.0	20		
C025757	Free Free Cyanide	2025/07/22	102	80 - 120	101	80 - 120	<0.00050	mg/L	7.3	20		
C025819	Dissolved Organic Carbon (C)	2025/07/22	101	75 - 125	95	80 - 120	<0.50	mg/L	16	20		
C026699	Total Ammonia (N)	2025/07/23	105	80 - 120	111	80 - 120	<0.0050	mg/L	NC	20		
C026716	Total Phosphorus (P)	2025/07/23	101	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C026802	Dissolved Organic Carbon (C)	2025/07/24	110	75 - 125	107	80 - 120	<0.50	mg/L	NC	20		
C027278	Orthophosphate (P)	2025/07/23	95	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C027347	Total Nitrogen (N)	2025/07/23	104	80 - 120	102	80 - 120	<0.020	mg/L	3.0	20	103	80 - 120
C028529	Total Mercury (Hg)	2025/07/30	68 (1)	80 - 120	104	80 - 120	<0.00010	ug/L	NC	25		
C028535	Dissolved Mercury (Hg)	2025/07/24	101	80 - 120	104	80 - 120	<0.00010	ug/L	2.8	25		
C028546	Dissolved Mercury (Hg)	2025/07/24	90	80 - 120	89	80 - 120	<0.00010	ug/L	5.6	25		
C031049	Dissolved Aluminum (Al)	2025/08/05	98	80 - 120	99	80 - 120	<0.10	ug/L	5.4	40		
C031049	Dissolved Antimony (Sb)	2025/08/05	113	80 - 120	112	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Arsenic (As)	2025/08/05	100	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Barium (Ba)	2025/08/05	104	80 - 120	103	80 - 120	<0.0080	ug/L	NC	40		
C031049	Dissolved Beryllium (Be)	2025/08/05	102	80 - 120	100	80 - 120	<0.0015	ug/L	NC	40		
C031049	Dissolved Bismuth (Bi)	2025/08/05	100	80 - 120	100	80 - 120	<0.0010	ug/L	NC	40		
C031049	Dissolved Boron (B)	2025/08/05	107	80 - 120	102	80 - 120	<0.10	ug/L	NC	40		
C031049	Dissolved Cadmium (Cd)	2025/08/05	102	80 - 120	99	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Calcium (Ca)	2025/08/05	98	80 - 120	100	80 - 120	<2.0	ug/L	NC	40		
C031049	Dissolved Chromium (Cr)	2025/08/05	105	80 - 120	102	80 - 120	<0.020	ug/L	NC	40		
C031049	Dissolved Cobalt (Co)	2025/08/05	104	80 - 120	101	80 - 120	<0.0040	ug/L	NC	40		
C031049	Dissolved Copper (Cu)	2025/08/05	104	80 - 120	102	80 - 120	<0.020	ug/L	31	40		
C031049	Dissolved Iron (Fe)	2025/08/05	92	80 - 120	93	80 - 120	<1.0	ug/L	NC	40		
C031049	Dissolved Lead (Pb)	2025/08/05	99	80 - 120	98	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Lithium (Li)	2025/08/05	109	80 - 120	106	80 - 120	<0.050	ug/L	NC	40		
C031049	Dissolved Magnesium (Mg)	2025/08/05	108	80 - 120	107	80 - 120	<0.50	ug/L	NC	40		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031049	Dissolved Manganese (Mn)	2025/08/05	101	80 - 120	100	80 - 120	<0.0040	ug/L	NC	40		
C031049	Dissolved Molybdenum (Mo)	2025/08/05	110	80 - 120	107	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Nickel (Ni)	2025/08/05	104	80 - 120	102	80 - 120	<0.015	ug/L	NC	40		
C031049	Dissolved Potassium (K)	2025/08/05	105	80 - 120	103	80 - 120	<5.0	ug/L	NC	40		
C031049	Dissolved Selenium (Se)	2025/08/05	95	80 - 120	96	80 - 120	<0.010	ug/L	NC	40		
C031049	Dissolved Silicon (Si)	2025/08/05	93	80 - 120	92	80 - 120	<1.2	ug/L	NC	40		
C031049	Dissolved Silver (Ag)	2025/08/05	104	80 - 120	100	80 - 120	<0.0020	ug/L	NC	40		
C031049	Dissolved Sodium (Na)	2025/08/05	108	80 - 120	106	80 - 120	<0.50	ug/L	NC	40		
C031049	Dissolved Strontium (Sr)	2025/08/05	98	80 - 120	97	80 - 120	<0.0080	ug/L	NC	40		
C031049	Dissolved Sulphur (S)	2025/08/05	85	80 - 120	88	80 - 120	<1.0	ug/L	NC	40		
C031049	Dissolved Thallium (Tl)	2025/08/05	102	80 - 120	100	80 - 120	<0.00080	ug/L	NC	40		
C031049	Dissolved Tin (Sn)	2025/08/05	110	80 - 120	106	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Titanium (Ti)	2025/08/05	100	80 - 120	101	80 - 120	<0.030	ug/L	13	40		
C031049	Dissolved Uranium (U)	2025/08/05	101	80 - 120	100	80 - 120	<0.00050	ug/L	NC	40		
C031049	Dissolved Vanadium (V)	2025/08/05	94	80 - 120	94	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Zinc (Zn)	2025/08/05	99	80 - 120	97	80 - 120	<0.060	ug/L	NC	40		
C031049	Dissolved Zirconium (Zr)	2025/08/05	100	80 - 120	100	80 - 120	<0.0080	ug/L	NC	40		
C036971	Total Aluminum (Al)	2025/08/05	103	80 - 120	105	80 - 120	<0.10	ug/L	16	40		
C036971	Total Antimony (Sb)	2025/08/05	108	80 - 120	111	80 - 120	<0.0030	ug/L	NC	40		
C036971	Total Arsenic (As)	2025/08/05	100	80 - 120	99	80 - 120	<0.0050	ug/L	0.60	40		
C036971	Total Barium (Ba)	2025/08/05	101	80 - 120	103	80 - 120	<0.0080	ug/L	4.3	40		
C036971	Total Beryllium (Be)	2025/08/05	105	80 - 120	102	80 - 120	<0.0015	ug/L	NC	40		
C036971	Total Bismuth (Bi)	2025/08/05	97	80 - 120	99	80 - 120	<0.0010	ug/L	NC	40		
C036971	Total Boron (B)	2025/08/05	110	80 - 120	107	80 - 120	<0.10	ug/L	1.2	40		
C036971	Total Cadmium (Cd)	2025/08/05	101	80 - 120	100	80 - 120	<0.0030	ug/L	NC	40		
C036971	Total Calcium (Ca)	2025/08/05	90	80 - 120	95	80 - 120	<2.0	ug/L	1.9	40		
C036971	Total Chromium (Cr)	2025/08/05	102	80 - 120	102	80 - 120	<0.020	ug/L	27	40		
C036971	Total Cobalt (Co)	2025/08/05	103	80 - 120	103	80 - 120	<0.0040	ug/L	27	40		
C036971	Total Copper (Cu)	2025/08/05	103	80 - 120	103	80 - 120	<0.020	ug/L	7.1	40		
C036971	Total Iron (Fe)	2025/08/05	95	80 - 120	88	80 - 120	<1.0	ug/L	21	40		
C036971	Total Lead (Pb)	2025/08/05	101	80 - 120	98	80 - 120	<0.0030	ug/L	0.77	40		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C036971	Total Lithium (Li)	2025/08/05	113	80 - 120	109	80 - 120	<0.050	ug/L	15	40		
C036971	Total Magnesium (Mg)	2025/08/05	105	80 - 120	107	80 - 120	<0.50	ug/L	0.27	40		
C036971	Total Manganese (Mn)	2025/08/05	75 (1)	80 - 120	100	80 - 120	<0.0040	ug/L	29	40		
C036971	Total Molybdenum (Mo)	2025/08/05	107	80 - 120	109	80 - 120	<0.0050	ug/L	NC	40		
C036971	Total Nickel (Ni)	2025/08/05	103	80 - 120	103	80 - 120	<0.015	ug/L	6.0	40		
C036971	Total Potassium (K)	2025/08/05	104	80 - 120	105	80 - 120	<5.0	ug/L	9.4	40		
C036971	Total Selenium (Se)	2025/08/05	97	80 - 120	94	80 - 120	<0.010	ug/L	NC	40		
C036971	Total Silicon (Si)	2025/08/05	90	80 - 120	90	80 - 120	<1.2	ug/L	4.9	40		
C036971	Total Silver (Ag)	2025/08/05	101	80 - 120	103	80 - 120	0.0027, RDL=0.0020 (2)	ug/L	18	40		
C036971	Total Sodium (Na)	2025/08/05	106	80 - 120	106	80 - 120	<0.50	ug/L	1.6	40		
C036971	Total Strontium (Sr)	2025/08/05	96	80 - 120	96	80 - 120	<0.0080	ug/L	3.1	40		
C036971	Total Sulphur (S)	2025/08/05	81	80 - 120	82	80 - 120	<1.0	ug/L	5.4	40		
C036971	Total Thallium (Tl)	2025/08/05	101	80 - 120	101	80 - 120	<0.00080	ug/L	NC	40		
C036971	Total Tin (Sn)	2025/08/05	108	80 - 120	107	80 - 120	<0.0050	ug/L	38	40		
C036971	Total Titanium (Ti)	2025/08/05	104	80 - 120	98	80 - 120	<0.030	ug/L	0.32	40		
C036971	Total Uranium (U)	2025/08/05	99	80 - 120	100	80 - 120	<0.00050	ug/L	20	40		
C036971	Total Vanadium (V)	2025/08/05	90	80 - 120	90	80 - 120	<0.0050	ug/L	18	40		
C036971	Total Zinc (Zn)	2025/08/05	103	80 - 120	97	80 - 120	<0.060	ug/L	NC	40		
C036971	Total Zirconium (Zr)	2025/08/05	107	80 - 120	98	80 - 120	<0.0080	ug/L	16	40		



Bureau Veritas Job #: C562731
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C043101	Radium 226	2025/08/07			94	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Maria Magdalena Florescu, Ph.D., P.Chem., QP, Laboratory Manager SR

Neenu Jose, Project Solutions Representative

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE(CONT'D)

The analytical data and all QC contained in this report were reviewed and validated by:

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

BUREAU VERITAS										CHAIN OF CUSTODY RECORD										Page 2 of 3																																																																																																																																																																	
INVOICE TO: Company Name: #10600 B2Gold Back River Corp. Attention: Accounts Payable Address: Park Place Suite 3400-666 Burnard St. VANCOUVER BC V6C 2X6 Tel: (604) 681-6371 Fax: (604) 681-6209 Email: BR.accounts payable@b2gold.com										REPORT TO: Company Name: #50378 WSP Canada Inc. Attention: Beatriz Cupe-Flores Address: Saskatoon SK S7H 0T4 Tel: Beatriz.cupe.flores@wsp.com, Jennifer.arena@wsp.com										PROJECT INFORMATION: Duration #: C41460 P.D. #: WATER QUALITY- JULY AEMP Project: WATER QUALITY- JULY AEMP Project Manager: Melissa McIsaac Site #: CMT5228-02-01				Laboratory Use Only: Bureau Veritas Job #: 759283 COC #: CMT5228-02-01																																																																																																																																																													
Regulatory Criteria: ☐ AT1 ☐ CCME ☐ Other										Special Instructions:										ANALYSIS REQUESTED (PLEASE BE SPECIFIC) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Mobile Field Filtrant 7 (Y/N)</th> <th>AEMP-Routine Parameters</th> <th>AEMP - Nutrients</th> <th>AEMP- Other Conventional</th> <th>Ultra Low Level Total Metals *</th> <th>Ultra Low Level Dissolved Metals + Hg (Lab lit)</th> <th>Radium-226 Low Level</th> <th>Chlorophyll and Phaeophytin</th> <th>Water</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Mobile Field Filtrant 7 (Y/N)	AEMP-Routine Parameters	AEMP - Nutrients	AEMP- Other Conventional	Ultra Low Level Total Metals *	Ultra Low Level Dissolved Metals + Hg (Lab lit)	Radium-226 Low Level	Chlorophyll and Phaeophytin	Water										Turnaround Time (TAT) Required: Please provide advance notice for rush projects Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Data Required: Rush Confirmation Number:																																																																																																																																											
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Sample Barcode Label	Sample (Location) Modification	Date Sampled	Time Sampled	Media	Mobile Field Filtrant 7 (Y/N)	AEMP-Routine Parameters	AEMP - Nutrients	AEMP- Other Conventional	Ultra Low Level Total Metals *	Ultra Low Level Dissolved Metals + Hg (Lab lit)	Radium-226 Low Level	Chlorophyll and Phaeophytin	Water																																																																																																																																																																								
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* RELINQUISHED BY: (Signature/Print) Date: (YY/MM/DD) Time:										* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. ** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.										** If Yes Bureau Veritas Yellow Check																																																																																																																																																																	



MCAL-2025-07-1205

Bureau Veritas Canada (2018) Inc.

Received in Yellowknife
By: J. Meier

JUL 14 2025

Tamp: see ACTR
CS: Ice:

MCAL - see AGR

Received in Yellowknife
By: J. H. H.

JUL 14 2025

Temp: _____
CS: _____

See, Kern

(continued)



Your P.O. #: 470000200
 Your Project #: WATER QUALITY- JULY AEMP
 Site Location: 176233659
 Your C.O.C. #: 759289-02-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/08/12
 Report #: R3698037
 Version: 5 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562731

Received: 2025/07/14, 15:00

Sample Matrix: Water
 # Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	9	N/A	2025/07/17	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	9	N/A	2025/07/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	9	N/A	2025/07/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	6	N/A	2025/07/22	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 4)	3	N/A	2025/07/24	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	9	N/A	2025/07/20	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	9	N/A	2025/07/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	9	N/A	2025/07/18		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	9	N/A	2025/08/07	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	9	N/A	2025/08/07	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	9	N/A	2025/07/24	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	9	2025/07/24	2025/07/24	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	9	N/A	2025/08/05	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	9	N/A	2025/08/05	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N	6	N/A	2025/08/01		Auto Calc
Ammonia-N Low Level (Preserved) (1)	8	N/A	2025/07/18	AB SOP-00007	SM 24 4500 NH3 A G m
Ammonia-N Low Level (Preserved) (1)	1	N/A	2025/07/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	8	N/A	2025/07/17		Auto Calc
Nitrate and Nitrite (1)	1	N/A	2025/07/18		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	9	N/A	2025/07/17	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	8	2025/07/16	2025/07/17		Auto Calc
Nitrate (as N) (Low Level) (1)	1	2025/07/16	2025/07/18		Auto Calc
pH @25°C (1, 6)	9	N/A	2025/07/20	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	6	N/A	2025/08/01	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	8	N/A	2025/07/17	AB SOP-00025	SM 24 4500-P A, F m
Orthophosphate LL by Automated Analyzer (1, 7)	1	N/A	2025/07/23	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	9	2025/07/18	2025/07/18	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	8	N/A	2025/07/17	AB SOP-00011	EPA 370.1 R1978 m
Silica (Reactive) (1)	1	N/A	2025/07/18	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	9	2025/07/17	2025/07/18	AB SOP-00065	SM 24 2540 C m



Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 759289-02-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

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Received: 2025/07/14, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted Analyzed		
Total Dissolved Solids (Calculated) (1)	9	N/A 2025/08/07		Auto Calc
Temperature (Field) (1)	6	N/A 2025/08/01	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	1	N/A 2025/07/18		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	7	N/A 2025/07/21		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A 2025/07/24		Auto Calc
Nitrogen (Total) (1)	1	2025/07/17 2025/07/18	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	7	2025/07/18 2025/07/21	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/07/23 2025/07/23	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 8)	1	N/A 2025/07/21	AB SOP-00087	MMCW 119 1996 m
Carbon (Total Organic) (1, 8)	8	N/A 2025/07/22	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	9	2025/07/17 2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	7	2025/07/17 2025/07/22	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/18 2025/07/18	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/07/23 2025/07/23	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	6	2025/07/17 2025/07/17	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	3	2025/07/17 2025/07/18	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	9	N/A 2025/07/17	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	6	N/A 2025/08/08	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless



Your P.O. #: 470000200
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Site Location: 176233659
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Canada S7H 0T4

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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C562731

Received: 2025/07/14, 15:00

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC482		DPC483			DPC484		
Sampling Date		2025/07/11 07:30		2025/07/11 08:20			2025/07/12 14:35		
COC Number		759289-02-01		759289-02-01			759289-02-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	BRP-38-1	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	28.1	C020057	28.0	0.50	C020057	13.4	0.50	C020057
Total Hardness (CaCO ₃)	mg/L	28.0	C020435	27.9	0.50	C020435	13.4	0.50	C020435
Dissolved Nitrate (N)	mg/L	0.51	C021010	0.51	0.040	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	2.3	C020456	2.2	0.18	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	0.0080	C020456	0.0080	0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	C020940	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	39	C020620	39	10	C020620	16	10	C020620
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.35	C020566	0.33	0.040	C020566	0.26	0.020	C020566
Un-Ionized Ammonia	mg/L	<0.00050	C037090	<0.00050	0.00050	C037090	<0.00050	0.00050	C037090

Field Parameters									
Field pH	pH	7.0	ONSITE	7.0	N/A	ONSITE	7.38	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.05	ONSITE	13.06	N/A	ONSITE	12.39	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	72	C022262	72	2.0	C022262	31	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050 (1)	C025741	0.00060	0.00050	C025741	0.00052	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00051	C025745	0.00058	0.00050	C025745	<0.00050	0.00050	C025745
Fluoride (F)	mg/L	0.024	C022257	0.028	0.010	C022257	0.022	0.010	C022257
Free Free Cyanide	mg/L	0.00053	C025757	0.00066	0.00050	C025757	0.00060	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.7	C025819	3.9	0.50	C026802	3.2	0.50	C026802
pH	pH	6.07	C022261	6.13	N/A	C022261	6.35	N/A	C022261
Reactive Silica	mg/L	0.95	C021937	0.97	0.050	C021942	0.36	0.050	C021942
Alkalinity (Total as CaCO ₃)	mg/L	4.47	C022259	4.90	0.50	C022259	8.52	0.50	C022259
Total Organic Carbon (C)	mg/L	3.7	C025725	3.6	0.50	C025725	2.9	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	5.46	C022259	5.97	0.50	C022259	10.4	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	52	C021264	52	10	C021264	24	10	C021264
Total Suspended Solids	mg/L	<1.0	C021258	<1.0	1.0	C021258	2.3	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC482		DPC483			DPC484		
Sampling Date		2025/07/11 07:30		2025/07/11 08:20			2025/07/12 14:35		
COC Number		759289-02-01		759289-02-01			759289-02-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	BRP-38-1	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	C027278	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	C022855	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	4.9	C021895	5.4	0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	17	C021895	17	0.50	C021895	4.8	0.50	C021895
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C021989	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0049	C022001	<0.0010	0.0010	C022001	0.0014	0.0010	C022776
Total Ammonia (N)	mg/L	0.024	C022701	0.025	0.0050	C022701	0.0077	0.0050	C022701
Dissolved Nitrite (N)	mg/L	0.0026	C021680	0.0023	0.0010	C021680	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	0.51	C021680	0.51	0.040	C021680	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.87	C022916	0.84	0.020	C022916	0.26	0.020	C021971
RADIONUCLIDE									
Radium 226	Bq/l						<0.0050	0.0050	C043101
Physical Properties									
Turbidity	NTU	0.15	C021640	<0.10	0.10	C021640	0.11	0.10	C021640
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC485			DPC486		DPC487		
Sampling Date		2025/07/12 13:45			2025/07/12 11:10		2025/07/12 12:50		
COC Number		759289-02-01			759289-02-01		759289-02-01		
	UNITS	BRP-38-2	RDL	QC Batch	BRP-38-3	QC Batch	BRP-38-4	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	13.3	0.50	C020057	13.5	C020057	13.3	0.50	C020057
Total Hardness (CaCO ₃)	mg/L	13.1	0.50	C020435	13.3	C020435	13.3	0.50	C020435
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C021010	0.0040	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	<0.013	0.013	C020456	0.017	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C020456	<0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C020940	<0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	15	10	C020620	15	C020620	15	10	C020620
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.25	0.020	C020566	0.26	C020566	0.26	0.020	C020566
Un-Ionized Ammonia	mg/L				<0.00050	C037090	<0.00050	0.00050	C037090

Field Parameters									
Field pH	pH				7.35	ONSITE	7.36	N/A	ONSITE
Field Temperature (Fd)	deg. C				12.41	ONSITE	12.38	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	31	2.0	C022262	31	C022262	31	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00064	0.00050	C025741	0.00059 (1)	C025741	0.00071 (1)	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00064	0.00050	C025745	0.00065	C025745	0.00083	0.00050	C025745
Fluoride (F)	mg/L	0.022	0.010	C022257	0.022	C022257	0.022	0.010	C022257
Free Free Cyanide	mg/L	0.00062	0.00050	C025757	0.00055	C025757	0.00067	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.3	0.50	C025819	3.1	C025819	3.3	0.50	C025819
pH	pH	6.32	N/A	C022261	6.32	C022261	6.35	N/A	C022261
Reactive Silica	mg/L	0.38	0.050	C021937	0.39	C022404	0.37	0.050	C021937
Alkalinity (Total as CaCO ₃)	mg/L	7.94	0.50	C022259	8.34	C022259	8.40	0.50	C022259
Total Organic Carbon (C)	mg/L	2.9	0.50	C025725	2.6	C025725	3.0	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	9.68	0.50	C022259	10.2	C022259	10.3	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	0.50	C022259	<0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	20	10	C021264	24	C021264	24	10	C021264
Total Suspended Solids	mg/L	<1.0	1.0	C021260	<1.0	C021260	1.8	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC485			DPC486		DPC487		
Sampling Date		2025/07/12 13:45			2025/07/12 11:10		2025/07/12 12:50		
COC Number		759289-02-01			759289-02-01		759289-02-01		
	UNITS	BRP-38-2	RDL	QC Batch	BRP-38-3	QC Batch	BRP-38-4	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	C022165	<0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	0.0018	C022855	<0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	<0.50	0.50	C021895	<0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	5.0	0.50	C021895	4.9	C021895	4.8	0.50	C021895
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989	<0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0017	0.0010	C026716	0.0020	C022001	0.0028	0.0010	C022001
Total Ammonia (N)	mg/L	0.0080	0.0050	C026699	0.0063	C022701	0.067	0.0050	C022701
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C021680	<0.0010	C021688	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C021680	0.0040	C021688	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.25	0.020	C027347	0.27	C022916	0.26	0.020	C022916
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	0.0050	C043101	<0.0050	C043101	<0.0050	0.0050	C043101
Physical Properties									
Turbidity	NTU	0.12	0.10	C021640	0.11	C021640	<0.10	0.10	C021640
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC488			DPC491			DPC492		
Sampling Date		2025/07/12 12:10			2025/07/11 09:00			2025/07/12 00:00		
COC Number		759289-02-01			759289-02-01			759289-02-01		
	UNITS	BRP-38-5	RDL	QC Batch	FB-1	RDL	QC Batch	TB-1	RDL	QC Batch

Calculated Parameters										
Dissolved Hardness (CaCO ₃)	mg/L	13.3	0.50	C020057	<0.50	0.50	C021135	<0.50	0.50	C021135
Total Hardness (CaCO ₃)	mg/L	13.5	0.50	C020435	<0.50	0.50	C020435	<0.50	0.50	C020435
Dissolved Nitrate (N)	mg/L	0.0048	0.0030	C021010	0.0038	0.0030	C021010	<0.0030	0.0030	C021010
Nitrate (NO ₃)	mg/L	0.021	0.013	C020456	0.017	0.013	C020456	<0.013	0.013	C020456
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C020456	<0.0033	0.0033	C020456	<0.0033	0.0033	C020456
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940	<0.0020	0.0020	C020940
Calculated Total Dissolved Solids	mg/L	16	10	C020620	<10	10	C020620	<10	10	C021136
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.28	0.020	C020566	<0.020	0.020	C020566	<0.020	0.020	C020566
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C037090						

Field Parameters										
Field pH	pH	7.36	N/A	ONSITE						
Field Temperature (Fd)	deg. C	12.44	N/A	ONSITE						

Misc. Inorganics										
Conductivity	uS/cm	31	2.0	C022262	<2.0	2.0	C022262	<2.0	2.0	C022262
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063 (1)	0.00050	C025741	<0.00050	0.00050	C025741	<0.00050	0.00050	C025741
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00076	0.00050	C025745	<0.00050	0.00050	C025745	<0.00050	0.00050	C025745
Fluoride (F)	mg/L	0.022	0.010	C022257	<0.010	0.010	C022257	<0.010	0.010	C022257
Free Free Cyanide	mg/L	0.00074	0.00050	C025757	<0.00050	0.00050	C025757	<0.00050	0.00050	C025757
Dissolved Organic Carbon (C)	mg/L	3.0	0.50	C025819	<0.50	0.50	C025819	<0.50	0.50	C026802
pH	pH	6.32	N/A	C022261	5.73	N/A	C022261	5.54	N/A	C022261
Reactive Silica	mg/L	1.1	0.050	C021942	<0.050	0.050	C021942	<0.050	0.050	C021942
Alkalinity (Total as CaCO ₃)	mg/L	8.15	0.50	C022259	0.84	0.50	C022259	<0.50	0.50	C022259
Total Organic Carbon (C)	mg/L	3.0	0.50	C025725	<0.50	0.50	C024934	<0.50	0.50	C025725
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Bicarbonate (HCO ₃)	mg/L	9.94	0.50	C022259	1.03	0.50	C022259	<0.50	0.50	C022259
Carbonate (CO ₃)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Hydroxide (OH)	mg/L	<0.50	0.50	C022259	<0.50	0.50	C022259	<0.50	0.50	C022259
Total Dissolved Solids	mg/L	20	10	C021264	<10	10	C021264	<10	10	C021264
Total Suspended Solids	mg/L	1.7	0.99	C021260	<1.0	1.0	C021258	<1.0	1.0	C021260

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DPC488			DPC491			DPC492		
Sampling Date		2025/07/12 12:10			2025/07/11 09:00			2025/07/12 00:00		
COC Number		759289-02-01			759289-02-01			759289-02-01		
	UNITS	BRP-38-5	RDL	QC Batch	FB-1	RDL	QC Batch	TB-1	RDL	QC Batch
Anions										
Orthophosphate (P)	mg/L	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165	<0.0010	0.0010	C022165
Total Sulphide	mg/L	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855	<0.0018	0.0018	C022855
Chloride (Cl)	mg/L	<0.50	0.50	C021895	<0.50	0.50	C021895	<0.50	0.50	C021895
Sulphate (SO4)	mg/L	4.9	0.50	C021895	<0.50	0.50	C021895	<0.50	0.50	C021895
Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989	<0.0010	0.0010	C021989
Total Phosphorus (P)	mg/L	0.0024	0.0010	C022001	<0.0010	0.0010	C022001	<0.0010	0.0010	C022001
Total Ammonia (N)	mg/L	0.018	0.0050	C022701	<0.0050	0.0050	C022701	0.0091	0.0050	C022701
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C021680	<0.0010	0.0010	C021680	<0.0010	0.0010	C021680
Dissolved Nitrate plus Nitrite (N)	mg/L	0.0048	0.0030	C021680	0.0038	0.0030	C021680	<0.0030	0.0030	C021680
Total Nitrogen (N)	mg/L	0.28	0.020	C022916	<0.020 (1)	0.020	C022916	<0.020 (2)	0.020	C022916
RADIONUCLIDE										
Radium 226	Bq/l	<0.0050	0.0050	C043101				<0.0050	0.0050	C043101
Physical Properties										
Turbidity	NTU	0.14	0.10	C021640	<0.10	0.10	C021640	<0.10	0.10	C021640
RDL = Reportable Detection Limit										
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.										
(2) Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.										



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Elements									
Total Mercury (Hg)	ug/L	0.00153	0.00154	0.00092	0.00105	0.00096	0.00118	0.00010	C028529
Lab Filtered Elements									
Dissolved Mercury (Hg)	ug/L	0.00085	0.00089	0.00065	0.00046	0.00042	0.00041	0.00010	C028535
RDL = Reportable Detection Limit									

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch

Elements						
Total Mercury (Hg)	ug/L	0.00099	<0.00010	0.00015 (1)	0.00010	C028529
Lab Filtered Elements						
Dissolved Mercury (Hg)	ug/L	0.00044	<0.00010	<0.00010	0.00010	C028546
RDL = Reportable Detection Limit						
(1) Reanalysis confirms results >RDL.						



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Dissolved Metals by ICPMS									
Dissolved Aluminum (Al)	ug/L	17.3	17.9	4.10	4.21	4.24	4.07	0.10	C031049
Dissolved Antimony (Sb)	ug/L	0.0087	0.0116	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Arsenic (As)	ug/L	0.226	0.230	0.132	0.151	0.149	0.137	0.0050	C031049
Dissolved Barium (Ba)	ug/L	10.3	10.3	3.81	3.71	3.83	3.76	0.0080	C031049
Dissolved Beryllium (Be)	ug/L	0.0024	0.0023	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	C031049
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C031049
Dissolved Boron (B)	ug/L	2.18	2.18	1.00	0.97	1.01	0.94	0.10	C031049
Dissolved Cadmium (Cd)	ug/L	0.0044	0.0060	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Calcium (Ca)	ug/L	5680	5650	2290	2260	2300	2280	2.0	C031049
Dissolved Chromium (Cr)	ug/L	0.086	0.094	0.033	0.027	0.047	0.031	0.020	C031049
Dissolved Cobalt (Co)	ug/L	0.101	0.110	0.0131	0.0140	0.0153	0.0138	0.0040	C031049
Dissolved Copper (Cu)	ug/L	1.75	1.69	0.617	0.573	0.627	0.601	0.020	C031049
Dissolved Iron (Fe)	ug/L	7.4	7.0	16.6	16.7	16.8	15.7	1.0	C031049
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Lithium (Li)	ug/L	1.01	1.03	0.510	0.523	0.530	0.529	0.050	C031049
Dissolved Magnesium (Mg)	ug/L	3370	3380	1860	1850	1870	1850	0.50	C031049
Dissolved Manganese (Mn)	ug/L	2.43	2.35	0.209	0.224	0.279	0.161	0.0040	C031049
Dissolved Molybdenum (Mo)	ug/L	0.0173	0.0194	<0.0050	0.0052	<0.0050	<0.0050	0.0050	C031049
Dissolved Nickel (Ni)	ug/L	6.13	6.19	1.01	1.00	1.05	1.01	0.015	C031049
Dissolved Potassium (K)	ug/L	631	626	333	330	334	330	5.0	C031049
Dissolved Selenium (Se)	ug/L	0.025	0.036	0.024	0.012	0.017	0.020	0.010	C031049
Dissolved Silicon (Si)	ug/L	373	369	134	129	132	133	1.2	C031049
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	C031049
Dissolved Sodium (Na)	ug/L	1090	1100	611	597	608	605	0.50	C031049
Dissolved Strontium (Sr)	ug/L	25.4	25.1	7.23	7.28	7.23	7.24	0.0080	C031049
Dissolved Sulphur (S)	ug/L	4880	4980	1590	1620	1590	1580	1.0	C031049
Dissolved Thallium (Tl)	ug/L	0.00280	0.00304	0.00109	0.00146	<0.00080	0.00134	0.00080	C031049
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	C031049
Dissolved Titanium (Ti)	ug/L	0.061	0.112	<0.030	<0.030	<0.030	0.050	0.030	C031049
Dissolved Uranium (U)	ug/L	0.00897	0.00989	0.00281	0.00308	0.00334	0.00377	0.00050	C031049
Dissolved Vanadium (V)	ug/L	0.0343	0.0323	0.0088	0.0052	0.0085	0.0093	0.0050	C031049

RDL = Reportable Detection Limit



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	0.856	0.886	0.068	<0.060	<0.060	0.065	0.060	C031049
Dissolved Zirconium (Zr)	ug/L	0.0657	0.0645	0.0168	0.0150	0.0166	0.0146	0.0080	C031049
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	34.8	35.2	10.9	9.39	8.89	9.86	0.10	C036971
Total Antimony (Sb)	ug/L	0.0081	0.0132	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Arsenic (As)	ug/L	0.295	0.272	0.161	0.165	0.166	0.159	0.0050	C036971
Total Barium (Ba)	ug/L	10.8	10.5	3.98	4.09	4.19	4.08	0.0080	C036971
Total Beryllium (Be)	ug/L	0.0053	0.0036	<0.0015	<0.0015	<0.0015	<0.0015	0.0015	C036971
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	C036971
Total Boron (B)	ug/L	2.18	2.14	1.17	0.96	0.96	0.96	0.10	C036971
Total Cadmium (Cd)	ug/L	0.0080	0.0076	<0.0030	<0.0030	0.0059	<0.0030	0.0030	C036971
Total Calcium (Ca)	ug/L	5720	5650	2330	2300	2330	2300	2.0	C036971
Total Chromium (Cr)	ug/L	0.164	0.139	0.030	0.080	0.081	0.073	0.020	C036971
Total Cobalt (Co)	ug/L	0.260	0.290	0.0879	0.0636	0.0636	0.0616	0.0040	C036971
Total Copper (Cu)	ug/L	2.09	1.94	0.647	0.726	0.765	0.727	0.020	C036971
Total Iron (Fe)	ug/L	44.2	49.9	104	84.2	79.8	86.2	1.0	C036971
Total Lead (Pb)	ug/L	0.0099	0.0112	0.0083	0.0064	0.0060	0.0063	0.0030	C036971
Total Lithium (Li)	ug/L	1.03	0.990	0.453	0.439	0.400	0.438	0.050	C036971
Total Magnesium (Mg)	ug/L	3320	3340	1840	1790	1830	1840	0.50	C036971
Total Manganese (Mn)	ug/L	4.91	5.32	3.90	2.79	2.80	2.63	0.0040	C036971
Total Molybdenum (Mo)	ug/L	0.0164	0.0171	<0.0050	<0.0050	0.0097	<0.0050	0.0050	C036971
Total Nickel (Ni)	ug/L	6.45	6.37	1.10	1.14	1.22	1.17	0.015	C036971
Total Potassium (K)	ug/L	631	623	334	325	358	334	5.0	C036971
Total Selenium (Se)	ug/L	<0.010	0.024	<0.010	<0.010	0.017	0.025	0.010	C036971
Total Silicon (Si)	ug/L	389	378	140	138	145	139	1.2	C036971
Total Silver (Ag)	ug/L	0.0035	0.0037	0.0028	<0.0020	<0.0020	<0.0020	0.0020	C036971
Total Sodium (Na)	ug/L	1100	1090	606	591	605	603	0.50	C036971
Total Strontium (Sr)	ug/L	25.4	25.0	7.36	7.24	7.34	7.23	0.0080	C036971
Total Sulphur (S)	ug/L	5000	4920	1660	1650	1710	1600	1.0	C036971
Total Thallium (Tl)	ug/L	0.00345	0.00300	0.00138	0.00124	0.00211	0.00118	0.00080	C036971
Total Tin (Sn)	ug/L	0.0297	0.0265	0.0354	0.0224	0.0211	0.0353	0.0050	C036971
Total Titanium (Ti)	ug/L	0.308	0.441	0.220	0.227	0.188	0.150	0.030	C036971
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC482	DPC483	DPC484	DPC485	DPC486	DPC487		
Sampling Date		2025/07/11 07:30	2025/07/11 08:20	2025/07/12 14:35	2025/07/12 13:45	2025/07/12 11:10	2025/07/12 12:50		
COC Number		759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-32-4	BRP-32-5	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Total Uranium (U)	ug/L	0.0139	0.0130	0.00400	0.00516	0.00543	0.00538	0.00050	C036971
Total Vanadium (V)	ug/L	0.0684	0.0699	0.0395	0.0319	0.0306	0.0344	0.0050	C036971
Total Zinc (Zn)	ug/L	1.24	1.04	0.151	0.202	0.228	0.198	0.060	C036971
Total Zirconium (Zr)	ug/L	0.0826	0.0769	0.0189	0.0180	0.0148	0.0195	0.0080	C036971
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C562731

Report Date: 2025/08/12

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	ug/L	3.84	<0.10	<0.10	0.10	C031049
Dissolved Antimony (Sb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Arsenic (As)	ug/L	0.148	0.0059	0.0083	0.0050	C031049
Dissolved Barium (Ba)	ug/L	3.85	<0.0080	<0.0080	0.0080	C031049
Dissolved Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	0.0015	C031049
Dissolved Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	0.0010	C031049
Dissolved Boron (B)	ug/L	0.96	<0.10	<0.10	0.10	C031049
Dissolved Cadmium (Cd)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Calcium (Ca)	ug/L	2280	<2.0	3.0	2.0	C031049
Dissolved Chromium (Cr)	ug/L	0.046	<0.020	<0.020	0.020	C031049
Dissolved Cobalt (Co)	ug/L	0.0106	<0.0040	<0.0040	0.0040	C031049
Dissolved Copper (Cu)	ug/L	0.605	0.022	0.031	0.020	C031049
Dissolved Iron (Fe)	ug/L	16.1	<1.0	<1.0	1.0	C031049
Dissolved Lead (Pb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C031049
Dissolved Lithium (Li)	ug/L	0.512	<0.050	<0.050	0.050	C031049
Dissolved Magnesium (Mg)	ug/L	1850	<0.50	<0.50	0.50	C031049
Dissolved Manganese (Mn)	ug/L	0.175	0.0044	<0.0040	0.0040	C031049
Dissolved Molybdenum (Mo)	ug/L	0.0671	<0.0050	<0.0050	0.0050	C031049
Dissolved Nickel (Ni)	ug/L	1.04	<0.015	<0.015	0.015	C031049
Dissolved Potassium (K)	ug/L	331	<5.0	<5.0	5.0	C031049
Dissolved Selenium (Se)	ug/L	0.020	<0.010	<0.010	0.010	C031049
Dissolved Silicon (Si)	ug/L	131	<1.2	<1.2	1.2	C031049
Dissolved Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	0.0020	C031049
Dissolved Sodium (Na)	ug/L	606	<0.50	<0.50	0.50	C031049
Dissolved Strontium (Sr)	ug/L	7.16	<0.0080	<0.0080	0.0080	C031049
Dissolved Sulphur (S)	ug/L	1600	<1.0	<1.0	1.0	C031049
Dissolved Thallium (Tl)	ug/L	0.00133	<0.00080	<0.00080	0.00080	C031049
Dissolved Tin (Sn)	ug/L	<0.0050	<0.0050	<0.0050	0.0050	C031049
Dissolved Titanium (Ti)	ug/L	<0.030	<0.030	<0.030	0.030	C031049
Dissolved Uranium (U)	ug/L	0.00284	<0.00050	<0.00050	0.00050	C031049
Dissolved Vanadium (V)	ug/L	0.0066	<0.0050	<0.0050	0.0050	C031049
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C562731

Report Date: 2025/08/12

WSP Canada Inc.

Client Project #: WATER QUALITY- JULY AEMP

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Dissolved Zinc (Zn)	ug/L	0.067	<0.060	<0.060	0.060	C031049
Dissolved Zirconium (Zr)	ug/L	0.0152	<0.0080	<0.0080	0.0080	C031049
Total Metals by ICPMS						
Total Aluminum (Al)	ug/L	9.22	0.17	0.13	0.10	C036971
Total Antimony (Sb)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Arsenic (As)	ug/L	0.173	<0.0050	0.0065	0.0050	C036971
Total Barium (Ba)	ug/L	4.21	<0.0080	<0.0080	0.0080	C036971
Total Beryllium (Be)	ug/L	<0.0015	<0.0015	<0.0015	0.0015	C036971
Total Bismuth (Bi)	ug/L	<0.0010	<0.0010	<0.0010	0.0010	C036971
Total Boron (B)	ug/L	0.97	<0.10	<0.10	0.10	C036971
Total Cadmium (Cd)	ug/L	<0.0030	<0.0030	<0.0030	0.0030	C036971
Total Calcium (Ca)	ug/L	2370	<2.0	<2.0	2.0	C036971
Total Chromium (Cr)	ug/L	0.082	<0.020	<0.020	0.020	C036971
Total Cobalt (Co)	ug/L	0.0523	<0.0040	<0.0040	0.0040	C036971
Total Copper (Cu)	ug/L	0.779	0.027	<0.020	0.020	C036971
Total Iron (Fe)	ug/L	77.7	<1.0	<1.0	1.0	C036971
Total Lead (Pb)	ug/L	0.0050	0.0051	<0.0030	0.0030	C036971
Total Lithium (Li)	ug/L	0.435	<0.050	<0.050	0.050	C036971
Total Magnesium (Mg)	ug/L	1840	<0.50	<0.50	0.50	C036971
Total Manganese (Mn)	ug/L	2.39	<0.0040	<0.0040	0.0040	C036971
Total Molybdenum (Mo)	ug/L	<0.0050	<0.0050	<0.0050	0.0050	C036971
Total Nickel (Ni)	ug/L	1.26	<0.015	<0.015	0.015	C036971
Total Potassium (K)	ug/L	335	<5.0	<5.0	5.0	C036971
Total Selenium (Se)	ug/L	<0.010	<0.010	<0.010	0.010	C036971
Total Silicon (Si)	ug/L	143	<1.2	<1.2	1.2	C036971
Total Silver (Ag)	ug/L	<0.0020	<0.0020	<0.0020	0.0020	C036971
Total Sodium (Na)	ug/L	603	<0.50	<0.50	0.50	C036971
Total Strontium (Sr)	ug/L	7.41	<0.0080	<0.0080	0.0080	C036971
Total Sulphur (S)	ug/L	1680	<1.0	<1.0	1.0	C036971
Total Thallium (Tl)	ug/L	0.00180	<0.00080	<0.00080	0.00080	C036971
Total Tin (Sn)	ug/L	0.0161	<0.0050	<0.0050	0.0050	C036971
Total Titanium (Ti)	ug/L	0.166	0.036	<0.030	0.030	C036971
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DPC488	DPC491	DPC492		
Sampling Date		2025/07/12 12:10	2025/07/11 09:00	2025/07/12 00:00		
COC Number		759289-02-01	759289-02-01	759289-02-01		
	UNITS	BRP-38-5	FB-1	TB-1	RDL	QC Batch
Total Uranium (U)	ug/L	0.00577	<0.00050	<0.00050	0.00050	C036971
Total Vanadium (V)	ug/L	0.0287	<0.0050	<0.0050	0.0050	C036971
Total Zinc (Zn)	ug/L	0.241	<0.060	<0.060	0.060	C036971
Total Zirconium (Zr)	ug/L	0.0206	<0.0080	<0.0080	0.0080	C036971
RDL = Reportable Detection Limit						



GENERAL COMMENTS

Report reissued to include results for un-ionized ammonia as per client request received 2025/07/31.

Sample DPC482 [BRP-32-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC483 [BRP-32-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC484 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC485 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC486 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC487 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC488 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC491 [FB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DPC492 [TB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Results relate only to the items tested.



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C021258	Total Suspended Solids	2025/07/18	100	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C021260	Total Suspended Solids	2025/07/17	91	80 - 120	100	80 - 120	<1.0	mg/L	NC	20		
C021264	Total Dissolved Solids	2025/07/18	98	80 - 120	95	80 - 120	<10	mg/L				
C021640	Turbidity	2025/07/17			100	80 - 120	<0.10	NTU	7.5	20		
C021680	Dissolved Nitrate plus Nitrite (N)	2025/07/17	137 (1)	80 - 120	114	80 - 120	0.0041, RDL=0.0030 (2)	mg/L	NC	20		
C021680	Dissolved Nitrite (N)	2025/07/17	108	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20		
C021688	Dissolved Nitrate plus Nitrite (N)	2025/07/17	NC	80 - 120	110	80 - 120	0.0057, RDL=0.0030 (2)	mg/L	0.70	20		
C021688	Dissolved Nitrite (N)	2025/07/17	NC	80 - 120	109	80 - 120	<0.0010	mg/L	0.30	20		
C021895	Chloride (Cl)	2025/07/17	107	80 - 120	102	80 - 120	<0.50	mg/L	5.1	20		
C021895	Sulphate (SO4)	2025/07/17	99	80 - 120	99	80 - 120	<0.50	mg/L	0.45	20		
C021937	Reactive Silica	2025/07/17	94	80 - 120	108	80 - 120	<0.050	mg/L	2.4	20		
C021942	Reactive Silica	2025/07/17	NC	80 - 120	104	80 - 120	<0.050	mg/L	2.6	20		
C021971	Total Nitrogen (N)	2025/07/18	NC	80 - 120	105	80 - 120	<0.020	mg/L	1.0	20	105	80 - 120
C021989	Dissolved Phosphorus (P)	2025/07/18	95	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20	91	80 - 120
C022001	Total Phosphorus (P)	2025/07/22	105	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20	92	80 - 120
C022165	Orthophosphate (P)	2025/07/17	155 (1)	80 - 120	109	80 - 120	<0.0010	mg/L				
C022257	Fluoride (F)	2025/07/20	115	80 - 120	112	80 - 120	<0.010	mg/L	10	20		
C022259	Alkalinity (PP as CaCO3)	2025/07/20					<0.50	mg/L	NC	20		
C022259	Alkalinity (Total as CaCO3)	2025/07/20			101	80 - 120	<0.50	mg/L	12	20		
C022259	Bicarbonate (HCO3)	2025/07/20					<0.50	mg/L	12	20		
C022259	Carbonate (CO3)	2025/07/20					<0.50	mg/L	NC	20		
C022259	Hydroxide (OH)	2025/07/20					<0.50	mg/L	NC	20		
C022261	pH	2025/07/20			100	97 - 103			1.5	N/A		
C022262	Conductivity	2025/07/20			101	90 - 110	<2.0	uS/cm	0.27	10		
C022404	Reactive Silica	2025/07/18	98	80 - 120	106	80 - 120	<0.050	mg/L	10	20		
C022701	Total Ammonia (N)	2025/07/18	104	80 - 120	107	80 - 120	<0.0050	mg/L	NC	20		
C022776	Total Phosphorus (P)	2025/07/18	107	80 - 120	103	80 - 120	<0.0010	mg/L	11	20	90	80 - 120
C022855	Total Sulphide	2025/07/18	92	80 - 120	90	80 - 120	<0.0018	mg/L	NC	20		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C022916	Total Nitrogen (N)	2025/07/21	115	80 - 120	108	80 - 120	<0.020	mg/L	NC	20	110	80 - 120
C024934	Total Organic Carbon (C)	2025/07/21	89	75 - 125	98	80 - 120	<0.50	mg/L	NC	20		
C025725	Total Organic Carbon (C)	2025/07/22	98	75 - 125	95	80 - 120	<0.50	mg/L	3.5	20		
C025741	Strong Acid Dissoc. Cyanide (CN)	2025/07/22	99	80 - 120	102	80 - 120	<0.00050	mg/L	0	20		
C025745	Weak Acid Dissoc. Cyanide (CN)	2025/07/22	103	80 - 120	100	80 - 120	<0.00050	mg/L	2.0	20		
C025757	Free Free Cyanide	2025/07/22	102	80 - 120	101	80 - 120	<0.00050	mg/L	7.3	20		
C025819	Dissolved Organic Carbon (C)	2025/07/22	101	75 - 125	95	80 - 120	<0.50	mg/L	16	20		
C026699	Total Ammonia (N)	2025/07/23	105	80 - 120	111	80 - 120	<0.0050	mg/L	NC	20		
C026716	Total Phosphorus (P)	2025/07/23	101	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C026802	Dissolved Organic Carbon (C)	2025/07/24	110	75 - 125	107	80 - 120	<0.50	mg/L	NC	20		
C027278	Orthophosphate (P)	2025/07/23	95	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C027347	Total Nitrogen (N)	2025/07/23	104	80 - 120	102	80 - 120	<0.020	mg/L	3.0	20	103	80 - 120
C028529	Total Mercury (Hg)	2025/07/30	68 (1)	80 - 120	104	80 - 120	<0.00010	ug/L	NC	25		
C028535	Dissolved Mercury (Hg)	2025/07/24	101	80 - 120	104	80 - 120	<0.00010	ug/L	2.8	25		
C028546	Dissolved Mercury (Hg)	2025/07/24	90	80 - 120	89	80 - 120	<0.00010	ug/L	5.6	25		
C031049	Dissolved Aluminum (Al)	2025/08/05	98	80 - 120	99	80 - 120	<0.10	ug/L	5.4	40		
C031049	Dissolved Antimony (Sb)	2025/08/05	113	80 - 120	112	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Arsenic (As)	2025/08/05	100	80 - 120	98	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Barium (Ba)	2025/08/05	104	80 - 120	103	80 - 120	<0.0080	ug/L	NC	40		
C031049	Dissolved Beryllium (Be)	2025/08/05	102	80 - 120	100	80 - 120	<0.0015	ug/L	NC	40		
C031049	Dissolved Bismuth (Bi)	2025/08/05	100	80 - 120	100	80 - 120	<0.0010	ug/L	NC	40		
C031049	Dissolved Boron (B)	2025/08/05	107	80 - 120	102	80 - 120	<0.10	ug/L	NC	40		
C031049	Dissolved Cadmium (Cd)	2025/08/05	102	80 - 120	99	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Calcium (Ca)	2025/08/05	98	80 - 120	100	80 - 120	<2.0	ug/L	NC	40		
C031049	Dissolved Chromium (Cr)	2025/08/05	105	80 - 120	102	80 - 120	<0.020	ug/L	NC	40		
C031049	Dissolved Cobalt (Co)	2025/08/05	104	80 - 120	101	80 - 120	<0.0040	ug/L	NC	40		
C031049	Dissolved Copper (Cu)	2025/08/05	104	80 - 120	102	80 - 120	<0.020	ug/L	31	40		
C031049	Dissolved Iron (Fe)	2025/08/05	92	80 - 120	93	80 - 120	<1.0	ug/L	NC	40		
C031049	Dissolved Lead (Pb)	2025/08/05	99	80 - 120	98	80 - 120	<0.0030	ug/L	NC	40		
C031049	Dissolved Lithium (Li)	2025/08/05	109	80 - 120	106	80 - 120	<0.050	ug/L	NC	40		
C031049	Dissolved Magnesium (Mg)	2025/08/05	108	80 - 120	107	80 - 120	<0.50	ug/L	NC	40		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C031049	Dissolved Manganese (Mn)	2025/08/05	101	80 - 120	100	80 - 120	<0.0040	ug/L	NC	40		
C031049	Dissolved Molybdenum (Mo)	2025/08/05	110	80 - 120	107	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Nickel (Ni)	2025/08/05	104	80 - 120	102	80 - 120	<0.015	ug/L	NC	40		
C031049	Dissolved Potassium (K)	2025/08/05	105	80 - 120	103	80 - 120	<5.0	ug/L	NC	40		
C031049	Dissolved Selenium (Se)	2025/08/05	95	80 - 120	96	80 - 120	<0.010	ug/L	NC	40		
C031049	Dissolved Silicon (Si)	2025/08/05	93	80 - 120	92	80 - 120	<1.2	ug/L	NC	40		
C031049	Dissolved Silver (Ag)	2025/08/05	104	80 - 120	100	80 - 120	<0.0020	ug/L	NC	40		
C031049	Dissolved Sodium (Na)	2025/08/05	108	80 - 120	106	80 - 120	<0.50	ug/L	NC	40		
C031049	Dissolved Strontium (Sr)	2025/08/05	98	80 - 120	97	80 - 120	<0.0080	ug/L	NC	40		
C031049	Dissolved Sulphur (S)	2025/08/05	85	80 - 120	88	80 - 120	<1.0	ug/L	NC	40		
C031049	Dissolved Thallium (Tl)	2025/08/05	102	80 - 120	100	80 - 120	<0.00080	ug/L	NC	40		
C031049	Dissolved Tin (Sn)	2025/08/05	110	80 - 120	106	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Titanium (Ti)	2025/08/05	100	80 - 120	101	80 - 120	<0.030	ug/L	13	40		
C031049	Dissolved Uranium (U)	2025/08/05	101	80 - 120	100	80 - 120	<0.00050	ug/L	NC	40		
C031049	Dissolved Vanadium (V)	2025/08/05	94	80 - 120	94	80 - 120	<0.0050	ug/L	NC	40		
C031049	Dissolved Zinc (Zn)	2025/08/05	99	80 - 120	97	80 - 120	<0.060	ug/L	NC	40		
C031049	Dissolved Zirconium (Zr)	2025/08/05	100	80 - 120	100	80 - 120	<0.0080	ug/L	NC	40		
C036971	Total Aluminum (Al)	2025/08/05	103	80 - 120	105	80 - 120	<0.10	ug/L	16	40		
C036971	Total Antimony (Sb)	2025/08/05	108	80 - 120	111	80 - 120	<0.0030	ug/L	NC	40		
C036971	Total Arsenic (As)	2025/08/05	100	80 - 120	99	80 - 120	<0.0050	ug/L	0.60	40		
C036971	Total Barium (Ba)	2025/08/05	101	80 - 120	103	80 - 120	<0.0080	ug/L	4.3	40		
C036971	Total Beryllium (Be)	2025/08/05	105	80 - 120	102	80 - 120	<0.0015	ug/L	NC	40		
C036971	Total Bismuth (Bi)	2025/08/05	97	80 - 120	99	80 - 120	<0.0010	ug/L	NC	40		
C036971	Total Boron (B)	2025/08/05	110	80 - 120	107	80 - 120	<0.10	ug/L	1.2	40		
C036971	Total Cadmium (Cd)	2025/08/05	101	80 - 120	100	80 - 120	<0.0030	ug/L	NC	40		
C036971	Total Calcium (Ca)	2025/08/05	90	80 - 120	95	80 - 120	<2.0	ug/L	1.9	40		
C036971	Total Chromium (Cr)	2025/08/05	102	80 - 120	102	80 - 120	<0.020	ug/L	27	40		
C036971	Total Cobalt (Co)	2025/08/05	103	80 - 120	103	80 - 120	<0.0040	ug/L	27	40		
C036971	Total Copper (Cu)	2025/08/05	103	80 - 120	103	80 - 120	<0.020	ug/L	7.1	40		
C036971	Total Iron (Fe)	2025/08/05	95	80 - 120	88	80 - 120	<1.0	ug/L	21	40		
C036971	Total Lead (Pb)	2025/08/05	101	80 - 120	98	80 - 120	<0.0030	ug/L	0.77	40		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C036971	Total Lithium (Li)	2025/08/05	113	80 - 120	109	80 - 120	<0.050	ug/L	15	40		
C036971	Total Magnesium (Mg)	2025/08/05	105	80 - 120	107	80 - 120	<0.50	ug/L	0.27	40		
C036971	Total Manganese (Mn)	2025/08/05	75 (1)	80 - 120	100	80 - 120	<0.0040	ug/L	29	40		
C036971	Total Molybdenum (Mo)	2025/08/05	107	80 - 120	109	80 - 120	<0.0050	ug/L	NC	40		
C036971	Total Nickel (Ni)	2025/08/05	103	80 - 120	103	80 - 120	<0.015	ug/L	6.0	40		
C036971	Total Potassium (K)	2025/08/05	104	80 - 120	105	80 - 120	<5.0	ug/L	9.4	40		
C036971	Total Selenium (Se)	2025/08/05	97	80 - 120	94	80 - 120	<0.010	ug/L	NC	40		
C036971	Total Silicon (Si)	2025/08/05	90	80 - 120	90	80 - 120	<1.2	ug/L	4.9	40		
C036971	Total Silver (Ag)	2025/08/05	101	80 - 120	103	80 - 120	0.0027, RDL=0.0020 (2)	ug/L	18	40		
C036971	Total Sodium (Na)	2025/08/05	106	80 - 120	106	80 - 120	<0.50	ug/L	1.6	40		
C036971	Total Strontium (Sr)	2025/08/05	96	80 - 120	96	80 - 120	<0.0080	ug/L	3.1	40		
C036971	Total Sulphur (S)	2025/08/05	81	80 - 120	82	80 - 120	<1.0	ug/L	5.4	40		
C036971	Total Thallium (Tl)	2025/08/05	101	80 - 120	101	80 - 120	<0.00080	ug/L	NC	40		
C036971	Total Tin (Sn)	2025/08/05	108	80 - 120	107	80 - 120	<0.0050	ug/L	38	40		
C036971	Total Titanium (Ti)	2025/08/05	104	80 - 120	98	80 - 120	<0.030	ug/L	0.32	40		
C036971	Total Uranium (U)	2025/08/05	99	80 - 120	100	80 - 120	<0.00050	ug/L	20	40		
C036971	Total Vanadium (V)	2025/08/05	90	80 - 120	90	80 - 120	<0.0050	ug/L	18	40		
C036971	Total Zinc (Zn)	2025/08/05	103	80 - 120	97	80 - 120	<0.060	ug/L	NC	40		
C036971	Total Zirconium (Zr)	2025/08/05	107	80 - 120	98	80 - 120	<0.0080	ug/L	16	40		



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C043101	Radium 226	2025/08/07			94	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis



Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Maria Magdalena Florescu, Ph.D., P.Chem., QP, Laboratory Manager SR

Neenu Jose, Project Solutions Representative

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Job #: C562731
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WSP Canada Inc.
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VALIDATION SIGNATURE PAGE(CONT'D)

The analytical data and all QC contained in this report were reviewed and validated by:

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas										CHAIN OF CUSTODY RECORD																																																																
Bureau Veritas 4000 19th N.E. Calgary, Alberta Canada T2E 6P8 Tel: (403) 291-2077 Toll-free: 800-553-6268 Fax: (403) 291-8468 www.bv.com										Page 2 of 3																																																																
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:																																																											
Company Name: #10600 B2Gold Back River Corp. Attention: Accounts Payable Address: Park Place Suite 3400-666 Burnard St. VANCOUVER BC V6C 2X6 Tel: (604) 681-8371 Fax: (604) 681-8209 Email: BR.accounts payable@b2gold.com					Company Name: #50378 WSP Canada Inc. Attention: Beatriz Cupe-Flores Address: Saskatoon SK S7H 0T4 Tel: Beatriz.cupe.flores@wsp.com Jennifer.arena@wsp.com					Duration #: C41460 P.D. #: WATER QUALITY- JULY AEMP Project: Project Name: Site #: Sampled By:					Bureau Veritas Job # Bottle Order #: COC #: Project Manager: Melissa McIsaac																																																											
Regulatory Criteria: ☐ AT1 ☐ CCME ☐ Other					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Turnaround Time (TAT) Required: Please provide advance notice for rush projects Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Data Required: Rush Confirmation Number:																																																											
SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS										Needle Field Filament 7 (Y/N)																																																																
										AEMP- Routine Parameters AEMP- Nutrients AEMP- Other Conventional Ultra Low Level Total Metals Ultra Low Level Dissolved Metals + Hg (Lab III) Radium-226 Low Level Chlorophyll and Phaeophytin Water																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Barcode Label</th> <th>Sample (Location) Modification</th> <th>Date Sampled</th> <th>Time Sampled</th> <th>Media</th> </tr> </thead> <tbody> <tr><td>1</td><td>BRP-32-1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>BRP-32-2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>BRP-32-3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>BRP-32-4</td><td>25/07/11</td><td>7:30</td><td></td></tr> <tr><td>5</td><td>BRP-32-5</td><td>25/07/11</td><td>8:20</td><td></td></tr> <tr><td>6</td><td>BRP-38-1</td><td>25/07/12</td><td>14:35</td><td></td></tr> <tr><td>7</td><td>BRP-38-2</td><td>25/07/12</td><td>13:45</td><td></td></tr> <tr><td>8</td><td>BRP-38-3</td><td>25/07/12</td><td>11:10</td><td></td></tr> <tr><td>9</td><td>BRP-38-4</td><td>25/07/12</td><td>12:50</td><td></td></tr> <tr><td>10</td><td>BRP-38-5</td><td>25/07/12</td><td>12:10</td><td></td></tr> </tbody> </table>										Sample Barcode Label	Sample (Location) Modification	Date Sampled	Time Sampled	Media	1	BRP-32-1				2	BRP-32-2				3	BRP-32-3				4	BRP-32-4	25/07/11	7:30		5	BRP-32-5	25/07/11	8:20		6	BRP-38-1	25/07/12	14:35		7	BRP-38-2	25/07/12	13:45		8	BRP-38-3	25/07/12	11:10		9	BRP-38-4	25/07/12	12:50		10	BRP-38-5	25/07/12	12:10											
Sample Barcode Label	Sample (Location) Modification	Date Sampled	Time Sampled	Media																																																																						
1	BRP-32-1																																																																									
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4	BRP-32-4	25/07/11	7:30																																																																							
5	BRP-32-5	25/07/11	8:20																																																																							
6	BRP-38-1	25/07/12	14:35																																																																							
7	BRP-38-2	25/07/12	13:45																																																																							
8	BRP-38-3	25/07/12	11:10																																																																							
9	BRP-38-4	25/07/12	12:50																																																																							
10	BRP-38-5	25/07/12	12:10																																																																							
* RELINQUISHED BY: (Signature/Print) Adam Feldberg										RECEIVED BY: (Signature/Print) Charles K. Long																																																																
Date: (YY/MM/DD) Time 25/07/13 16:20										Date: (YY/MM/DD) Time 25/07/16 15:00																																																																
# Jars used and not submitted										Laboratory Use Only Temperature (°C) on Receipt Custody Seal intact on Cooler?																																																																
Yes ☐ No ☐										Yes ☐ No ☐																																																																

* UNLESS OTHERWISE AGREED TO IN WRITING, THESE SAMPLES ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNED OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORY/RESOURCES/COC-TERMS-AND-CONDITIONS.
 ** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
 *** ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.



MCAL-2025-07-1205

Bureau Veritas Canada (2018) Inc.

Received in Yellowknife
By: J. McIsaac

JUL 14 2025

Tamp: see ACTR
CS: Ice:

Bureau Veritas 4900 16th N.E., Calgary, Alberta Canada T2E 6P8 Tel: (403) 291-3077 Toll-free 800-563-6266 Fax: (403) 291-9458 www.bv.com										CHAIN OF CUSTODY RECORD										Page 3 of 3	
INVOICE TO:					REPORT TO:					PROJECT INFORMATION:					Laboratory Use Only:						
Company Name: #10600 B2Gold Back River Corp.					Company Name: #50376 WSP Canada Inc.					Quotation #: C41460					Bureau Veritas Job #:						
Attention: Accounts Payable					Attention: Beatriz Cupe-Flores					P.O. #:					Bottle Order #:						
Address: Park Place Suite 3400-666 Burrard St.					Address: Saskatoon SK S7H 0T4					Project: WATER QUALITY- JULY AEMP					CDC #:						
Tel: (604) 681-8371 Fax: (604) 681-6209					Tel: Fax:					Project Name:					Project Manager:						
Email: BR_accounts payable@b2gold.com					Email: beatriz.cupe.flores@wsp.com, jennifer.arenas@wsp.com					Site #:					Melissa McIntosh						
Regulatory Criteria:					Special Instructions:					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Turnaround Time (TAT) Required:						
☐ ATI										Metals Field Filtered ? (Y/N)					Regular (Standard) TAT:						
☐ CCME										AEMP- Routine Parameters					(will be applied if Rush TAT is not specified)						
☐ Other:										AEMP- Nutrients					Standard TAT = 5-7 Working days for most tests.						
										AEMP- Other Conventional					Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details						
										Ultra Low Level Total Metals + Hg					Job Specific Rush TAT (if applies to entire submission)						
										Ultra Low Level Dissolved Metals + Hg (Lab fil)					Date Required:						
										Radium-226 Low Level					Rush Confirmation Number:						
										Chlorophyll and Phaeophytin in Water					(not on file)						
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS															# of Bottles						
															Comments						
1					Sample Barcode Label					Sample (Location) Identifier					Date Sampled						
2					FB					25/07/11					9:00						
3					FB					25/07/12					00:00						
4					FB																
5					FB																
6																					
7																					
8																					
9																					
10																					
* RELINQUISHED BY: (Signature/Print)					Date: (YYMMDD)					Time					RECEIVED BY: (Signature/Print)						
Adam Feldberg					25/07/13					16:20					Chloe R. H. W. A. A. A.						
Date: (YYMMDD)					Time					Date: (YYMMDD)					Time						
25/07/13					16:20					25/07/13					15:00						
# Jars used and not submitted					Time Sampled					Temperature (°C) on Receipt					Custody Seal Intact on Container?						
															☐ Yes ☐ No						
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/DOC-TERMS-AND-CONDITIONS.															White Bureau Veritas Yellow Client						
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.															MICAL - see AGR						
* ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER																					

Received in Yellowknife
By: J. H. H.
JUL 14 2025
Temp: See AGR
CS: Ice:



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/15
Report #: R3710055
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	3	N/A	2025/08/19	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	3	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	3	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	2	N/A	2025/08/23	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 4)	1	N/A	2025/08/24	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	3	N/A	2025/08/20	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	3	N/A	2025/08/22		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	3	N/A	2025/09/04	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	3	N/A	2025/09/04	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	3	N/A	2025/08/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	3	2025/08/22	2025/08/22	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	3	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	2	N/A	2025/09/02	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	1	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	2	N/A	2025/08/19		Auto Calc
Ammonia-N Low Level (Preserved) (1)	3	N/A	2025/08/19	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	3	N/A	2025/08/18		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	3	N/A	2025/08/17	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	3	2025/08/17	2025/08/18		Auto Calc
pH @25°C (1, 6)	3	N/A	2025/08/19	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	2	N/A	2025/08/17	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	2	N/A	2025/08/17	AB SOP-00025	SM 24 4500-P A, F m
Orthophosphate LL by Automated Analyzer (1, 7)	1	N/A	2025/08/25	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/08/21	2025/08/22	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	3	N/A	2025/08/21	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	3	2025/08/20	2025/08/21	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	2	N/A	2025/08/17	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/08/20		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2025/08/21		Auto Calc



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/15
Report #: R3710055
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Nitrogen (Total) (1)	1	2025/08/19	2025/08/20	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	2	2025/08/21	2025/08/21	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 8)	3	N/A	2025/08/24	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	2	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	1	2025/08/20	2025/08/21	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/08/19	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	2	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	3	2025/08/20	2025/08/21	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	3	N/A	2025/08/17	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	3	N/A	2025/09/12	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/15
Report #: R3710055
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA367			DRA368		
Sampling Date		2025/08/14 11:00			2025/08/14 11:05		
COC Number		C#761493-03-01			C#761493-03-01		
	UNITS	BRP-31-3	RDL	QC Batch	FD	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	45.5	0.50	C052203	46.2	0.50	C052203
Total Hardness (CaCO ₃)	mg/L	46.4	0.50	C052200	46.0	0.50	C052200
Dissolved Nitrate (N)	mg/L	1.5	0.20	C052230	1.5	0.20	C052230
Nitrate (NO ₃)	mg/L	6.7	0.89	C052222	6.8	0.89	C052222
Nitrite (NO ₂)	mg/L	0.021	0.0033	C052222	0.021	0.0033	C052222
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C052196	<0.0020	0.0020	C052196
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.44	0.20	C052305	0.41	0.20	C052305
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C052221	<0.00050	0.00050	C052221
Field Parameters							
Field pH	pH	6.87	N/A	ONSITE	6.87	N/A	ONSITE
Field Temperature (Fd)	deg. C	12.62	N/A	ONSITE	12.62	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	130	2.0	C052478	130	2.0	C052478
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055 (1)	0.00050	C055259	0.00062 (2)	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00057 (3)	0.00050	C055261	0.00069	0.00050	C055261
Fluoride (F)	mg/L	0.011	0.010	C052480	0.014	0.010	C052480
Free Free Cyanide	mg/L	0.00065	0.00050	C055264	0.00054	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	3.3	0.50	C060602	3.6	0.50	C060065
pH	pH	5.98	N/A	C052470	6.04	N/A	C052470
Reactive Silica	mg/L	0.57	0.050	C057468	0.62	0.050	C057468
Alkalinity (Total as CaCO ₃)	mg/L	4.69	0.50	C052459	4.69	0.50	C052459
Total Organic Carbon (C)	mg/L	3.9	0.50	C060607	4.0	0.50	C060607
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Bicarbonate (HCO ₃)	mg/L	5.72	0.50	C052459	5.72	0.50	C052459
RDL = Reportable Detection Limit N/A = Not Applicable (1) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. (2) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. (3) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA367			DRA368		
Sampling Date		2025/08/14 11:00			2025/08/14 11:05		
COC Number		C#761493-03-01			C#761493-03-01		
	UNITS	BRP-31-3	RDL	QC Batch	FD	RDL	QC Batch
Carbonate (CO ₃)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Hydroxide (OH)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Total Dissolved Solids	mg/L	60	10	C055161	56	10	C055161
Total Suspended Solids	mg/L	<1.0	1.0	C055182	<1.0	1.0	C055182
Anions							
Orthophosphate (P)	mg/L	0.0014	0.0010	C061991	<0.0010	0.0010	C051984
Total Sulphide	mg/L	<0.0018	0.0018	C057938	<0.0018	0.0018	C057938
Chloride (Cl)	mg/L	14	0.50	C053797	14	0.50	C053802
Sulphate (SO ₄)	mg/L	27	0.50	C053797	26	0.50	C053802
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0050 (1)	0.0050	C055317	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	<0.0010 (2)	0.0010	C055305	0.0024	0.0010	C055305
Total Ammonia (N)	mg/L	0.15	0.0050	C053671	0.15	0.0050	C053671
Dissolved Nitrite (N)	mg/L	0.0063	0.0010	C051872	0.0063	0.0010	C051872
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	0.20	C051872	1.5	0.20	C051872
Total Nitrogen (N)	mg/L	2.0	0.020	C057051	1.9	0.020	C057051
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C086018	<0.0050	0.0050	C086018
Physical Properties							
Turbidity	NTU	<0.10	0.10	C051996	<0.10	0.10	C051996
RDL = Reportable Detection Limit							
(1) Detection limits raised due to sample matrix. Dissolved Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.							
(2) Total Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA369		
Sampling Date		2025/08/14 11:45		
COC Number		C#761493-03-01		
	UNITS	EB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C052203
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C052200
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C052230
Nitrate (NO ₃)	mg/L	<0.013	0.013	C052222
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C052222
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C052196
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	0.020	C052305
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C052478
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C055261
Fluoride (F)	mg/L	<0.010	0.010	C052480
Free Free Cyanide	mg/L	<0.00050	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	C060065
pH	pH	5.91	N/A	C052470
Reactive Silica	mg/L	<0.050	0.050	C057468
Alkalinity (Total as CaCO ₃)	mg/L	0.84	0.50	C052459
Total Organic Carbon (C)	mg/L	<0.50	0.50	C060607
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C052459
Bicarbonate (HCO ₃)	mg/L	1.02	0.50	C052459
Carbonate (CO ₃)	mg/L	<0.50	0.50	C052459
Hydroxide (OH)	mg/L	<0.50	0.50	C052459
Total Dissolved Solids	mg/L	<10	10	C055161
Total Suspended Solids	mg/L	<1.0	1.0	C055182
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C051984
Total Sulphide	mg/L	<0.0018	0.0018	C057938
Chloride (Cl)	mg/L	<0.50	0.50	C053802
Sulphate (SO ₄)	mg/L	<0.50	0.50	C053802
RDL = Reportable Detection Limit N/A = Not Applicable				



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA369		
Sampling Date		2025/08/14 11:45		
COC Number		C#761493-03-01		
	UNITS	EB	RDL	QC Batch
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C053809
Total Ammonia (N)	mg/L	<0.0050	0.0050	C053671
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C051872
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C051872
Total Nitrogen (N)	mg/L	<0.020	0.020	C054434
RADIONUCLIDE				
Radium 226	Bq/l	<0.0050	0.0050	C086018
Physical Properties				
Turbidity	NTU	<0.10	0.10	C051996
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DRA367	DRA368	DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05	2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01	C#761493-03-01		
	UNITS	BRP-31-3	FD	EB	RDL	QC Batch
Elements						
Total Mercury (Hg)	mg/L	0.00000168	0.00000165	<0.0000001	0.00000010	C058761
Lab Filtered Elements						
Dissolved Mercury (Hg)	mg/L	0.00000159	0.00000147	<0.0000001	0.00000010	C062403
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0126	0.0130	C067921	<0.00010	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000192	0.0000168	C067921	<0.0000030	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000329	0.000328	C067921	<0.0000050	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.0164	0.0167	C067921	<0.0000080	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	0.0000034	0.0000051	C067921	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	C067921	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00319	0.00391	C067921	0.00020	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	0.0000178	0.0000149	C067921	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	10.3	10.6	C067921	0.0031	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000084	0.000101	C067921	<0.000020	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.000489	0.000533	C067921	<0.0000040	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.00203	0.00206	C067921	<0.000020	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0048	0.0057	C067921	<0.0010	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	C067921	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.00125	0.00120	C067921	<0.000050	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	4.82	4.77	C067921	<0.00050	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.00589	0.00637	C067921	<0.0000040	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	0.0000245	0.0000181	C067921	<0.0000050	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.00728	0.00739	C067921	<0.000015	0.000015	C067921
Dissolved Potassium (K)	mg/L	1.17	1.18	C067921	<0.0050	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000048	0.000049	C067921	<0.000010	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.197	0.203	C067921	<0.0012	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	C067921	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	1.90	1.90	C067921	0.00051	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.0593	0.0600	C067921	<0.0000080	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	8.07	7.88	C067921	0.0018	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000416	0.00000492	C067921	<0.0000008	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	C067921	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	C067921	<0.000030	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000686	0.00000775	C067921	<0.0000005	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000273	0.0000275	C067921	<0.0000050	0.0000050	C067921
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00161	0.00162	C067921	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000512	0.0000498	C067921	<0.0000080	0.0000080	C067921
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0264	0.0268	C069772	0.00030	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000197	0.0000176	C069772	0.0000035	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000339	0.000338	C069772	<0.0000050	0.0000050	C069772
Total Barium (Ba)	mg/L	0.0169	0.0169	C069772	<0.0000080	0.0000080	C069772
Total Beryllium (Be)	mg/L	0.0000049	0.0000047	C069772	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	C069772	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00344	0.00335	C069772	<0.00010	0.00010	C069772
Total Cadmium (Cd)	mg/L	0.0000182	0.0000185	C069772	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	10.6	10.5	C069772	<0.0020	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000139	0.000123	C069772	<0.000020	0.000020	C069772
Total Cobalt (Co)	mg/L	0.000899	0.000890	C069772	<0.0000040	0.0000040	C069772
Total Copper (Cu)	mg/L	0.00234	0.00232	C069772	<0.000020	0.000020	C069772
Total Iron (Fe)	mg/L	0.0416	0.0413	C069772	<0.0010	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000067	0.0000072	C069772	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.00123	0.00119	C069772	<0.000050	0.000050	C069772
Total Magnesium (Mg)	mg/L	4.81	4.81	C069772	<0.00050	0.00050	C069772
Total Manganese (Mn)	mg/L	0.0120	0.0115	C069772	0.0000065	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	0.0000235	0.0000242	C069772	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.00758	0.00749	C069772	<0.000015	0.000015	C069772
Total Potassium (K)	mg/L	1.23	1.20	C069772	<0.0050	0.0050	C069772
Total Selenium (Se)	mg/L	0.000058	0.000052	C069772	<0.000010	0.000010	C069772
Total Silicon (Si)	mg/L	0.204	0.207	C069772	<0.0012	0.0012	C069772
Total Silver (Ag)	mg/L	0.0000033	<0.0000020	C069772	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	1.92	1.91	C069772	<0.00050	0.00050	C069772
Total Strontium (Sr)	mg/L	0.0606	0.0607	C069772	<0.0000080	0.0000080	C069772
Total Sulphur (S)	mg/L	7.69	7.97	C069772	<0.0010	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000519	0.00000440	C069772	<0.0000008	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	C069772	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000167	0.000137	C078883	<0.000030	0.000030	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000941	0.0000105	C069772	<0.0000005	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000370	0.0000418	C069772	<0.0000050	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.00176	0.00176	C069772	0.000319	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000528	0.0000518	C069772	<0.0000080	0.0000080	C069772
RDL = Reportable Detection Limit							



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WSP Canada Inc.
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GENERAL COMMENTS

Sample DRA367 [BRP-31-3] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample DRA367, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Sample DRA368, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Results relate only to the items tested.



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C051872	Dissolved Nitrate plus Nitrite (N)	2025/08/17	98	80 - 120	112	80 - 120	<0.0030	mg/L	NC	20		
C051872	Dissolved Nitrite (N)	2025/08/17	110	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C051984	Orthophosphate (P)	2025/08/17	97	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C051996	Turbidity	2025/08/17			100	80 - 120	<0.10	NTU	1.7	20		
C052459	Alkalinity (PP as CaCO3)	2025/08/19					<0.50	mg/L	NC	20		
C052459	Alkalinity (Total as CaCO3)	2025/08/19			98	80 - 120	<0.50	mg/L	1.8	20		
C052459	Bicarbonate (HCO3)	2025/08/19					<0.50	mg/L	1.8	20		
C052459	Carbonate (CO3)	2025/08/19					<0.50	mg/L	NC	20		
C052459	Hydroxide (OH)	2025/08/19					<0.50	mg/L	NC	20		
C052470	pH	2025/08/19			101	97 - 103			1.8	N/A		
C052478	Conductivity	2025/08/19			101	90 - 110	<2.0	uS/cm	0.31	10		
C052480	Fluoride (F)	2025/08/19	92	80 - 120	92	80 - 120	<0.010	mg/L	NC	20		
C053671	Total Ammonia (N)	2025/08/19	100	80 - 120	106	80 - 120	<0.0050	mg/L	0.053	20		
C053797	Chloride (Cl)	2025/08/19	103	80 - 120	104	80 - 120	<0.50	mg/L	0.20	20		
C053797	Sulphate (SO4)	2025/08/19	101	80 - 120	104	80 - 120	<0.50	mg/L	2.4	20		
C053802	Chloride (Cl)	2025/08/19	101	80 - 120	103	80 - 120	<0.50	mg/L	0.56	20		
C053802	Sulphate (SO4)	2025/08/19	98	80 - 120	102	80 - 120	<0.50	mg/L	0.94	20		
C053809	Total Phosphorus (P)	2025/08/20	NC	80 - 120	97	80 - 120	<0.0010	mg/L	2.7	20	91	80 - 120
C054434	Total Nitrogen (N)	2025/08/20	NC	80 - 120	102	80 - 120	<0.020	mg/L	0.12	20	104	80 - 120
C055161	Total Dissolved Solids	2025/08/21	93	80 - 120	97	80 - 120	<10	mg/L	0	20		
C055182	Total Suspended Solids	2025/08/21	97	80 - 120	97	80 - 120	<1.0	mg/L	5.2	20		
C055259	Strong Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	0.74	20		
C055261	Weak Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20		
C055264	Free Free Cyanide	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
C055305	Total Phosphorus (P)	2025/08/20	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C055317	Dissolved Phosphorus (P)	2025/08/20	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C057051	Total Nitrogen (N)	2025/08/21	111	80 - 120	105	80 - 120	<0.020	mg/L	2.1	20	107	80 - 120
C057468	Reactive Silica	2025/08/21	NC	80 - 120	108	80 - 120	<0.050	mg/L	0.049	20		
C057938	Total Sulphide	2025/08/22	98	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C058761	Total Mercury (Hg)	2025/08/22	104	80 - 120	108	80 - 120	<0.0000001	mg/L	8.3	25		
C060065	Dissolved Organic Carbon (C)	2025/08/23	NC	75 - 125	104	80 - 120	<0.50	mg/L	3.1	20		



Bureau Veritas Job #: C570800
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C060602	Dissolved Organic Carbon (C)	2025/08/24	NC	75 - 125	101	80 - 120	<0.50	mg/L	0.51	20		
C060607	Total Organic Carbon (C)	2025/08/24	94	75 - 125	99	80 - 120	<0.50	mg/L	7.5	20		
C061991	Orthophosphate (P)	2025/08/25	99	80 - 120	100	80 - 120	<0.0010	mg/L	17	20		
C062403	Dissolved Mercury (Hg)	2025/08/26	91	80 - 120	96	80 - 120	<0.0000001	mg/L	19	25		
C067921	Dissolved Aluminum (Al)	2025/09/03	96	80 - 120	97	80 - 120	<0.00010	mg/L	4.2	40		
C067921	Dissolved Antimony (Sb)	2025/09/03	105	80 - 120	105	80 - 120	<0.0000030	mg/L	4.2	40		
C067921	Dissolved Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	40		
C067921	Dissolved Barium (Ba)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000080	mg/L	0.49	40		
C067921	Dissolved Beryllium (Be)	2025/09/03	98	80 - 120	100	80 - 120	<0.0000015	mg/L	3.7	40		
C067921	Dissolved Bismuth (Bi)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000010	mg/L	NC	40		
C067921	Dissolved Boron (B)	2025/09/03	101	80 - 120	102	80 - 120	<0.00010	mg/L	3.0	40		
C067921	Dissolved Cadmium (Cd)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000030	mg/L	7.4	40		
C067921	Dissolved Calcium (Ca)	2025/09/03	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.19	40		
C067921	Dissolved Chromium (Cr)	2025/09/03	101	80 - 120	102	80 - 120	<0.000020	mg/L	9.2	40		
C067921	Dissolved Cobalt (Co)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000040	mg/L	5.7	40		
C067921	Dissolved Copper (Cu)	2025/09/03	99	80 - 120	100	80 - 120	<0.000020	mg/L	1.7	40		
C067921	Dissolved Iron (Fe)	2025/09/03	101	80 - 120	102	80 - 120	<0.0010	mg/L	17	40		
C067921	Dissolved Lead (Pb)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000030	mg/L	NC	40		
C067921	Dissolved Lithium (Li)	2025/09/03	96	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	40		
C067921	Dissolved Magnesium (Mg)	2025/09/03	92	80 - 120	99	80 - 120	<0.00050	mg/L	0.39	40		
C067921	Dissolved Manganese (Mn)	2025/09/03	101	80 - 120	101	80 - 120	<0.0000040	mg/L	4.7	40		
C067921	Dissolved Molybdenum (Mo)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000050	mg/L	4.2	40		
C067921	Dissolved Nickel (Ni)	2025/09/03	99	80 - 120	100	80 - 120	<0.000015	mg/L	0.98	40		
C067921	Dissolved Potassium (K)	2025/09/03	102	80 - 120	103	80 - 120	<0.0050	mg/L	0.60	40		
C067921	Dissolved Selenium (Se)	2025/09/03	98	80 - 120	98	80 - 120	<0.000010	mg/L	3.2	40		
C067921	Dissolved Silicon (Si)	2025/09/03	95	80 - 120	97	80 - 120	<0.0012	mg/L	3.9	40		
C067921	Dissolved Silver (Ag)	2025/09/03	106	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	40		
C067921	Dissolved Sodium (Na)	2025/09/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	0.053	40		
C067921	Dissolved Strontium (Sr)	2025/09/03	NC	80 - 120	102	80 - 120	<0.0000080	mg/L	0.22	40		
C067921	Dissolved Sulphur (S)	2025/09/03	95	80 - 120	98	80 - 120	<0.0010	mg/L	1.2	40		
C067921	Dissolved Thallium (Tl)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000008	mg/L	6.7	40		



Bureau Veritas Job #: C570800
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C067921	Dissolved Tin (Sn)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	40		
C067921	Dissolved Titanium (Ti)	2025/09/03	100	80 - 120	100	80 - 120	<0.000030	mg/L	NC	40		
C067921	Dissolved Uranium (U)	2025/09/03	95	80 - 120	94	80 - 120	<0.0000005	mg/L	2.7	40		
C067921	Dissolved Vanadium (V)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000050	mg/L	4.6	40		
C067921	Dissolved Zinc (Zn)	2025/09/03	97	80 - 120	99	80 - 120	<0.000060	mg/L	0.37	40		
C067921	Dissolved Zirconium (Zr)	2025/09/03	94	80 - 120	95	80 - 120	<0.0000080	mg/L	2.7	40		
C069772	Total Aluminum (Al)	2025/09/03	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Antimony (Sb)	2025/09/03	105	80 - 120	107	80 - 120	<0.0000030	mg/L	16	40		
C069772	Total Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Barium (Ba)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Beryllium (Be)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000015	mg/L	NC	40		
C069772	Total Bismuth (Bi)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000010	mg/L	NC	40		
C069772	Total Boron (B)	2025/09/03	105	80 - 120	102	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Cadmium (Cd)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Calcium (Ca)	2025/09/03	102	80 - 120	101	80 - 120	<0.0020	mg/L	25	40		
C069772	Total Chromium (Cr)	2025/09/03	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Cobalt (Co)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000040	mg/L	NC	40		
C069772	Total Copper (Cu)	2025/09/03	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Iron (Fe)	2025/09/03	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Lead (Pb)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Lithium (Li)	2025/09/03	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	40		
C069772	Total Magnesium (Mg)	2025/09/03	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Manganese (Mn)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000040	mg/L	21	40		
C069772	Total Molybdenum (Mo)	2025/09/03	105	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Nickel (Ni)	2025/09/03	101	80 - 120	102	80 - 120	<0.000015	mg/L	NC	40		
C069772	Total Potassium (K)	2025/09/03	104	80 - 120	104	80 - 120	<0.0050	mg/L	NC	40		
C069772	Total Selenium (Se)	2025/09/03	100	80 - 120	98	80 - 120	<0.000010	mg/L	NC	40		
C069772	Total Silicon (Si)	2025/09/03	94	80 - 120	94	80 - 120	<0.0012	mg/L	NC	40		
C069772	Total Silver (Ag)	2025/09/03	107	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	40		
C069772	Total Sodium (Na)	2025/09/03	103	80 - 120	102	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Strontium (Sr)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000080	mg/L	NC	40		



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C069772	Total Sulphur (S)	2025/09/03	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Thallium (Tl)	2025/09/03	106	80 - 120	106	80 - 120	<0.0000008	mg/L	NC	40		
C069772	Total Tin (Sn)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000050	mg/L	1.1	40		
C069772	Total Titanium (Ti)	2025/09/03	100	80 - 120	101	80 - 120	<0.000030	mg/L	25	40		
C069772	Total Uranium (U)	2025/09/03	95	80 - 120	96	80 - 120	<0.0000005	mg/L	NC	40		
C069772	Total Vanadium (V)	2025/09/03	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Zinc (Zn)	2025/09/03	98	80 - 120	99	80 - 120	<0.000060	mg/L	1.0	40		
C069772	Total Zirconium (Zr)	2025/09/03	98	80 - 120	95	80 - 120	<0.0000080	mg/L	NC	40		
C078883	Total Titanium (Ti)	2025/09/09	99	80 - 120	99	80 - 120	<0.000030	mg/L	13	40		
C086018	Radium 226	2025/09/12			91	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

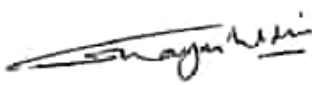
The analytical data and all QC contained in this report were reviewed and validated by:



Steven Simpson, Lab Director


Mauro Oselin, P.Chem., QP, Scientific Specialist


Sandy Yuan, M.Sc., QP, Scientific Specialist


Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C570800
2025/08/15 12:30

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION		Laboratory Use Only:												
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #:	C41460	Bureau Veritas Job #:	Bottle Order #:											
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #:														
Address:	Park Place Suite 3400-666 Burrard St.	Address:	Saskatoon SK S7H 0T4	Project:	August AEMP program													
	VANCOUVER BC V6C 2X8			Project Name:		COC #:	Project Manager:											
Tel:	(604) 681-8371	Tel:		Site #:														
Email:	BR.accounts.payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Sampled By:														
Regulatory Criteria		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				Turnaround Time (TAT) Required:										
☐ ATI ☐ CCME ☐ CHM								Please provide advance notice for rush projects										
								Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.										
								Job Specific Rush TAT (if applies to entire submission) Date Required: ☐										
								Rush Confirmation Number: ☐										
								# of Bottles: ☐										
								Comments										
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																		
	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtration (Y/N)	AEMP-Routine Parameters	AEMP - Nutrients	AEMP - Other Conventional	Chlorophyll a + b	Radium-226 Low Level	Low Level Total Metals with CV Hg	Low Level D. Metals w/ CV Hg Diss	Un-ionized ammonia	field pH	field Temp °C		
1		1B																
2		PE																
3		BRP-31-3	Aug 14, 2025	11:00	Water		✓	✓	✓		✓	✓	✓	✓	6.87	12.62	19	
4		FD	Aug 14, 2025	11:05	↓		✓	✓	✓		✓	✓	✓	✓	6.87	12.62	19	
5		EB	Aug 14, 2025	11:45	↓		✓	✓	✓		✓	✓	✓	✓	-	-	19	not enough PE for 1L General
6																		
7																		
8																		
9																		
10																		
* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	if jars used and not submitted		Laboratory Use Only		Custody Seal Intact on Code?						
Adam Feldberg		25/08/15	6:55	Jasmin Benoi		2025/08/16	014:00			Temperature (°C) on Receipt		Yes ☒ No ☐						
										5.0/6								

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 30 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

Received in Yellowknife
By: J. McKeown @ 12:30
AUG 15 2025
Temp: 3/3/2
CS: NO Ice: YES

White: Bureau Veritas Yellow: Client
Jie: YES

EYK-2025-08-04E



Your P.O. #: 470000200
 Your Project #: August AEMP program
 Site Location: 176233659
 Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/09/15
 Report #: R3710055
 Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	3	N/A	2025/08/19	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	3	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	3	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	2	N/A	2025/08/23	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1, 4)	1	N/A	2025/08/24	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	3	N/A	2025/08/19	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	3	N/A	2025/08/20	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	3	N/A	2025/08/22		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	3	N/A	2025/09/04	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	3	N/A	2025/09/04	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	3	N/A	2025/08/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	3	2025/08/22	2025/08/22	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	3	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	2	N/A	2025/09/02	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	1	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	2	N/A	2025/08/19		Auto Calc
Ammonia-N Low Level (Preserved) (1)	3	N/A	2025/08/19	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	3	N/A	2025/08/18		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	3	N/A	2025/08/17	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	3	2025/08/17	2025/08/18		Auto Calc
pH @25°C (1, 6)	3	N/A	2025/08/19	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	2	N/A	2025/08/17	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	2	N/A	2025/08/17	AB SOP-00025	SM 24 4500-P A, F m
Orthophosphate LL by Automated Analyzer (1, 7)	1	N/A	2025/08/25	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/08/21	2025/08/22	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	3	N/A	2025/08/21	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	3	2025/08/20	2025/08/21	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	2	N/A	2025/08/17	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/08/20		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	2	N/A	2025/08/21		Auto Calc



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/15
Report #: R3710055
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Nitrogen (Total) (1)	1	2025/08/19	2025/08/20	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	2	2025/08/21	2025/08/21	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 8)	3	N/A	2025/08/24	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	2	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	1	2025/08/20	2025/08/21	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	1	2025/08/19	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	2	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	3	2025/08/20	2025/08/21	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	3	N/A	2025/08/17	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	3	N/A	2025/09/12	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: C#761493-03-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/15
Report #: R3710055
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C570800

Received: 2025/08/15, 12:30

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas Job #: C570800

Report Date: 2025/09/15

WSP Canada Inc.

Client Project #: August AEMP program

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA367			DRA368		
Sampling Date		2025/08/14 11:00			2025/08/14 11:05		
COC Number		C#761493-03-01			C#761493-03-01		
	UNITS	BRP-31-3	RDL	QC Batch	FD	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	45.5	0.50	C052203	46.2	0.50	C052203
Total Hardness (CaCO ₃)	mg/L	46.4	0.50	C052200	46.0	0.50	C052200
Dissolved Nitrate (N)	mg/L	1.5	0.20	C052230	1.5	0.20	C052230
Nitrate (NO ₃)	mg/L	6.7	0.89	C052222	6.8	0.89	C052222
Nitrite (NO ₂)	mg/L	0.021	0.0033	C052222	0.021	0.0033	C052222
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C052196	<0.0020	0.0020	C052196
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.44	0.20	C052305	0.41	0.20	C052305
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C052221	<0.00050	0.00050	C052221
Field Parameters							
Field pH	pH	6.87	N/A	ONSITE	6.87	N/A	ONSITE
Field Temperature (Fd)	deg. C	12.62	N/A	ONSITE	12.62	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	130	2.0	C052478	130	2.0	C052478
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055 (1)	0.00050	C055259	0.00062 (2)	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00057 (3)	0.00050	C055261	0.00069	0.00050	C055261
Fluoride (F)	mg/L	0.011	0.010	C052480	0.014	0.010	C052480
Free Free Cyanide	mg/L	0.00065	0.00050	C055264	0.00054	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	3.3	0.50	C060602	3.6	0.50	C060065
pH	pH	5.98	N/A	C052470	6.04	N/A	C052470
Reactive Silica	mg/L	0.57	0.050	C057468	0.62	0.050	C057468
Alkalinity (Total as CaCO ₃)	mg/L	4.69	0.50	C052459	4.69	0.50	C052459
Total Organic Carbon (C)	mg/L	3.9	0.50	C060607	4.0	0.50	C060607
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Bicarbonate (HCO ₃)	mg/L	5.72	0.50	C052459	5.72	0.50	C052459
RDL = Reportable Detection Limit N/A = Not Applicable (1) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. (2) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. (3) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA367			DRA368		
Sampling Date		2025/08/14 11:00			2025/08/14 11:05		
COC Number		C#761493-03-01			C#761493-03-01		
	UNITS	BRP-31-3	RDL	QC Batch	FD	RDL	QC Batch
Carbonate (CO ₃)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Hydroxide (OH)	mg/L	<0.50	0.50	C052459	<0.50	0.50	C052459
Total Dissolved Solids	mg/L	60	10	C055161	56	10	C055161
Total Suspended Solids	mg/L	<1.0	1.0	C055182	<1.0	1.0	C055182
Anions							
Orthophosphate (P)	mg/L	0.0014	0.0010	C061991	<0.0010	0.0010	C051984
Total Sulphide	mg/L	<0.0018	0.0018	C057938	<0.0018	0.0018	C057938
Chloride (Cl)	mg/L	14	0.50	C053797	14	0.50	C053802
Sulphate (SO ₄)	mg/L	27	0.50	C053797	26	0.50	C053802
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0050 (1)	0.0050	C055317	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	<0.0010 (2)	0.0010	C055305	0.0024	0.0010	C055305
Total Ammonia (N)	mg/L	0.15	0.0050	C053671	0.15	0.0050	C053671
Dissolved Nitrite (N)	mg/L	0.0063	0.0010	C051872	0.0063	0.0010	C051872
Dissolved Nitrate plus Nitrite (N)	mg/L	1.5	0.20	C051872	1.5	0.20	C051872
Total Nitrogen (N)	mg/L	2.0	0.020	C057051	1.9	0.020	C057051
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C086018	<0.0050	0.0050	C086018
Physical Properties							
Turbidity	NTU	<0.10	0.10	C051996	<0.10	0.10	C051996
RDL = Reportable Detection Limit							
(1) Detection limits raised due to sample matrix. Dissolved Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.							
(2) Total Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA369		
Sampling Date		2025/08/14 11:45		
COC Number		C#761493-03-01		
	UNITS	EB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C052203
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C052200
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C052230
Nitrate (NO ₃)	mg/L	<0.013	0.013	C052222
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C052222
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C052196
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	0.020	C052305
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C052478
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C055261
Fluoride (F)	mg/L	<0.010	0.010	C052480
Free Free Cyanide	mg/L	<0.00050	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	C060065
pH	pH	5.91	N/A	C052470
Reactive Silica	mg/L	<0.050	0.050	C057468
Alkalinity (Total as CaCO ₃)	mg/L	0.84	0.50	C052459
Total Organic Carbon (C)	mg/L	<0.50	0.50	C060607
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C052459
Bicarbonate (HCO ₃)	mg/L	1.02	0.50	C052459
Carbonate (CO ₃)	mg/L	<0.50	0.50	C052459
Hydroxide (OH)	mg/L	<0.50	0.50	C052459
Total Dissolved Solids	mg/L	<10	10	C055161
Total Suspended Solids	mg/L	<1.0	1.0	C055182
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C051984
Total Sulphide	mg/L	<0.0018	0.0018	C057938
Chloride (Cl)	mg/L	<0.50	0.50	C053802
Sulphate (SO ₄)	mg/L	<0.50	0.50	C053802
RDL = Reportable Detection Limit N/A = Not Applicable				



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRA369		
Sampling Date		2025/08/14 11:45		
COC Number		C#761493-03-01		
	UNITS	EB	RDL	QC Batch
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	<0.0010	0.0010	C053809
Total Ammonia (N)	mg/L	<0.0050	0.0050	C053671
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C051872
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C051872
Total Nitrogen (N)	mg/L	<0.020	0.020	C054434
RADIONUCLIDE				
Radium 226	Bq/l	<0.0050	0.0050	C086018
Physical Properties				
Turbidity	NTU	<0.10	0.10	C051996
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
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Your P.O. #: 470000200
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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DRA367	DRA368	DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05	2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01	C#761493-03-01		
	UNITS	BRP-31-3	FD	EB	RDL	QC Batch
Elements						
Total Mercury (Hg)	mg/L	0.00000168	0.00000165	<0.0000001	0.00000010	C058761
Lab Filtered Elements						
Dissolved Mercury (Hg)	mg/L	0.00000159	0.00000147	<0.0000001	0.00000010	C062403
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0126	0.0130	C067921	<0.00010	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000192	0.0000168	C067921	<0.0000030	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000329	0.000328	C067921	<0.0000050	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.0164	0.0167	C067921	<0.0000080	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	0.0000034	0.0000051	C067921	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	C067921	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00319	0.00391	C067921	0.00020	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	0.0000178	0.0000149	C067921	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	10.3	10.6	C067921	0.0031	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000084	0.000101	C067921	<0.000020	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.000489	0.000533	C067921	<0.0000040	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.00203	0.00206	C067921	<0.000020	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0048	0.0057	C067921	<0.0010	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	C067921	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.00125	0.00120	C067921	<0.000050	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	4.82	4.77	C067921	<0.00050	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.00589	0.00637	C067921	<0.0000040	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	0.0000245	0.0000181	C067921	<0.0000050	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.00728	0.00739	C067921	<0.000015	0.000015	C067921
Dissolved Potassium (K)	mg/L	1.17	1.18	C067921	<0.0050	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000048	0.000049	C067921	<0.000010	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.197	0.203	C067921	<0.0012	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	C067921	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	1.90	1.90	C067921	0.00051	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.0593	0.0600	C067921	<0.0000080	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	8.07	7.88	C067921	0.0018	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000416	0.00000492	C067921	<0.0000008	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	C067921	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	C067921	<0.000030	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000686	0.00000775	C067921	<0.0000005	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000273	0.0000275	C067921	<0.0000050	0.0000050	C067921
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00161	0.00162	C067921	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000512	0.0000498	C067921	<0.0000080	0.0000080	C067921
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0264	0.0268	C069772	0.00030	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000197	0.0000176	C069772	0.0000035	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000339	0.000338	C069772	<0.0000050	0.0000050	C069772
Total Barium (Ba)	mg/L	0.0169	0.0169	C069772	<0.0000080	0.0000080	C069772
Total Beryllium (Be)	mg/L	0.0000049	0.0000047	C069772	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	C069772	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00344	0.00335	C069772	<0.00010	0.00010	C069772
Total Cadmium (Cd)	mg/L	0.0000182	0.0000185	C069772	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	10.6	10.5	C069772	<0.0020	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000139	0.000123	C069772	<0.000020	0.000020	C069772
Total Cobalt (Co)	mg/L	0.000899	0.000890	C069772	<0.0000040	0.0000040	C069772
Total Copper (Cu)	mg/L	0.00234	0.00232	C069772	<0.000020	0.000020	C069772
Total Iron (Fe)	mg/L	0.0416	0.0413	C069772	<0.0010	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000067	0.0000072	C069772	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.00123	0.00119	C069772	<0.000050	0.000050	C069772
Total Magnesium (Mg)	mg/L	4.81	4.81	C069772	<0.00050	0.00050	C069772
Total Manganese (Mn)	mg/L	0.0120	0.0115	C069772	0.0000065	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	0.0000235	0.0000242	C069772	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.00758	0.00749	C069772	<0.000015	0.000015	C069772
Total Potassium (K)	mg/L	1.23	1.20	C069772	<0.0050	0.0050	C069772
Total Selenium (Se)	mg/L	0.000058	0.000052	C069772	<0.000010	0.000010	C069772
Total Silicon (Si)	mg/L	0.204	0.207	C069772	<0.0012	0.0012	C069772
Total Silver (Ag)	mg/L	0.0000033	<0.0000020	C069772	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	1.92	1.91	C069772	<0.00050	0.00050	C069772
Total Strontium (Sr)	mg/L	0.0606	0.0607	C069772	<0.0000080	0.0000080	C069772
Total Sulphur (S)	mg/L	7.69	7.97	C069772	<0.0010	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000519	0.00000440	C069772	<0.0000008	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	C069772	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000167	0.000137	C078883	<0.000030	0.000030	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRA367	DRA368		DRA369		
Sampling Date		2025/08/14 11:00	2025/08/14 11:05		2025/08/14 11:45		
COC Number		C#761493-03-01	C#761493-03-01		C#761493-03-01		
	UNITS	BRP-31-3	FD	QC Batch	EB	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000941	0.0000105	C069772	<0.0000005	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000370	0.0000418	C069772	<0.0000050	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.00176	0.00176	C069772	0.000319	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000528	0.0000518	C069772	<0.0000080	0.0000080	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

GENERAL COMMENTS

Sample DRA367 [BRP-31-3] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample DRA367, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Sample DRA368, Elements by ICPMS Ultra-Low Level (tot.): Test repeated.

Results relate only to the items tested.



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C051872	Dissolved Nitrate plus Nitrite (N)	2025/08/17	98	80 - 120	112	80 - 120	<0.0030	mg/L	NC	20		
C051872	Dissolved Nitrite (N)	2025/08/17	110	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C051984	Orthophosphate (P)	2025/08/17	97	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C051996	Turbidity	2025/08/17			100	80 - 120	<0.10	NTU	1.7	20		
C052459	Alkalinity (PP as CaCO3)	2025/08/19					<0.50	mg/L	NC	20		
C052459	Alkalinity (Total as CaCO3)	2025/08/19			98	80 - 120	<0.50	mg/L	1.8	20		
C052459	Bicarbonate (HCO3)	2025/08/19					<0.50	mg/L	1.8	20		
C052459	Carbonate (CO3)	2025/08/19					<0.50	mg/L	NC	20		
C052459	Hydroxide (OH)	2025/08/19					<0.50	mg/L	NC	20		
C052470	pH	2025/08/19			101	97 - 103			1.8	N/A		
C052478	Conductivity	2025/08/19			101	90 - 110	<2.0	uS/cm	0.31	10		
C052480	Fluoride (F)	2025/08/19	92	80 - 120	92	80 - 120	<0.010	mg/L	NC	20		
C053671	Total Ammonia (N)	2025/08/19	100	80 - 120	106	80 - 120	<0.0050	mg/L	0.053	20		
C053797	Chloride (Cl)	2025/08/19	103	80 - 120	104	80 - 120	<0.50	mg/L	0.20	20		
C053797	Sulphate (SO4)	2025/08/19	101	80 - 120	104	80 - 120	<0.50	mg/L	2.4	20		
C053802	Chloride (Cl)	2025/08/19	101	80 - 120	103	80 - 120	<0.50	mg/L	0.56	20		
C053802	Sulphate (SO4)	2025/08/19	98	80 - 120	102	80 - 120	<0.50	mg/L	0.94	20		
C053809	Total Phosphorus (P)	2025/08/20	NC	80 - 120	97	80 - 120	<0.0010	mg/L	2.7	20	91	80 - 120
C054434	Total Nitrogen (N)	2025/08/20	NC	80 - 120	102	80 - 120	<0.020	mg/L	0.12	20	104	80 - 120
C055161	Total Dissolved Solids	2025/08/21	93	80 - 120	97	80 - 120	<10	mg/L	0	20		
C055182	Total Suspended Solids	2025/08/21	97	80 - 120	97	80 - 120	<1.0	mg/L	5.2	20		
C055259	Strong Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	0.74	20		
C055261	Weak Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20		
C055264	Free Free Cyanide	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
C055305	Total Phosphorus (P)	2025/08/20	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C055317	Dissolved Phosphorus (P)	2025/08/20	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C057051	Total Nitrogen (N)	2025/08/21	111	80 - 120	105	80 - 120	<0.020	mg/L	2.1	20	107	80 - 120
C057468	Reactive Silica	2025/08/21	NC	80 - 120	108	80 - 120	<0.050	mg/L	0.049	20		
C057938	Total Sulphide	2025/08/22	98	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C058761	Total Mercury (Hg)	2025/08/22	104	80 - 120	108	80 - 120	<0.0000001	mg/L	8.3	25		
C060065	Dissolved Organic Carbon (C)	2025/08/23	NC	75 - 125	104	80 - 120	<0.50	mg/L	3.1	20		



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C060602	Dissolved Organic Carbon (C)	2025/08/24	NC	75 - 125	101	80 - 120	<0.50	mg/L	0.51	20		
C060607	Total Organic Carbon (C)	2025/08/24	94	75 - 125	99	80 - 120	<0.50	mg/L	7.5	20		
C061991	Orthophosphate (P)	2025/08/25	99	80 - 120	100	80 - 120	<0.0010	mg/L	17	20		
C062403	Dissolved Mercury (Hg)	2025/08/26	91	80 - 120	96	80 - 120	<0.0000001	mg/L	19	25		
C067921	Dissolved Aluminum (Al)	2025/09/03	96	80 - 120	97	80 - 120	<0.00010	mg/L	4.2	40		
C067921	Dissolved Antimony (Sb)	2025/09/03	105	80 - 120	105	80 - 120	<0.0000030	mg/L	4.2	40		
C067921	Dissolved Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	40		
C067921	Dissolved Barium (Ba)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000080	mg/L	0.49	40		
C067921	Dissolved Beryllium (Be)	2025/09/03	98	80 - 120	100	80 - 120	<0.0000015	mg/L	3.7	40		
C067921	Dissolved Bismuth (Bi)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000010	mg/L	NC	40		
C067921	Dissolved Boron (B)	2025/09/03	101	80 - 120	102	80 - 120	<0.00010	mg/L	3.0	40		
C067921	Dissolved Cadmium (Cd)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000030	mg/L	7.4	40		
C067921	Dissolved Calcium (Ca)	2025/09/03	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.19	40		
C067921	Dissolved Chromium (Cr)	2025/09/03	101	80 - 120	102	80 - 120	<0.000020	mg/L	9.2	40		
C067921	Dissolved Cobalt (Co)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000040	mg/L	5.7	40		
C067921	Dissolved Copper (Cu)	2025/09/03	99	80 - 120	100	80 - 120	<0.000020	mg/L	1.7	40		
C067921	Dissolved Iron (Fe)	2025/09/03	101	80 - 120	102	80 - 120	<0.0010	mg/L	17	40		
C067921	Dissolved Lead (Pb)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000030	mg/L	NC	40		
C067921	Dissolved Lithium (Li)	2025/09/03	96	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	40		
C067921	Dissolved Magnesium (Mg)	2025/09/03	92	80 - 120	99	80 - 120	<0.00050	mg/L	0.39	40		
C067921	Dissolved Manganese (Mn)	2025/09/03	101	80 - 120	101	80 - 120	<0.0000040	mg/L	4.7	40		
C067921	Dissolved Molybdenum (Mo)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000050	mg/L	4.2	40		
C067921	Dissolved Nickel (Ni)	2025/09/03	99	80 - 120	100	80 - 120	<0.000015	mg/L	0.98	40		
C067921	Dissolved Potassium (K)	2025/09/03	102	80 - 120	103	80 - 120	<0.0050	mg/L	0.60	40		
C067921	Dissolved Selenium (Se)	2025/09/03	98	80 - 120	98	80 - 120	<0.000010	mg/L	3.2	40		
C067921	Dissolved Silicon (Si)	2025/09/03	95	80 - 120	97	80 - 120	<0.0012	mg/L	3.9	40		
C067921	Dissolved Silver (Ag)	2025/09/03	106	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	40		
C067921	Dissolved Sodium (Na)	2025/09/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	0.053	40		
C067921	Dissolved Strontium (Sr)	2025/09/03	NC	80 - 120	102	80 - 120	<0.0000080	mg/L	0.22	40		
C067921	Dissolved Sulphur (S)	2025/09/03	95	80 - 120	98	80 - 120	<0.0010	mg/L	1.2	40		
C067921	Dissolved Thallium (Tl)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000008	mg/L	6.7	40		



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C067921	Dissolved Tin (Sn)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	40		
C067921	Dissolved Titanium (Ti)	2025/09/03	100	80 - 120	100	80 - 120	<0.000030	mg/L	NC	40		
C067921	Dissolved Uranium (U)	2025/09/03	95	80 - 120	94	80 - 120	<0.0000005	mg/L	2.7	40		
C067921	Dissolved Vanadium (V)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000050	mg/L	4.6	40		
C067921	Dissolved Zinc (Zn)	2025/09/03	97	80 - 120	99	80 - 120	<0.000060	mg/L	0.37	40		
C067921	Dissolved Zirconium (Zr)	2025/09/03	94	80 - 120	95	80 - 120	<0.0000080	mg/L	2.7	40		
C069772	Total Aluminum (Al)	2025/09/03	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Antimony (Sb)	2025/09/03	105	80 - 120	107	80 - 120	<0.0000030	mg/L	16	40		
C069772	Total Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Barium (Ba)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Beryllium (Be)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000015	mg/L	NC	40		
C069772	Total Bismuth (Bi)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000010	mg/L	NC	40		
C069772	Total Boron (B)	2025/09/03	105	80 - 120	102	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Cadmium (Cd)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Calcium (Ca)	2025/09/03	102	80 - 120	101	80 - 120	<0.0020	mg/L	25	40		
C069772	Total Chromium (Cr)	2025/09/03	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Cobalt (Co)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000040	mg/L	NC	40		
C069772	Total Copper (Cu)	2025/09/03	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Iron (Fe)	2025/09/03	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Lead (Pb)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Lithium (Li)	2025/09/03	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	40		
C069772	Total Magnesium (Mg)	2025/09/03	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Manganese (Mn)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000040	mg/L	21	40		
C069772	Total Molybdenum (Mo)	2025/09/03	105	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Nickel (Ni)	2025/09/03	101	80 - 120	102	80 - 120	<0.000015	mg/L	NC	40		
C069772	Total Potassium (K)	2025/09/03	104	80 - 120	104	80 - 120	<0.0050	mg/L	NC	40		
C069772	Total Selenium (Se)	2025/09/03	100	80 - 120	98	80 - 120	<0.000010	mg/L	NC	40		
C069772	Total Silicon (Si)	2025/09/03	94	80 - 120	94	80 - 120	<0.0012	mg/L	NC	40		
C069772	Total Silver (Ag)	2025/09/03	107	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	40		
C069772	Total Sodium (Na)	2025/09/03	103	80 - 120	102	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Strontium (Sr)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000080	mg/L	NC	40		



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C069772	Total Sulphur (S)	2025/09/03	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Thallium (Tl)	2025/09/03	106	80 - 120	106	80 - 120	<0.0000008	mg/L	NC	40		
C069772	Total Tin (Sn)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000050	mg/L	1.1	40		
C069772	Total Titanium (Ti)	2025/09/03	100	80 - 120	101	80 - 120	<0.000030	mg/L	25	40		
C069772	Total Uranium (U)	2025/09/03	95	80 - 120	96	80 - 120	<0.0000005	mg/L	NC	40		
C069772	Total Vanadium (V)	2025/09/03	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Zinc (Zn)	2025/09/03	98	80 - 120	99	80 - 120	<0.000060	mg/L	1.0	40		
C069772	Total Zirconium (Zr)	2025/09/03	98	80 - 120	95	80 - 120	<0.0000080	mg/L	NC	40		
C078883	Total Titanium (Ti)	2025/09/09	99	80 - 120	99	80 - 120	<0.000030	mg/L	13	40		
C086018	Radium 226	2025/09/12			91	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



Bureau Veritas Job #: C570800
Report Date: 2025/09/15

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Steven Simpson, Lab Director


Mauro Oselin, P.Chem., QP, Scientific Specialist


Sandy Yuan, M.Sc., QP, Scientific Specialist


Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C570800
2025/08/15 12:30

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION		Laboratory Use Only:												
Company Name:	#10500 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:											
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #														
Address:	Park Place Suite 3400-666 Burrard St.	Address:	Saskatoon SK S7H 0T4	Project:	August AEMP program													
	VANCOUVER BC V6C 2X8			Project Name:		COC #:	Project Manager:											
Tel:	(604) 681-8371	Tel:		Site #:														
Email:	BR.accounts.payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Sampled By:														
Regulatory Criteria		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				Turnaround Time (TAT) Required:										
☐ ATI ☐ CCME ☐ CHM								Please provide advance notice for rush projects										
								Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.										
								Job Specific Rush TAT (if applies to entire submission) Date Required: ☐										
								Rush Confirmation Number: ☐										
								# of Bottles: ☐										
								Comments										
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																		
	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtration (Y/N)	AEMP-Routine Parameters	AEMP - Nutrients	AEMP - Other Conventional	Chlorophyll a + b	Radium-226 Low Level	Low Level Total Metals with CV Hg	Low Level D. Metals w/ CV Hg Diss	Un-ionized ammonia	field pH	field Temp °C		
1		1B																
2		PE																
3		BRP-31-3	Aug 14, 2025	11:00	Water		✓	✓	✓		✓	✓	✓	✓	6.87	12.62	19	
4		FD	Aug 14, 2025	11:05	↓		✓	✓	✓		✓	✓	✓	✓	6.87	12.62	19	
5		EB	Aug 14, 2025	11:45	↓		✓	✓	✓		✓	✓	✓	✓	-	-	19	not enough PE for 1L General
6																		
7																		
8																		
9																		
10																		
* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	if jars used and not submitted		Laboratory Use Only		Custody Seal Intact on Code?						
Adam Feldberg		25/08/15	6:55	Jasmin Benoi		2025/08/16	014:00			Temperature (°C) on Receipt		Yes ☒ No ☐						
										5.0/6								

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 30 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

Received in Yellowknife
By: J. McKeown
AUG 15 2025
Temp: 3/3/2
CS: NO Ice: YES



EYK-2025-08-04E



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Your C.O.C. #: 1OF1, 761971-01-01, 761971-02-01, 761971-03-01,
761971-04-01, 761971-05-01, 761971-06-01

Report Date: 2025/09/03
Report #: R3705227
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571366

Received: 2025/08/18, 13:50

Sample Matrix: Filter
Samples Received: 51

Analyses	Date		Date Analyzed	Laboratory Method	Analytical Method
	Quantity	Extracted			
Chlorophyll and Pheophytin in Water (1)	7	2025/08/25	2025/08/26	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/08/26	2025/08/27	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/08/27	2025/08/28	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	4	2025/08/28	2025/08/29	CAL SOP-00273	SM 24 10150 A, B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Your C.O.C. #: 1OF1, 761971-01-01, 761971-02-01, 761971-03-01,
761971-04-01, 761971-05-01, 761971-06-01

Report Date: 2025/09/03
Report #: R3705227
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571366

Received: 2025/08/18, 13:50

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE001	DRE002	DRE003		DRE004		DRE005		
Sampling Date		2025/08/12 09:30	2025/08/12 09:30	2025/08/12 09:30		2025/08/12 11:35		2025/08/12 11:35		
COC Number		761971-01-01	761971-01-01	761971-01-01		761971-01-01		761971-01-01		
	UNITS	BRP-29A-1A	BRP-29A-1B	BRP-29A-1C	RDL	BRP-29A-2A	RDL	BRP-29A-2B	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	1.0	0.82	1.0	0.53	0.65	0.48	0.84	0.59	C061148
Chlorophyll c	ug/L	0.56	0.55	0.68	0.53	<0.48	0.48	0.61	0.59	C061148
Pheophytin A	ug/L	<0.53	<0.53	<0.53	0.53	<0.48	0.48	<0.59	0.59	C061148
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE006	DRE007		DRE008	DRE009		DRE010		
Sampling Date		2025/08/12 11:35	2025/08/12 10:40		2025/08/12 10:40	2025/08/12 10:40		2025/08/12 12:45		
COC Number		761971-01-01	761971-01-01		761971-01-01	761971-01-01		761971-01-01		
	UNITS	BRP-29A-2C	BRP-29A-3A	QC Batch	BRP-29A-3B	BRP-29A-3C	RDL	BRP-29A-4A	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.86	0.88	C061148	0.82	0.66	0.53	0.80	0.51	C062991
Chlorophyll c	ug/L	0.71	0.63	C061148	<0.53	<0.53	0.53	<0.51	0.51	C062991
Pheophytin A	ug/L	<0.53	<0.53	C061148	<0.53	<0.53	0.53	<0.51	0.51	C062991
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE011		DRE012		DRE013	DRE014	DRE015		
Sampling Date		2025/08/12 12:45		2025/08/12 12:45		2025/08/12 13:50	2025/08/12 13:50	2025/08/12 13:50		
COC Number		761971-02-01		761971-02-01		761971-02-01	761971-02-01	761971-02-01		
	UNITS	BRP-29A-4B	RDL	BRP-29A-4C	RDL	BRP-29A-5A	BRP-29A-5B	BRP-29A-5C	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.72	0.53	0.73	0.59	0.83	0.60	0.71	0.53	C062991
Chlorophyll c	ug/L	<0.53	0.53	<0.59	0.59	0.59	<0.53	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	0.53	<0.59	0.59	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit										



RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE016		DRE017		DRE018	DRE019	DRE020		
Sampling Date		2025/08/14 11:45		2025/08/14 11:45		2025/08/14 11:45	2025/08/12 15:00	2025/08/12 15:00		
COC Number		761971-02-01		761971-02-01		761971-02-01	761971-02-01	761971-02-01		
	UNITS	BRP-31-3A	RDL	BRP-31-3B	RDL	BRP-31-3C	BRP-31-4A	BRP-31-4B	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.83	0.53	0.93	0.52	0.65	0.94	<0.53	0.53	C062991
Chlorophyll c	ug/L	<0.53	0.53	0.53	0.52	<0.53	0.53	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	0.53	<0.52	0.52	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE021	DRE022	DRE023	DRE024	DRE025	DRE026		
Sampling Date		2025/08/12 15:00	2025/08/13 13:00	2025/08/13 13:00	2025/08/13 13:00	2025/08/13 13:55	2025/08/13 13:55		
COC Number		761971-03-01	761971-03-01	761971-03-01	761971-03-01	761971-03-01	761971-03-01		
	UNITS	BRP-31-4C	BRP-32-1A	BRP-32-1B	BRP-32-1C	BRP-32-2A	BRP-32-2B	RDL	QC Batch

MISCELLANEOUS									
Chlorophyll a	ug/L	1.1	2.1	2.0	1.8	2.1	2.0	0.53	C062991
Chlorophyll c	ug/L	0.73	0.83	0.68	<0.53	0.75	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit									

Bureau Veritas ID		DRE027			DRE028	DRE029	DRE030	DRE031		
Sampling Date		2025/08/13 13:55			2025/08/13 08:50	2025/08/13 08:50	2025/08/13 08:50	2025/08/13 11:40		
COC Number		761971-03-01			761971-03-01	761971-03-01	761971-03-01	761971-04-01		
	UNITS	BRP-32-2C	RDL	QC Batch	BRP-32-3A	BRP-32-3B	BRP-32-3C	BRP-32-4A	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	2.0	0.53	C062991	1.6	1.8	2.1	1.9	0.54	C062993
Chlorophyll c	ug/L	<0.53	0.53	C062991	<0.54	<0.54	0.55	<0.54	0.54	C062993
Pheophytin A	ug/L	0.55	0.53	C062991	<0.54	<0.54	<0.54	<0.54	0.54	C062993
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE032	DRE033	DRE034	DRE035	DRE036	DRE037		
Sampling Date		2025/08/13 11:40	2025/08/13 11:40	2025/08/13 10:05	2025/08/13 10:05	2025/08/13 10:05	2025/08/16 13:35		
COC Number		761971-04-01	761971-04-01	761971-04-01	761971-04-01	761971-04-01	761971-04-01		
	UNITS	BRP-32-4B	BRP-32-4C	BRP-32-5A	BRP-32-5B	BRP-32-5C	BRP-38-1A	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	2.0	2.0	2.0	1.7	1.9	<0.53	0.53	C062993
Chlorophyll c	ug/L	0.56	0.60	0.56	<0.53	<0.53	<0.53	0.53	C062993
Pheophytin A	ug/L	<0.53	<0.53	<0.53	0.67	<0.53	<0.53	0.53	C062993

RDL = Reportable Detection Limit

Bureau Veritas ID		DRE038		DRE039		DRE040		DRE041	DRE042		
Sampling Date		2025/08/16 13:35		2025/08/16 13:35		2025/08/16 12:45		2025/08/16 12:45	2025/08/16 12:45		
COC Number		761971-04-01		761971-04-01		761971-04-01		761971-05-01	761971-05-01		
	UNITS	BRP-38-1B	RDL	BRP-38-1C	RDL	BRP-38-2A	RDL	BRP-38-2B	BRP-38-2C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.56	0.54	0.67	0.53	0.74	0.54	0.73	0.72	0.53	C062993
Chlorophyll c	ug/L	<0.54	0.54	<0.53	0.53	<0.54	0.54	<0.53	<0.53	0.53	C062993
Pheophytin A	ug/L	<0.54	0.54	<0.53	0.53	<0.54	0.54	<0.53	<0.53	0.53	C062993

RDL = Reportable Detection Limit

Bureau Veritas ID		DRE043		DRE044	DRE045	DRE046		DRE047		
Sampling Date		2025/08/16 10:02		2025/08/16 10:02	2025/08/16 10:02	2025/08/16 11:45		2025/08/16 11:45		
COC Number		761971-05-01		761971-05-01	761971-05-01	761971-05-01		761971-05-01		
	UNITS	BRP-38-3A	RDL	BRP-38-3B	BRP-38-3C	BRP-38-4A	RDL	BRP-38-4B	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.67	0.54	0.66	<0.53	<0.53	0.53	0.72	0.54	C062993
Chlorophyll c	ug/L	<0.54	0.54	<0.53	<0.53	<0.53	0.53	<0.54	0.54	C062993
Pheophytin A	ug/L	<0.54	0.54	<0.53	<0.53	<0.53	0.53	<0.54	0.54	C062993

RDL = Reportable Detection Limit



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE048	DRE049		DRE050		DRE051		
Sampling Date		2025/08/16 11:45	2025/08/16 11:00		2025/08/16 11:00		2025/08/16 11:00		
COC Number		761971-05-01	761971-05-01		761971-05-01		761971-06-01		
	UNITS	BRP-38-4C	BRP-38-5A	RDL	BRP-38-5B	RDL	BRP-38-5C	RDL	QC Batch
MISCELLANEOUS									
Chlorophyll a	ug/L	<0.53	<0.53	0.53	0.85	0.54	<0.53	0.53	C065474
Chlorophyll c	ug/L	<0.53	<0.53	0.53	1.0	0.54	<0.53	0.53	C065474
Pheophytin A	ug/L	<0.53	<0.53	0.53	<0.54	0.54	<0.53	0.53	C065474
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

GENERAL COMMENTS

Results relate only to the items tested.



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Spiked Blank		Method Blank	
			% Recovery	QC Limits	Value	UNITS
C061148	Chlorophyll a	2025/08/26	105	80 - 120	<0.53	ug/L
C061148	Chlorophyll c	2025/08/26			<0.53	ug/L
C061148	Pheophytin A	2025/08/26			<0.53	ug/L
C062991	Chlorophyll a	2025/08/27	96	80 - 120	<0.53	ug/L
C062991	Chlorophyll c	2025/08/27			<0.53	ug/L
C062991	Pheophytin A	2025/08/27			<0.53	ug/L
C062993	Chlorophyll a	2025/08/28	96	80 - 120	<0.54	ug/L
C062993	Chlorophyll c	2025/08/28			<0.54	ug/L
C062993	Pheophytin A	2025/08/28			<0.54	ug/L
C065474	Chlorophyll a	2025/08/29	98	80 - 120	<0.53	ug/L
C065474	Chlorophyll c	2025/08/29			<0.53	ug/L
C065474	Pheophytin A	2025/08/29			<0.53	ug/L
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.						
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.						



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

INVOICE TO:		REPORT TO:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.
Accounts Payable		Attention	Beatriz Cupe-Flores
Address:	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4
Tel:	(604) 681-8371	Fax:	(604) 681-6209
Email:	BR.accounts payable@b2gold.com	Tel:	beatriz.cupe.flores@wsp.com
		Fax:	
PROJECT INFORMATION:		Laboratory Use Only:	
Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
P.O. #			
Project:	August AEMP program		
Project Name:		COC #:	Project Manager:
Site #			
Sampled By			

Regulatory Criteria:		Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					Tumaround Time (TAT) Required
☐ ATI	☐ CCME	☐ Other						Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details Rush Specific: Rush TAT (if available) is subject to availability.

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS									
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Fil	Chlorophyll a	# Filtr	Total Vol	
1 SID#386756	BRP-29A-1A	AUG 12 2025	9:30	Water	✓	✓	2	1	
2 SID#386757	BRP-29A-1B				✓	✓	1	1	
3 SID#386758	BRP-29A-1C				✓	✓	1	1	
4 SID#386759	BRP-29A-2A		11:35		✓	✓	1	0.9	
5 SID#386760	BRP-29A-2B				✓	✓	1	1	
6 SID#386761	BRP-29A-2C				✓	✓	1	1	
7 SID#386762	BRP-29A-3A		10:40		✓	✓	1	1	
8 SID#386763	BRP-29A-3B				✓	✓	1	1	
9 SID#386764	BRP-29A-3C				✓	✓	1	1	
10 SID#386765	BRP-29A-4A		12:45		✓	✓	1	1	

* RELINQUISHED BY: (Signature/Print)

25/08/18 8:50

RECEIVED BY: (Signature/Print)

25/08/19 15:00

Date: (YY/MM/DD)

25/08/18

Time

8:50

Date: (YY/MM/DD)

25/08/19

Time

15:00

Jars used and not submitted

0

Time Sensitive

☐

Laboratory Use Only

Temperature (°C) on Receipt

Custody Seal Intact on Cooler?

Received in Yellowknife

BY: J. Macdonald

AUG 18 2025

Temp: 1 / 5°C

CS: 1 / Ice: 1

of Bottles

1

Comments

Filtered Volume in L

Date Required

Rush Confirmation Number

(call lab for #)

☐

[illegible]

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St	Address:	Saskatoon SK S7H 0T4	Project	August AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name		COC #:	751971
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Site #:			Project Manager:
				Sampled By:			Stephanie Rodriguez Camacho

Regulatory Criteria	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required:
☐ ATI			Please provide advance notice for rush projects
☐ CCME			Regular (Standard) TAT: (will be applied if Rush TAT is not specified): Standard TAT = 5-7 Working days for most tests. Please note Standard TAT for certain tests are > 5 days - contact your Project Manager for details
☐ Other			Job Specific Rush TAT (if applies to entire submission) Date Required: ☐ Rush Confirmation Number: ☐

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Chlorophyll a	# filters used	Volume Filtered	# of Bottles	Comments
1 SID#396766	BRP-29A-4B	Aug 19 2025	12:45	Water	✓	✓	2	0.9		Filtered Volume in L
2 SID#396767	BRP-29A-4C		12:45		✓	✓				
3 SID#396768	BRP-29A-5A		13:50		✓	✓				
4 SID#396769	BRP-29A-5B				✓	✓				
5 SID#396770	BRP-29A-5C				✓	✓				
6 SID#396771	BRP-31-3A	Aug 19 2025	11:45		✓	✓				Received in Yellowknife By: <i>[Signature]</i>
7 SID#396772	BRP-31-3B				✓	✓				
8 SID#396773	BRP-31-3C				✓	✓				
9 SID#396774	BRP-31-4A	Aug 19 2025	15:00		✓	✓				Temp: <i>5°C</i> CS: <i>1</i> Ice: <i>1</i>
10 SID#396775	BRP-31-4B		15:00		✓	✓				

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only	Custody Seal intact on Cooler?
<i>Adam Feldman</i>		25/08/19	18:00	<i>[Signature]</i>		25/08/19	15:00		☐	Temp: <i>See Actr</i>	☐ Yes ☐ No

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.



Bureau Veritas
4326 76 Avenue NW Edmonton Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6296 Fax (780) 450-1187 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
Attention	Accounts Payable	Attention	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St.	Address	Saskatoon SK S7H 0T4	Project:	August AEMP program	COC #:	Project Manager:
	VANCOUVER BC V6C 2X8			Project Name:			
Tel	(604) 681-8371	Tel		Site #:			
Email	BR.accounts payable@b2gold.com	Email	beatriz.cupe.flores@wsp.com	Sampled By:			

Regulatory Criteria:	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required
☐ ATI			
☐ CCME			
☐ Other			

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	Chlorophyll a	# filters used	Volume Filtered	# of Bottles	Comments
1 SID#386776	BRP-31-4C	Aug 18 2025	15:00	shore	✓	✓	2	1		Volume Filtered in L
2 SID#386777	BRP-32-1A	Aug 19 2025	13:00		✓	✓				
3 SID#386778	BRP-32-1B				✓	✓				
4 SID#386779	BRP-32-1C				✓	✓				
5 SID#386780	BRP-32-2A		13:55		✓	✓				
6 SID#386781	BRP-32-2B				✓	✓				
7 SID#386782	BRP-32-2C				✓	✓				
8 SID#386783	BRP-32-3A		8:50		✓	✓				
9 SID#386784	BRP-32-3B				✓	✓				
10 SID#386785	BRP-32-3C				✓	✓				

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only	Custody Seal intact on Cooler?
Adam Feldberg		25/08/18	6:00	J. A. Lowing		25/08/19	15:00		☐	Temperature (°C) on Receipt: See ACR	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	761971
Attention	Accounts Payable	Attention	Beatriz Cupe-Flores	P.O. #			
Address	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address	Saskatoon SK S7H 0T4	Project:	August AEMP program		
Tel	(604) 681-8371	Tel		Project Name:		COC #:	
Email	BR.accounts@b2gold.com	Email	beatriz.cupe.flores@wsp.com	Site #:			
				Sampled By:			Stephanie Rodriguez Camacho

Regulatory Criteria	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required
☐ ATI			☐ Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details
☐ CCME			☐ Job Specific Rush TAT (if applies to entire submission) Date Required: _____ Rush Confirmation Number: _____
☐ Other			

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	Chlorophyll a	# Filters used	Volume Filtered	# of Bottles	Comments
1 SID#395786	BRP-32-4A	Aug 13 2025	11:40	Water	✓	✓	2	1		Volume Filtered in L
2 SID#395787	BRP-32-4B				✓	✓				
3 SID#395788	BRP-32-4C				✓	✓				
4 SID#395789	BRP-32-5A		10:05		✓	✓				
5 SID#395790	BRP-32-5B				✓	✓				
6 SID#395791	BRP-32-5C				✓	✓				
7 SID#395792	BRP-38-1A	Aug 16 2025	13:35		✓	✓				
8 SID#395793	BRP-38-1B				✓	✓				
9 SID#395794	BRP-38-1C				✓	✓				
10 SID#395795	BRP-38-2A		12:45		✓	✓				

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only	Custody Seal intact on Cooler?
Adam Felder		25/08/18	8:00	J. L. Lomon		25/08/18	15:00		☐	Temperature (°C) on Receipt: See ACTR	☐ Yes ☐ No

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGEMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COO-TERMS-AND-CONDITIONS.

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

* ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER



Bureau Veritas
4326 76 Avenue NW Edmonton, Alberta Canada T5B 2R4 Tel (780) 577-7100 Toll-free 800-563-6296 Fax (780) 450-4187 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:

Company Name: #10600 B2Gold Back River Corp.
Attention: Accounts Payable
Address: Park Place Suite 3400-666 Burrard St.
VANCOUVER BC V6C 2X8
Tel: (604) 681-8371 Fax: (604) 681-6209
Email: BR.accounts@b2gold.com

REPORT TO:

Company Name: #50378 WSP Canada Inc.
Attention: Beatriz Cupe-Flores
Address: Saskatoon SK S7H 0T4
Tel: Fax:
Email: beatriz.cupe.flores@wsp.com

PROJECT INFORMATION:

Quotation #: C41460
P.O. #: August AEMP program
Project Name:
Site #:
Sampled By:

Laboratory Use Only:

Bureau Veritas Job #: Bottle Order #:
COC #:
Project Manager:
C#761971-05-01
Stephanie Rodriguez Camacho

Special Instructions

Regulatory Criteria:

☐ ATI
☐ CCME
☐ Other

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects.
Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.
Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Chlorophyll a	#filters used	Volume Filtered	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	# of Bottles	Comments
1 SID#386796	BRP-38-2B	Aug 18 2025	12:45		✓	✓	9				Volume filtered in L
2 SID#386797	BRP-38-2C		12:45		✓	✓					
3 SID#386798	BRP-38-3A		10:02		✓	✓					
4 SID#386799	BRP-38-3B				✓	✓					
5 SID#386800	BRP-38-3C				✓	✓					
6 SID#386801	BRP-38-4A		11:45		✓	✓					
7 SID#386802	BRP-38-4B				✓	✓					
8 SID#386803	BRP-38-4C				✓	✓					
9 SID#386804	BRP-38-5A		11:00		✓	✓					
10 SID#386805	BRP-38-5B		11:00		✓	✓					

* RELINQUISHED BY: (Signature/Print)

Adam Feldler
Date: (YY/MM/DD) 05/08/18 Time: 8:00

RECEIVED BY: (Signature/Print)

DAE Laven
Date: (YY/MM/DD) 05/08/18 Time: 15:00

jars used and not submitted

Time Sensitive

Laboratory Use Only
Temperature (°C) on Receipt

Custody Seal intact on Cooler?

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client



INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St.	Address:	Saskatoon SK S7H 0T4	Project:	August AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name:		COC #:	Project Manager:
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Site #:			Stephanie Rodriguez Carnacho
				Sampled By:			

Regulatory Criteria	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required:
☐ ATI			Please provide advance notice for rush projects
☐ CCME			
☐ Other			

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	Chlorophyll a	# filters used	Volume filtered L	# of Bottles	Comments
1 SID-399206	BRP-38-5C	Aug 14 2025	11:00	Water		✓	2	1		
2										
3										
4										
5										
6										
7										
8										
9										
10										

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only	Custody Seal Intact on Cooler?
Adam Feldberg		25/08/18	8:00	J. H. Brown		25/08/19	15:00		☐	Temp: 5°C CS: Ice	☐ Yes ☐ No

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Your C.O.C. #: 1OF1, 761971-01-01, 761971-02-01, 761971-03-01,
761971-04-01, 761971-05-01, 761971-06-01

Report Date: 2025/09/03
Report #: R3705227
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571366

Received: 2025/08/18, 13:50

Sample Matrix: Filter
Samples Received: 51

Analyses	Date		Date Analyzed	Laboratory Method	Analytical Method
	Quantity	Extracted			
Chlorophyll and Pheophytin in Water (1)	7	2025/08/25	2025/08/26	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/08/26	2025/08/27	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	20	2025/08/27	2025/08/28	CAL SOP-00273	SM 24 10150 A, B m
Chlorophyll and Pheophytin in Water (1)	4	2025/08/28	2025/08/29	CAL SOP-00273	SM 24 10150 A, B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Your C.O.C. #: 1OF1, 761971-01-01, 761971-02-01, 761971-03-01,
761971-04-01, 761971-05-01, 761971-06-01

Report Date: 2025/09/03
Report #: R3705227
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571366

Received: 2025/08/18, 13:50

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

=====

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE001	DRE002	DRE003		DRE004		DRE005		
Sampling Date		2025/08/12 09:30	2025/08/12 09:30	2025/08/12 09:30		2025/08/12 11:35		2025/08/12 11:35		
COC Number		761971-01-01	761971-01-01	761971-01-01		761971-01-01		761971-01-01		
	UNITS	BRP-29A-1A	BRP-29A-1B	BRP-29A-1C	RDL	BRP-29A-2A	RDL	BRP-29A-2B	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	1.0	0.82	1.0	0.53	0.65	0.48	0.84	0.59	C061148
Chlorophyll c	ug/L	0.56	0.55	0.68	0.53	<0.48	0.48	0.61	0.59	C061148
Pheophytin A	ug/L	<0.53	<0.53	<0.53	0.53	<0.48	0.48	<0.59	0.59	C061148
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE006	DRE007		DRE008	DRE009		DRE010		
Sampling Date		2025/08/12 11:35	2025/08/12 10:40		2025/08/12 10:40	2025/08/12 10:40		2025/08/12 12:45		
COC Number		761971-01-01	761971-01-01		761971-01-01	761971-01-01		761971-01-01		
	UNITS	BRP-29A-2C	BRP-29A-3A	QC Batch	BRP-29A-3B	BRP-29A-3C	RDL	BRP-29A-4A	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.86	0.88	C061148	0.82	0.66	0.53	0.80	0.51	C062991
Chlorophyll c	ug/L	0.71	0.63	C061148	<0.53	<0.53	0.53	<0.51	0.51	C062991
Pheophytin A	ug/L	<0.53	<0.53	C061148	<0.53	<0.53	0.53	<0.51	0.51	C062991
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE011		DRE012		DRE013	DRE014	DRE015		
Sampling Date		2025/08/12 12:45		2025/08/12 12:45		2025/08/12 13:50	2025/08/12 13:50	2025/08/12 13:50		
COC Number		761971-02-01		761971-02-01		761971-02-01	761971-02-01	761971-02-01		
	UNITS	BRP-29A-4B	RDL	BRP-29A-4C	RDL	BRP-29A-5A	BRP-29A-5B	BRP-29A-5C	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.72	0.53	0.73	0.59	0.83	0.60	0.71	0.53	C062991
Chlorophyll c	ug/L	<0.53	0.53	<0.59	0.59	0.59	<0.53	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	0.53	<0.59	0.59	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE016		DRE017		DRE018	DRE019	DRE020		
Sampling Date		2025/08/14 11:45		2025/08/14 11:45		2025/08/14 11:45	2025/08/12 15:00	2025/08/12 15:00		
COC Number		761971-02-01		761971-02-01		761971-02-01	761971-02-01	761971-02-01		
	UNITS	BRP-31-3A	RDL	BRP-31-3B	RDL	BRP-31-3C	BRP-31-4A	BRP-31-4B	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	0.83	0.53	0.93	0.52	0.65	0.94	<0.53	0.53	C062991
Chlorophyll c	ug/L	<0.53	0.53	0.53	0.52	<0.53	0.53	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	0.53	<0.52	0.52	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit										

Bureau Veritas ID		DRE021	DRE022	DRE023	DRE024	DRE025	DRE026		
Sampling Date		2025/08/12 15:00	2025/08/13 13:00	2025/08/13 13:00	2025/08/13 13:00	2025/08/13 13:55	2025/08/13 13:55		
COC Number		761971-03-01	761971-03-01	761971-03-01	761971-03-01	761971-03-01	761971-03-01		
	UNITS	BRP-31-4C	BRP-32-1A	BRP-32-1B	BRP-32-1C	BRP-32-2A	BRP-32-2B	RDL	QC Batch

MISCELLANEOUS									
Chlorophyll a	ug/L	1.1	2.1	2.0	1.8	2.1	2.0	0.53	C062991
Chlorophyll c	ug/L	0.73	0.83	0.68	<0.53	0.75	<0.53	0.53	C062991
Pheophytin A	ug/L	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53	0.53	C062991
RDL = Reportable Detection Limit									

Bureau Veritas ID		DRE027			DRE028	DRE029	DRE030	DRE031		
Sampling Date		2025/08/13 13:55			2025/08/13 08:50	2025/08/13 08:50	2025/08/13 08:50	2025/08/13 11:40		
COC Number		761971-03-01			761971-03-01	761971-03-01	761971-03-01	761971-04-01		
	UNITS	BRP-32-2C	RDL	QC Batch	BRP-32-3A	BRP-32-3B	BRP-32-3C	BRP-32-4A	RDL	QC Batch

MISCELLANEOUS										
Chlorophyll a	ug/L	2.0	0.53	C062991	1.6	1.8	2.1	1.9	0.54	C062993
Chlorophyll c	ug/L	<0.53	0.53	C062991	<0.54	<0.54	0.55	<0.54	0.54	C062993
Pheophytin A	ug/L	0.55	0.53	C062991	<0.54	<0.54	<0.54	<0.54	0.54	C062993
RDL = Reportable Detection Limit										



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE032	DRE033	DRE034	DRE035	DRE036	DRE037		
Sampling Date		2025/08/13 11:40	2025/08/13 11:40	2025/08/13 10:05	2025/08/13 10:05	2025/08/13 10:05	2025/08/16 13:35		
COC Number		761971-04-01	761971-04-01	761971-04-01	761971-04-01	761971-04-01	761971-04-01		
	UNITS	BRP-32-4B	BRP-32-4C	BRP-32-5A	BRP-32-5B	BRP-32-5C	BRP-38-1A	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	2.0	2.0	2.0	1.7	1.9	<0.53	0.53	C062993
Chlorophyll c	ug/L	0.56	0.60	0.56	<0.53	<0.53	<0.53	0.53	C062993
Pheophytin A	ug/L	<0.53	<0.53	<0.53	0.67	<0.53	<0.53	0.53	C062993

RDL = Reportable Detection Limit

Bureau Veritas ID		DRE038		DRE039		DRE040		DRE041	DRE042		
Sampling Date		2025/08/16 13:35		2025/08/16 13:35		2025/08/16 12:45		2025/08/16 12:45	2025/08/16 12:45		
COC Number		761971-04-01		761971-04-01		761971-04-01		761971-05-01	761971-05-01		
	UNITS	BRP-38-1B	RDL	BRP-38-1C	RDL	BRP-38-2A	RDL	BRP-38-2B	BRP-38-2C	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.56	0.54	0.67	0.53	0.74	0.54	0.73	0.72	0.53	C062993
Chlorophyll c	ug/L	<0.54	0.54	<0.53	0.53	<0.54	0.54	<0.53	<0.53	0.53	C062993
Pheophytin A	ug/L	<0.54	0.54	<0.53	0.53	<0.54	0.54	<0.53	<0.53	0.53	C062993

RDL = Reportable Detection Limit

Bureau Veritas ID		DRE043		DRE044	DRE045	DRE046		DRE047		
Sampling Date		2025/08/16 10:02		2025/08/16 10:02	2025/08/16 10:02	2025/08/16 11:45		2025/08/16 11:45		
COC Number		761971-05-01		761971-05-01	761971-05-01	761971-05-01		761971-05-01		
	UNITS	BRP-38-3A	RDL	BRP-38-3B	BRP-38-3C	BRP-38-4A	RDL	BRP-38-4B	RDL	QC Batch

MISCELLANEOUS

Chlorophyll a	ug/L	0.67	0.54	0.66	<0.53	<0.53	0.53	0.72	0.54	C062993
Chlorophyll c	ug/L	<0.54	0.54	<0.53	<0.53	<0.53	0.53	<0.54	0.54	C062993
Pheophytin A	ug/L	<0.54	0.54	<0.53	<0.53	<0.53	0.53	<0.54	0.54	C062993

RDL = Reportable Detection Limit



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF FILTER

Bureau Veritas ID		DRE048	DRE049		DRE050		DRE051		
Sampling Date		2025/08/16 11:45	2025/08/16 11:00		2025/08/16 11:00		2025/08/16 11:00		
COC Number		761971-05-01	761971-05-01		761971-05-01		761971-06-01		
	UNITS	BRP-38-4C	BRP-38-5A	RDL	BRP-38-5B	RDL	BRP-38-5C	RDL	QC Batch
MISCELLANEOUS									
Chlorophyll a	ug/L	<0.53	<0.53	0.53	0.85	0.54	<0.53	0.53	C065474
Chlorophyll c	ug/L	<0.53	<0.53	0.53	1.0	0.54	<0.53	0.53	C065474
Pheophytin A	ug/L	<0.53	<0.53	0.53	<0.54	0.54	<0.53	0.53	C065474
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

GENERAL COMMENTS

Results relate only to the items tested.



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Spiked Blank		Method Blank	
			% Recovery	QC Limits	Value	UNITS
C061148	Chlorophyll a	2025/08/26	105	80 - 120	<0.53	ug/L
C061148	Chlorophyll c	2025/08/26			<0.53	ug/L
C061148	Pheophytin A	2025/08/26			<0.53	ug/L
C062991	Chlorophyll a	2025/08/27	96	80 - 120	<0.53	ug/L
C062991	Chlorophyll c	2025/08/27			<0.53	ug/L
C062991	Pheophytin A	2025/08/27			<0.53	ug/L
C062993	Chlorophyll a	2025/08/28	96	80 - 120	<0.54	ug/L
C062993	Chlorophyll c	2025/08/28			<0.54	ug/L
C062993	Pheophytin A	2025/08/28			<0.54	ug/L
C065474	Chlorophyll a	2025/08/29	98	80 - 120	<0.53	ug/L
C065474	Chlorophyll c	2025/08/29			<0.53	ug/L
C065474	Pheophytin A	2025/08/29			<0.53	ug/L
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.						
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.						



Bureau Veritas Job #: C571366
Report Date: 2025/09/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St	Address:	Saskatoon SK S7H 0T4	Project	August AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name		COC #:	751971
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Site #:			Project Manager:
				Sampled By:			Stephanie Rodriguez Camacho

Regulatory Criteria	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required:
☐ ATI			Please provide advance notice for rush projects
☐ CCME			Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note Standard TAT for certain tests are > 5 days - contact your Project Manager for details
☐ Other			Job Specific Rush TAT (if applies to entire submission) Date Required: ☐ Rush Confirmation Number: ☐

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Chlorophyll a	# filters used	Volume Filtered	# of Bottles	Comments
1 SID#396766	BRP-29A-4B	Aug 19 2025	12:45	Water	✓	✓	2	0.9		Filtered Volume in L
2 SID#396767	BRP-29A-4C		12:45		✓	✓				
3 SID#396768	BRP-29A-5A		13:50		✓	✓				
4 SID#396769	BRP-29A-5B				✓	✓				
5 SID#396770	BRP-29A-5C				✓	✓				
6 SID#396771	BRP-31-3A	Aug 19 2025	11:45		✓	✓				
7 SID#396772	BRP-31-3B				✓	✓				
8 SID#396773	BRP-31-3C				✓	✓				
9 SID#396774	BRP-31-4A	Aug 19 2025	15:00		✓	✓				
10 SID#396775	BRP-31-4B		15:00		✓	✓				

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only
Adam Feldman	25/08/19	18:00	SEP 1 2025	25/08/19	15:00		☐	Temperature (°C) on Receipt: <u>See AETR</u> Custody Seal intact on Cooler? ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.
Attention	Accounts Payable	Attention	Beatriz Cupe-Flores
Address:	Park Place Suite 3400-666 Burrard St.	Address:	Saskatoon SK S7H 0T4
	VANCOUVER BC V6C 2X8		
Tel:	(604) 681-8371	Fax:	(604) 681-6209
Email:	BR.accounts@b2gold.com		
PROJECT INFORMATION:		Laboratory Use Only:	
Quotation #	C41460	Bureau Veritas Job #:	Bottle Order #:
P.O. #			
Project:	August AEMP program		
Project Name		COC #:	761971
Site #		Project Manager:	
Sampled By:			
			
		C#761971-03-01	
		Stephanie Rodriguez Carmichael	

Regulatory Criteria:					
☐	ATI				
☐	CQME				
☐	Other				
		Special Instructions			
Filtered ? (Y / N)					
ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					
ers Used e Filtered					
Turnaround Time (TAT) Required:					
Please provide advance notice for rush projects "					
Regular (Standard) TAT:					
(will be applied if Rush TAT is not specified)					
Standard TAT = 5-7 Working days for most tests.					
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details					
Job Specific Rush TAT (if applies to entire submission)					

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS									
Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Metals Field P	Chlorophyll a	# Filt	Volume	
1 SID#386776	BRP-31-4C	Aug 18, 2025	15:00	chlore		✓	2	1	
2 SID#386777	BRP-32-1A	Aug 19, 2025	13:00			✓			
3 SID#386778	BRP-32-1B					✓			
4 SID#386779	BRP-32-1C					✓			
5 SID#386780	BRP-32-2A		13:55			✓			
6 SID#386781	BRP-32-2B					✓			
7 SID#386782	BRP-32-2C					✓			
8 SID#386783	BRP-32-3A		8:50			✓			
9 SID#386784	BRP-32-3B					✓			
10 SID#386785	BRP-32-3C					✓			

RELINQUISHED BY: (Signature/Print)

Adam Feldberg

25/08/18

6:00

RECEIVED BY: (Signature/Print)

25/08/19

15:00

jars used and not submitted

Time Sensitive ☐

Temperature (°C) on Receipt

Custody Seal intact on Cooler? ☐ Yes ☐ No

Date Required: _____

Rush Confirmation Number: _____

(call lab for #)

Comments: Volume Filtered in L

Received in Yellowknife By: J. Harce

Aug 18 2025

Temp: 1°C

CS: 1 Ice: 1

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGEMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORY/RESOURCES/COC-TERMS-AND-CONDITIONS.

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL DELAYS.

ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

Signature	Date
	
White: Bureau Veritas	Yellow: Client

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#10600 B2Gold Back River Corp.	Company Name	#50378 WSP Canada Inc.	Quotation #	C41460	Bureau Veritas Job #:	761971
Attention	Accounts Payable	Attention	Beatriz Cupe-Flores	P.O. #			
Address	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address	Saskatoon SK S7H 0T4	Project	August AEMP program		
Tel	(604) 681-8371	Tel		Project Name			
Email	BR.accounts@b2gold.com	Email	beatriz.cupe.flores@wsp.com	Site #			
				Sampled By:			

Regulatory Criteria	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	Turnaround Time (TAT) Required
☐ ATI			☐ Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details
☐ CCME			☐ Job Specific Rush TAT (if applies to entire submission) Date Required: _____ Rush Confirmation Number: _____
☐ Other			

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	Chlorophyll a	# Filters used	Volume Filtered	# of Bottles	Comments
1 SID#395786	BRP-32-4A	Aug 13 2025	11:40	Water	✓	✓	2	Volume Filtered in L		
2 SID#395787	BRP-32-4B				✓	✓				
3 SID#395788	BRP-32-4C				✓	✓				
4 SID#395789	BRP-32-5A		10:05		✓	✓				
5 SID#395790	BRP-32-5B				✓	✓				
6 SID#395791	BRP-32-5C				✓	✓				
7 SID#395792	BRP-38-1A	Aug 16 2025	13:35		✓	✓				
8 SID#395793	BRP-38-1B				✓	✓				
9 SID#395794	BRP-38-1C				✓	✓				
10 SID#395795	BRP-38-2A		12:45		✓	✓				

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# Jars used and not submitted	Time Sensitive	Laboratory Use Only	Custody Seal intact on Cooler?
Adam Felder		25/08/18	8:00	J. L. Lomon	25/08/18	15:00		☐	Temperature (°C) on Receipt: See ACTR	☐ Yes ☐ No

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGEMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COO-TERMS-AND-CONDITIONS.

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client



Bureau Veritas
4326 76 Avenue NW Edmonton, Alberta Canada T5B 2R4 Tel (780) 577-7100 Toll-free 800-563-6296 Fax (780) 450-4187 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:

Company Name: #10600 B2Gold Back River Corp.
Attention: Accounts Payable
Address: Park Place Suite 3400-666 Burrard St.
VANCOUVER BC V6C 2X8
Tel: (604) 681-8371 Fax: (604) 681-6209
Email: BR.accounts.payable@b2gold.com

REPORT TO:

Company Name: #50378 WSP Canada Inc.
Attention: Beatriz Cupe-Flores
Address: Saskatoon SK S7H 0T4
Tel: Fax:
Email: beatriz.cupe.flores@wsp.com

PROJECT INFORMATION:

Quotation #: C41460
P.O. #: August AEMP program
Project Name:
Site #:
Sampled By:

Laboratory Use Only:

Bureau Veritas Job #: Bottle Order #:
COC #:
Project Manager:
C#761971-05-01
Stephanie Rodriguez Camacho

Special Instructions

Regulatory Criteria:

☐ ATI
☐ CCME
☐ Other

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects.
Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.
Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Chlorophyll a	#filters used	Volume Filtered	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	# of Bottles	Comments
1 SID#386796	BRP-38-2B	Aug 18 2025	12:45		✓	✓	9				Volume filtered in L
2 SID#386797	BRP-38-2C		12:45		✓	✓					
3 SID#386798	BRP-38-3A		10:02		✓	✓					
4 SID#386799	BRP-38-3B				✓	✓					
5 SID#386800	BRP-38-3C				✓	✓					
6 SID#386801	BRP-38-4A		11:45		✓	✓					
7 SID#386802	BRP-38-4B				✓	✓					
8 SID#386803	BRP-38-4C				✓	✓					
9 SID#386804	BRP-38-5A		11:00		✓	✓					
10 SID#386805	BRP-38-5B		11:00		✓	✓					

* RELINQUISHED BY: (Signature/Print)

Adam Feldler

Date: (YY/MM/DD)

25/08/18

Time

8:00

RECEIVED BY: (Signature/Print)

DA Laven

Date: (YY/MM/DD)

25/08/18

Time

15:00

jars used and not submitted

Time Sensitive

Laboratory Use Only

Temperature (°C) on Receipt

See AETR

Custody Seal intact on Cooler?

Yes No

White: Bureau Veritas Yellow: Client

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.



INVOICE TO:				REPORT TO:				PROJECT INFORMATION:				Laboratory Use Only:									
Company Name #10600 B2Gold Back River Corp.				Company Name #50378 WSP Canada Inc.				Quotation # C41460				Bureau Veritas Job #:				Bottle Order #:					
Attention: Accounts Payable				Attention: Beatriz Cupe-Flores				P.O. #													
Address: Park Place Suite 3400-666 Burrard St.				Address: Saskatoon SK S7H 0T4				Project: August AEMP program													
VANCOUVER BC V6C 2X8								Project Name:								COC #:					
Tel: (604) 681-8371				Tel: (604) 681-6209				Site #:													
Email: BR.accounts payable@b2gold.com				Email: beatriz.cupe.flores@wsp.com				Sampled By:								Barcode C4761971-06-01					
Fax: (604) 681-6209				Fax:																	
Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other				Special Instructions				ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				Turnaround Time (TAT) Required: Please provide advance notice for rush projects									
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																					
Sample Barcode Label		Sample (Location) Identification		Date Sampled		Time Sampled		Matrix		Metals Field Filtered ? (Y / N)		Chlorophyll a		# filters used		Volume filtered L					
1 SID-399906		BRP-38-5C		20/08/2025		11:00		Chloro		✓											
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
* RELINQUISHED BY: (Signature/Print) Adam Feldberg				Date: (YY/MM/DD) 25/08/18		Time 8:00		RECEIVED BY: (Signature/Print) J. Brown		Date: (YY/MM/DD) 25/08/19		Time 15:00		# jars used and not submitted		Time Sensitive ☐		Temperature (°C) on Receipt See ACTR		Custody Seal Intact on Cooler? ☐ Yes ☐ No	
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS .																					
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.																					
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER																					
Received in Yellowknife By: J. Brown AUG 18 2025 Temp: 5°C CS: Ice: _____										White: Bureau Veritas Yellow: Client											



Your P.O. #: 470000200
 Your Project #: AUGUST AEMP PROGRAM
 Site Location: 176233659
 Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/09/22
 Report #: R3712881
 Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	6	N/A	2025/08/21	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	6	N/A	2025/08/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	6	N/A	2025/08/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	6	N/A	2025/08/27	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	6	N/A	2025/08/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	6	N/A	2025/08/23		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	6	N/A	2025/09/04	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	6	N/A	2025/09/04	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	6	N/A	2025/08/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	6	2025/08/26	2025/08/26	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	6	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	6	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	5	N/A	2025/08/25		Auto Calc
Ammonia-N Low Level (Preserved) (1)	6	N/A	2025/08/25	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	6	N/A	2025/08/22		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	6	N/A	2025/08/21	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	6	2025/08/20	2025/08/22		Auto Calc
pH @25°C (1, 6)	6	N/A	2025/08/22	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	5	N/A	2025/08/20	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	6	N/A	2025/08/22	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/08/21	2025/08/23	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	3	2025/08/22	2025/08/23	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	6	N/A	2025/08/21	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	6	2025/08/21	2025/08/22	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	5	N/A	2025/08/20	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	5	N/A	2025/08/22		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/08/25		Auto Calc
Nitrogen (Total) (1)	5	2025/08/22	2025/08/22	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/08/22	2025/08/25	AB SOP-00093	SM 24 4500-N C m



Your P.O. #: 470000200
Your Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/22
Report #: R3712881
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Carbon (Total Organic) (1, 8)	6	N/A	2025/08/26	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	6	2025/08/22	2025/08/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	6	2025/08/22	2025/08/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	6	2025/08/21	2025/08/21	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	6	N/A	2025/08/20	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	6	N/A	2025/09/19	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9

(4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.



Your P.O. #: 470000200
Your Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/22
Report #: R3712881
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD995		DRD996		DRD997		
Sampling Date		2025/08/16 13:20		2025/08/16 12:30		2025/08/16 09:40		
COC Number		761493-05-01		761493-05-01		761493-05-01		
	UNITS	BRP-38-1	QC Batch	BRP-38-2	QC Batch	BRP-38-3	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	13.4	C055338	13.4	C055338	13.4	0.50	C055338
Total Hardness (CaCO ₃)	mg/L	13.7	C055527	13.6	C055527	13.7	0.50	C055527
Dissolved Nitrate (N)	mg/L	0.016	C055865	<0.0030	C055865	<0.0030	0.0030	C055865
Nitrate (NO ₃)	mg/L	0.070	C055593	<0.013	C055593	<0.013	0.013	C055593
Nitrite (NO ₂)	mg/L	<0.0033	C055593	<0.0033	C055593	<0.0033	0.0033	C055593
Sulphide (as H ₂ S)	mg/L	<0.0020	C055724	<0.0020	C055724	0.0065	0.0020	C055724
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.23	C055880	0.26	C055880	0.24	0.020	C055880
Un-Ionized Ammonia	mg/L	<0.00050	C055861	<0.00050	C055861	<0.00050	0.00050	C055861
Field Parameters								
Field pH	pH	7.54	ONSITE	7.47	ONSITE	7.71	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.79	ONSITE	13.64	ONSITE	13.39	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	32	C059044	32	C059044	32	2.0	C059044
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057521	<0.00050	C057521	<0.00050	0.00050	C057521
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057532	<0.00050	C057532	<0.00050	0.00050	C057532
Fluoride (F)	mg/L	0.022	C059037	0.022	C059037	0.022	0.010	C059037
Free Free Cyanide	mg/L	<0.00050	C057536	<0.00050	C057536	<0.00050	0.00050	C057536
Dissolved Organic Carbon (C)	mg/L	3.6	C064358	3.4	C064358	3.4	0.50	C064358
pH	pH	6.45	C059043	6.50	C059043	6.42	N/A	C059043
Reactive Silica	mg/L	0.13	C058458	0.17	C058458	0.20	0.050	C058458
Alkalinity (Total as CaCO ₃)	mg/L	8.59	C059041	8.25	C059041	8.49	0.50	C059041
Total Organic Carbon (C)	mg/L	3.0	C062902	3.0	C062902	3.1	0.50	C062902
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Bicarbonate (HCO ₃)	mg/L	10.5	C059041	10.1	C059041	10.4	0.50	C059041
Carbonate (CO ₃)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Hydroxide (OH)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Total Dissolved Solids	mg/L	36	C057038	24	C057038	32	10	C057038
Total Suspended Solids	mg/L	<1.0	C057050	<1.0	C057050	<1.0	1.0	C057050
Anions								
Orthophosphate (P)	mg/L	<0.0010	C059356	<0.0010	C059351	<0.0010	0.0010	C059356
RDL = Reportable Detection Limit N/A = Not Applicable								



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD995		DRD996		DRD997		
Sampling Date		2025/08/16 13:20		2025/08/16 12:30		2025/08/16 09:40		
COC Number		761493-05-01		761493-05-01		761493-05-01		
	UNITS	BRP-38-1	QC Batch	BRP-38-2	QC Batch	BRP-38-3	RDL	QC Batch
Total Sulphide	mg/L	<0.0018	C058130	<0.0018	C058130	0.0061	0.0018	C058130
Chloride (Cl)	mg/L	<0.50	C058480	<0.50	C058182	<0.50	0.50	C058182
Sulphate (SO4)	mg/L	4.9	C058480	4.9	C058182	4.8	0.50	C058182
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0017	C058642	<0.0010	C058642	0.0011	0.0010	C058642
Total Phosphorus (P)	mg/L	<0.0010 (1)	C058883	<0.0010	C058883	<0.0010 (1)	0.0010	C058883
Total Ammonia (N)	mg/L	<0.0050	C061058	<0.0050	C061056	0.0052	0.0050	C061056
Dissolved Nitrite (N)	mg/L	<0.0010	C058013	<0.0010	C058013	<0.0010	0.0010	C058013
Dissolved Nitrate plus Nitrite (N)	mg/L	0.016	C058013	<0.0030	C058013	<0.0030	0.0030	C058013
Total Nitrogen (N)	mg/L	0.25	C058637	0.26	C058637	0.24	0.020	C058637
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C095968	<0.0050	C095968	<0.0050	0.0050	C095968
Physical Properties								
Turbidity	NTU	<0.10	C056154	<0.10	C056154	<0.10	0.10	C056154
RDL = Reportable Detection Limit								
(1) TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.								



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD998		DRD999			DRE000		
Sampling Date		2025/08/16 11:35		2025/08/16 10:45			2025/08/16 00:00		
COC Number		761493-05-01		761493-05-01			761493-05-01		
	UNITS	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch	TB	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	13.5	C055338	13.3	0.50	C055338	<0.50	0.50	C055338
Total Hardness (CaCO ₃)	mg/L	13.7	C055527	13.7	0.50	C055527	<0.50	0.50	C055527
Dissolved Nitrate (N)	mg/L	0.044	C055865	<0.0030	0.0030	C055865	<0.0030	0.0030	C055865
Nitrate (NO ₃)	mg/L	0.20	C055593	<0.013	0.013	C055593	<0.013	0.013	C055593
Nitrite (NO ₂)	mg/L	<0.0033	C055593	<0.0033	0.0033	C055593	<0.0033	0.0033	C055593
Sulphide (as H ₂ S)	mg/L	<0.0020	C055724	<0.0020	0.0020	C055724	<0.0020	0.0020	C055724
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.22	C055880	0.26	0.020	C055880	<0.020	0.020	C055880
Un-Ionized Ammonia	mg/L	<0.00050	C055861	<0.00050	0.00050	C055861			
Field Parameters									
Field pH	pH	7.47	ONSITE	7.49	N/A	ONSITE			
Field Temperature (Fd)	deg. C	13.54	ONSITE	13.46	N/A	ONSITE			
Misc. Inorganics									
Conductivity	uS/cm	32	C059044	33	2.0	C059044	<2.0	2.0	C059044
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057521	<0.00050	0.00050	C057521	<0.00050	0.00050	C057521
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057532	<0.00050	0.00050	C057532	<0.00050	0.00050	C057532
Fluoride (F)	mg/L	0.022	C059037	0.023	0.010	C059037	<0.010	0.010	C059037
Free Free Cyanide	mg/L	<0.00050	C057536	<0.00050	0.00050	C057536	<0.00050	0.00050	C057536
Dissolved Organic Carbon (C)	mg/L	3.3	C064358	3.5	0.50	C064358	<0.50	0.50	C064358
pH	pH	6.42	C059043	6.41	N/A	C059043	5.39	N/A	C059043
Reactive Silica	mg/L	0.19	C058458	0.19	0.050	C058458	<0.050	0.050	C058458
Alkalinity (Total as CaCO ₃)	mg/L	8.56	C059041	8.48	0.50	C059041	0.62	0.50	C059041
Total Organic Carbon (C)	mg/L	3.1	C062902	3.1	0.50	C062902	<0.50	0.50	C062902
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Bicarbonate (HCO ₃)	mg/L	10.4	C059041	10.3	0.50	C059041	0.75	0.50	C059041
Carbonate (CO ₃)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Hydroxide (OH)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Total Dissolved Solids	mg/L	28	C057038	36	10	C057038	<10	10	C057038
Total Suspended Solids	mg/L	1.9	C057050	<1.0	1.0	C057050	<1.0	1.0	C057050
Anions									
Orthophosphate (P)	mg/L	<0.0010	C059356	<0.0010	0.0010	C059351	<0.0010	0.0010	C059356
RDL = Reportable Detection Limit									
N/A = Not Applicable									



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD998		DRD999			DRE000		
Sampling Date		2025/08/16 11:35		2025/08/16 10:45			2025/08/16 00:00		
COC Number		761493-05-01		761493-05-01			761493-05-01		
	UNITS	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch	TB	RDL	QC Batch
Total Sulphide	mg/L	<0.0018	C058135	<0.0018	0.0018	C058135	<0.0018	0.0018	C058135
Chloride (Cl)	mg/L	<0.50	C058182	<0.50	0.50	C058182	<0.50	0.50	C058182
Sulphate (SO4)	mg/L	4.7	C058182	4.6	0.50	C058182	<0.50	0.50	C058182
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C058642	<0.0010	0.0010	C058642	<0.0010	0.0010	C058642
Total Phosphorus (P)	mg/L	0.0015	C058883	<0.0010	0.0010	C058883	<0.0010	0.0010	C058883
Total Ammonia (N)	mg/L	<0.0050	C061056	<0.0050	0.0050	C061056	<0.0050	0.0050	C061056
Dissolved Nitrite (N)	mg/L	<0.0010	C058013	<0.0010	0.0010	C058013	<0.0010	0.0010	C058013
Dissolved Nitrate plus Nitrite (N)	mg/L	0.044	C058013	<0.0030	0.0030	C058013	<0.0030	0.0030	C058013
Total Nitrogen (N)	mg/L	0.26	C058640	0.26	0.020	C058637	<0.020	0.020	C058637
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	C095968	<0.0050	0.0050	C095968	<0.0050	0.0050	C095968
Physical Properties									
Turbidity	NTU	<0.10	C056154	<0.10	0.10	C056154	<0.10	0.10	C056154
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998	DRD999		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35	2025/08/16 10:45		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000109	0.00000083	0.00000091	0.00000057	0.00000068	0.00000010	C063266
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000051	0.00000104	0.00000049	0.00000073	0.00000052	0.00000010	C062403
RDL = Reportable Detection Limit								

Bureau Veritas ID		DRE000		
Sampling Date		2025/08/16 00:00		
COC Number		761493-05-01		
	UNITS	TB	RDL	QC Batch

Elements				
Total Mercury (Hg)	mg/L	<0.0000001	0.00000010	C063266
Lab Filtered Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000001	0.00000010	C062403
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00196	0.00202	0.00192	0.00198	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000050	0.0000038	0.0000032	0.0000045	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000158	0.000162	0.000164	0.000159	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.00327	0.00327	0.00330	0.00329	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00114	0.00119	0.00114	0.00126	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	2.26	2.27	2.26	2.28	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000047	0.000057	0.000047	0.000053	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.0000146	0.0000159	0.0000153	0.0000145	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.000619	0.000625	0.000614	0.000628	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0185	0.0183	0.0191	0.0186	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.000413	0.000429	0.000419	0.000393	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	1.88	1.89	1.88	1.90	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.0000676	0.0000647	0.0000786	0.0000655	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000127	<0.0000050	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.000858	0.000849	0.000862	0.000879	0.000015	C067921
Dissolved Potassium (K)	mg/L	0.347	0.346	0.349	0.348	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000020	0.000014	0.000020	0.000011	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.0868	0.0867	0.0877	0.0870	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	0.623	0.623	0.617	0.627	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.00763	0.00764	0.00768	0.00760	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	1.66	1.67	1.65	1.68	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000113	0.00000094	0.00000093	0.00000100	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	<0.000030	0.000032	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000264	0.00000283	0.00000247	0.00000271	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000106	0.0000119	0.0000111	0.0000115	0.0000050	C067921
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.000060	<0.000060	0.000065	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000118	0.0000118	0.0000116	0.0000119	0.0000080	C067921
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00576	0.00569	0.00525	0.00551	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000031	0.0000032	0.0000038	0.0000040	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000170	0.000166	0.000169	0.000166	0.0000050	C069772
Total Barium (Ba)	mg/L	0.00349	0.00340	0.00337	0.00345	0.0000080	C069772
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00098	0.00098	0.00097	0.00098	0.00010	C069772
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	2.31	2.29	2.29	2.31	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000061	0.000063	0.000076	0.000059	0.000020	C069772
Total Cobalt (Co)	mg/L	0.0000882	0.0000795	0.0000818	0.0000872	0.0000040	C069772
Total Copper (Cu)	mg/L	0.000708	0.000691	0.000698	0.000716	0.000020	C069772
Total Iron (Fe)	mg/L	0.0819	0.0765	0.0747	0.0801	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000032	<0.0000030	0.0000030	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.000400	0.000415	0.000403	0.000383	0.000050	C069772
Total Magnesium (Mg)	mg/L	1.92	1.92	1.93	1.93	0.00050	C069772
Total Manganese (Mn)	mg/L	0.00446	0.00412	0.00416	0.00441	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.000935	0.000900	0.000933	0.000930	0.000015	C069772
Total Potassium (K)	mg/L	0.377	0.368	0.366	0.366	0.0050	C069772
Total Selenium (Se)	mg/L	0.000016	0.000020	0.000023	0.000022	0.000010	C069772
Total Silicon (Si)	mg/L	0.0879	0.0877	0.0881	0.0866	0.0012	C069772
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	0.646	0.636	0.642	0.642	0.00050	C069772
Total Strontium (Sr)	mg/L	0.00791	0.00781	0.00776	0.00775	0.0000080	C069772
Total Sulphur (S)	mg/L	1.60	1.62	1.64	1.62	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000088	0.00000128	0.00000107	0.00000118	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000101	0.000073	0.000151	0.000128	0.000030	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000366	0.00000329	0.00000350	0.00000338	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000233	0.0000209	0.0000211	0.0000240	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.000135	0.000087	0.000077	0.000086	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000169	0.0000158	0.0000159	0.0000162	0.0000080	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00188	<0.00010	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000041	<0.0000030	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000156	<0.0000050	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.00327	<0.0000080	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00114	<0.00010	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	2.27	0.0039	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000062	0.000022	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.0000156	<0.0000040	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.000624	<0.000020	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0182	<0.0010	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.000404	<0.000050	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	1.86	<0.00050	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.0000595	<0.0000040	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	0.0000068	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.000866	<0.000015	0.000015	C067921
Dissolved Potassium (K)	mg/L	0.344	<0.0050	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000012	<0.000010	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.0861	<0.0012	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	0.615	0.00083	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.00759	<0.0000080	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	1.64	<0.0010	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000095	<0.0000008	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	0.000039	<0.000030	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000248	0.00000066	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000107	<0.0000050	0.0000050	C067921
RDL = Reportable Detection Limit					



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.000063	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000118	<0.0000080	0.0000080	C067921
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00532	0.00011	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000056	<0.0000030	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000160	<0.0000050	0.0000050	C069772
Total Barium (Ba)	mg/L	0.00344	<0.0000080	0.0000080	C069772
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00102	<0.00010	0.00010	C069772
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	2.32	0.0028	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000068	0.000029	0.000020	C069772
Total Cobalt (Co)	mg/L	0.0000777	<0.0000040	0.0000040	C069772
Total Copper (Cu)	mg/L	0.000709	<0.000020	0.000020	C069772
Total Iron (Fe)	mg/L	0.0738	<0.0010	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000033	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.000399	<0.000050	0.000050	C069772
Total Magnesium (Mg)	mg/L	1.92	<0.00050	0.00050	C069772
Total Manganese (Mn)	mg/L	0.00387	<0.0000040	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.000941	<0.000015	0.000015	C069772
Total Potassium (K)	mg/L	0.366	<0.0050	0.0050	C069772
Total Selenium (Se)	mg/L	0.000015	<0.000010	0.000010	C069772
Total Silicon (Si)	mg/L	0.0917	<0.0012	0.0012	C069772
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	0.643	<0.00050	0.00050	C069772
Total Strontium (Sr)	mg/L	0.00774	<0.0000080	0.0000080	C069772
Total Sulphur (S)	mg/L	1.63	<0.0010	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000125	<0.0000008	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000087	0.000040	0.000030	C069772
RDL = Reportable Detection Limit					



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000390	<0.0000005	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000234	<0.0000050	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.000127	0.000774	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000159	<0.0000080	0.0000080	C069772
RDL = Reportable Detection Limit					



GENERAL COMMENTS

Sample DRD995 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD996 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD997 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD998 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD999 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRE000 [TB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Results relate only to the items tested.



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C056154	Turbidity	2025/08/20			101	80 - 120	<0.10	NTU	NC	20		
C057038	Total Dissolved Solids	2025/08/22	95	80 - 120	98	80 - 120	<10	mg/L	6.5	20		
C057050	Total Suspended Solids	2025/08/21	95	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C057521	Strong Acid Dissoc. Cyanide (CN)	2025/08/22	109	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20		
C057532	Weak Acid Dissoc. Cyanide (CN)	2025/08/22	108	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
C057536	Free Free Cyanide	2025/08/22	107	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20		
C058013	Dissolved Nitrate plus Nitrite (N)	2025/08/21	105	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20		
C058013	Dissolved Nitrite (N)	2025/08/21	108	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C058130	Total Sulphide	2025/08/23	98	80 - 120	93	80 - 120	<0.0018	mg/L	NC	20		
C058135	Total Sulphide	2025/08/23	97	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C058182	Chloride (Cl)	2025/08/21	NC	80 - 120	100	80 - 120	<0.50	mg/L	1.6	20		
C058182	Sulphate (SO4)	2025/08/21	NC	80 - 120	104	80 - 120	<0.50	mg/L	1.7	20		
C058458	Reactive Silica	2025/08/21	91	80 - 120	106	80 - 120	<0.050	mg/L	4.0	20		
C058480	Chloride (Cl)	2025/08/21	104	80 - 120	101	80 - 120	<0.50	mg/L	4.6	20		
C058480	Sulphate (SO4)	2025/08/21	118	80 - 120	104	80 - 120	<0.50	mg/L	2.0	20		
C058637	Total Nitrogen (N)	2025/08/22	111	80 - 120	101	80 - 120	<0.020	mg/L	2.2	20	107	80 - 120
C058640	Total Nitrogen (N)	2025/08/25	109	80 - 120	102	80 - 120	<0.020	mg/L	6.9	20	105	80 - 120
C058642	Dissolved Phosphorus (P)	2025/08/25	99	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C058883	Total Phosphorus (P)	2025/08/25	102	80 - 120	97	80 - 120	<0.0010	mg/L	3.3	20	88	80 - 120
C059037	Fluoride (F)	2025/08/22	97	80 - 120	95	80 - 120	<0.010	mg/L	NC	20		
C059041	Alkalinity (PP as CaCO3)	2025/08/22					<0.50	mg/L	NC	20		
C059041	Alkalinity (Total as CaCO3)	2025/08/22			95	80 - 120	0.84, RDL=0.50 (1)	mg/L	7.4	20		
C059041	Bicarbonate (HCO3)	2025/08/22					1.02, RDL=0.50	mg/L	7.4	20		
C059041	Carbonate (CO3)	2025/08/22					<0.50	mg/L	NC	20		
C059041	Hydroxide (OH)	2025/08/22					<0.50	mg/L	NC	20		
C059043	pH	2025/08/22			100	97 - 103			0.37	N/A		
C059044	Conductivity	2025/08/22			101	90 - 110	<2.0	uS/cm	NC	10		
C059351	Orthophosphate (P)	2025/08/22	110	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20		
C059356	Orthophosphate (P)	2025/08/22	94	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		
C061056	Total Ammonia (N)	2025/08/25	NC	80 - 120	104	80 - 120	<0.0050	mg/L	0.049	20		



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C061058	Total Ammonia (N)	2025/08/25	103	80 - 120	103	80 - 120	<0.0050	mg/L	NC	20		
C062403	Dissolved Mercury (Hg)	2025/08/26	91	80 - 120	96	80 - 120	<0.0000001	mg/L	19	25		
C062902	Total Organic Carbon (C)	2025/08/26	100	75 - 125	99	80 - 120	<0.50	mg/L	NC	20		
C063266	Total Mercury (Hg)	2025/08/26	72 (2)	80 - 120	85	80 - 120	<0.0000001	mg/L	9.0	25		
C064358	Dissolved Organic Carbon (C)	2025/08/27	103	75 - 125	104	80 - 120	<0.50	mg/L	1.7	20		
C067921	Dissolved Aluminum (Al)	2025/09/03	96	80 - 120	97	80 - 120	<0.00010	mg/L	4.2	40		
C067921	Dissolved Antimony (Sb)	2025/09/03	105	80 - 120	105	80 - 120	<0.0000030	mg/L	4.2	40		
C067921	Dissolved Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	40		
C067921	Dissolved Barium (Ba)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000080	mg/L	0.49	40		
C067921	Dissolved Beryllium (Be)	2025/09/03	98	80 - 120	100	80 - 120	<0.0000015	mg/L	3.7	40		
C067921	Dissolved Bismuth (Bi)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000010	mg/L	NC	40		
C067921	Dissolved Boron (B)	2025/09/03	101	80 - 120	102	80 - 120	<0.00010	mg/L	3.0	40		
C067921	Dissolved Cadmium (Cd)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000030	mg/L	7.4	40		
C067921	Dissolved Calcium (Ca)	2025/09/03	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.19	40		
C067921	Dissolved Chromium (Cr)	2025/09/03	101	80 - 120	102	80 - 120	<0.000020	mg/L	9.2	40		
C067921	Dissolved Cobalt (Co)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000040	mg/L	5.7	40		
C067921	Dissolved Copper (Cu)	2025/09/03	99	80 - 120	100	80 - 120	<0.000020	mg/L	1.7	40		
C067921	Dissolved Iron (Fe)	2025/09/03	101	80 - 120	102	80 - 120	<0.0010	mg/L	17	40		
C067921	Dissolved Lead (Pb)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000030	mg/L	NC	40		
C067921	Dissolved Lithium (Li)	2025/09/03	96	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	40		
C067921	Dissolved Magnesium (Mg)	2025/09/03	92	80 - 120	99	80 - 120	<0.00050	mg/L	0.39	40		
C067921	Dissolved Manganese (Mn)	2025/09/03	101	80 - 120	101	80 - 120	<0.0000040	mg/L	4.7	40		
C067921	Dissolved Molybdenum (Mo)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000050	mg/L	4.2	40		
C067921	Dissolved Nickel (Ni)	2025/09/03	99	80 - 120	100	80 - 120	<0.000015	mg/L	0.98	40		
C067921	Dissolved Potassium (K)	2025/09/03	102	80 - 120	103	80 - 120	<0.0050	mg/L	0.60	40		
C067921	Dissolved Selenium (Se)	2025/09/03	98	80 - 120	98	80 - 120	<0.000010	mg/L	3.2	40		
C067921	Dissolved Silicon (Si)	2025/09/03	95	80 - 120	97	80 - 120	<0.0012	mg/L	3.9	40		
C067921	Dissolved Silver (Ag)	2025/09/03	106	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	40		
C067921	Dissolved Sodium (Na)	2025/09/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	0.053	40		
C067921	Dissolved Strontium (Sr)	2025/09/03	NC	80 - 120	102	80 - 120	<0.0000080	mg/L	0.22	40		
C067921	Dissolved Sulphur (S)	2025/09/03	95	80 - 120	98	80 - 120	<0.0010	mg/L	1.2	40		



Bureau Veritas Job #: C571520
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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C067921	Dissolved Thallium (Tl)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000008	mg/L	6.7	40		
C067921	Dissolved Tin (Sn)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	40		
C067921	Dissolved Titanium (Ti)	2025/09/03	100	80 - 120	100	80 - 120	<0.000030	mg/L	NC	40		
C067921	Dissolved Uranium (U)	2025/09/03	95	80 - 120	94	80 - 120	<0.0000005	mg/L	2.7	40		
C067921	Dissolved Vanadium (V)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000050	mg/L	4.6	40		
C067921	Dissolved Zinc (Zn)	2025/09/03	97	80 - 120	99	80 - 120	<0.000060	mg/L	0.37	40		
C067921	Dissolved Zirconium (Zr)	2025/09/03	94	80 - 120	95	80 - 120	<0.0000080	mg/L	2.7	40		
C069772	Total Aluminum (Al)	2025/09/03	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Antimony (Sb)	2025/09/03	105	80 - 120	107	80 - 120	<0.0000030	mg/L	16	40		
C069772	Total Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Barium (Ba)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Beryllium (Be)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000015	mg/L	NC	40		
C069772	Total Bismuth (Bi)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000010	mg/L	NC	40		
C069772	Total Boron (B)	2025/09/03	105	80 - 120	102	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Cadmium (Cd)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Calcium (Ca)	2025/09/03	102	80 - 120	101	80 - 120	<0.0020	mg/L	25	40		
C069772	Total Chromium (Cr)	2025/09/03	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Cobalt (Co)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000040	mg/L	NC	40		
C069772	Total Copper (Cu)	2025/09/03	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Iron (Fe)	2025/09/03	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Lead (Pb)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Lithium (Li)	2025/09/03	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	40		
C069772	Total Magnesium (Mg)	2025/09/03	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Manganese (Mn)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000040	mg/L	21	40		
C069772	Total Molybdenum (Mo)	2025/09/03	105	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Nickel (Ni)	2025/09/03	101	80 - 120	102	80 - 120	<0.000015	mg/L	NC	40		
C069772	Total Potassium (K)	2025/09/03	104	80 - 120	104	80 - 120	<0.0050	mg/L	NC	40		
C069772	Total Selenium (Se)	2025/09/03	100	80 - 120	98	80 - 120	<0.000010	mg/L	NC	40		
C069772	Total Silicon (Si)	2025/09/03	94	80 - 120	94	80 - 120	<0.0012	mg/L	NC	40		
C069772	Total Silver (Ag)	2025/09/03	107	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	40		
C069772	Total Sodium (Na)	2025/09/03	103	80 - 120	102	80 - 120	<0.00050	mg/L	NC	40		



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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C069772	Total Strontium (Sr)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Sulphur (S)	2025/09/03	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Thallium (Tl)	2025/09/03	106	80 - 120	106	80 - 120	<0.0000008	mg/L	NC	40		
C069772	Total Tin (Sn)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000050	mg/L	1.1	40		
C069772	Total Titanium (Ti)	2025/09/03	100	80 - 120	101	80 - 120	<0.000030	mg/L	25	40		
C069772	Total Uranium (U)	2025/09/03	95	80 - 120	96	80 - 120	<0.0000005	mg/L	NC	40		
C069772	Total Vanadium (V)	2025/09/03	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Zinc (Zn)	2025/09/03	98	80 - 120	99	80 - 120	<0.000060	mg/L	1.0	40		
C069772	Total Zirconium (Zr)	2025/09/03	98	80 - 120	95	80 - 120	<0.0000080	mg/L	NC	40		
C095968	Radium 226	2025/09/19			97	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Method blank exceeds acceptance limits, 2x RDL acceptable for low level analysis

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

CHAIN OF CUSTODY RECORD

CB71520

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #	C41450	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4	Project	August AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name		COC #:	Project Manager:
Fax:	(604) 681-8209	Fax:		Title #			
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Sampled By			

Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:		
☐ ATI ☐ CCME ☐ Other:				Metals Field Filtered ? (Y/N)										Please provide advance notice for rush projects.		
				AEMP - Routine Parameters AEMP - Nutrients AEMP - Other Conventional Unintended in Water Radium-226 Low Level Low Level Total Metals with CV Hg Low Level D. Metals w/ CV Hg-Dis Un-ionized ammonia Field pH Field Temp										Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission): Date Rushed: Rush Confirmation Number:		
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																
Sample Barcode Label	Sample (Location) Identifier	Date Sampled	Time Sampled	Matrix											# of Bottles	Comments
1	BRP-38-1	Aug 16, 2025	13:20	Water	✓	✓	✓	✓	✓	✓	✓	✓	7.54	13.79	19	
2	BRP-38-2	1	12:30	1	✓	✓	✓	✓	✓	✓	✓	✓	7.47	13.64	1	
3	BRP-38-3	1	9:40	1	✓	✓	✓	✓	✓	✓	✓	✓	7.71	13.37	1	
4	BRP-38-4	1	11:35	1	✓	✓	✓	✓	✓	✓	✓	✓	7.47	13.54	1	
5	BRP-38-5	1	10:45	1	✓	✓	✓	✓	✓	✓	✓	✓	7.49	13.46	1	
6	TB	1	00:00	1	✓	✓	✓	✓	✓	✓	✓	✓				
7																
8																
9																
10																

Received in Yellowknife

By: J. Heman

AUG 18 2025

Temp: Sep. Agn

CS: Ice:

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)		Time		RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)		Time		# jars used and not submitted		Laboratory Use Only	
Adam Feldberg		25/08/18		8:00		J. Heman		25/08/18		15:00				Time Signature: Temperature (°C) on Receipt: See Act R Country Seal intact on Cooler? ☐ Yes ☐ No	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORY-RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

* ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

White: Bureau Veritas Yellow: Client



EYK-2025-08-055



Your P.O. #: 470000200
Your Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/22
Report #: R3712881
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	6	N/A	2025/08/21	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	6	N/A	2025/08/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	6	N/A	2025/08/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	6	N/A	2025/08/27	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	6	N/A	2025/08/22	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	6	N/A	2025/08/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	6	N/A	2025/08/23		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	6	N/A	2025/09/04	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	6	N/A	2025/09/04	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	6	N/A	2025/08/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	6	2025/08/26	2025/08/26	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	6	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	6	N/A	2025/09/03	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	5	N/A	2025/08/25		Auto Calc
Ammonia-N Low Level (Preserved) (1)	6	N/A	2025/08/25	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	6	N/A	2025/08/22		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	6	N/A	2025/08/21	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	6	2025/08/20	2025/08/22		Auto Calc
pH @25°C (1, 6)	6	N/A	2025/08/22	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	5	N/A	2025/08/20	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	6	N/A	2025/08/22	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/08/21	2025/08/23	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	3	2025/08/22	2025/08/23	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	6	N/A	2025/08/21	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	6	2025/08/21	2025/08/22	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	5	N/A	2025/08/20	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	5	N/A	2025/08/22		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/08/25		Auto Calc
Nitrogen (Total) (1)	5	2025/08/22	2025/08/22	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/08/22	2025/08/25	AB SOP-00093	SM 24 4500-N C m



Your P.O. #: 470000200
Your Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/22
Report #: R3712881
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Carbon (Total Organic) (1, 8)	6	N/A	2025/08/26	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	6	2025/08/22	2025/08/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	6	2025/08/22	2025/08/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	6	2025/08/21	2025/08/21	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	6	N/A	2025/08/20	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	6	N/A	2025/09/19	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9

(4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.



Your P.O. #: 470000200
Your Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: 761493-05-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/09/22
Report #: R3712881
Version: 4 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C571520

Received: 2025/08/18, 13:50

- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD995		DRD996		DRD997		
Sampling Date		2025/08/16 13:20		2025/08/16 12:30		2025/08/16 09:40		
COC Number		761493-05-01		761493-05-01		761493-05-01		
	UNITS	BRP-38-1	QC Batch	BRP-38-2	QC Batch	BRP-38-3	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	13.4	C055338	13.4	C055338	13.4	0.50	C055338
Total Hardness (CaCO ₃)	mg/L	13.7	C055527	13.6	C055527	13.7	0.50	C055527
Dissolved Nitrate (N)	mg/L	0.016	C055865	<0.0030	C055865	<0.0030	0.0030	C055865
Nitrate (NO ₃)	mg/L	0.070	C055593	<0.013	C055593	<0.013	0.013	C055593
Nitrite (NO ₂)	mg/L	<0.0033	C055593	<0.0033	C055593	<0.0033	0.0033	C055593
Sulphide (as H ₂ S)	mg/L	<0.0020	C055724	<0.0020	C055724	0.0065	0.0020	C055724
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.23	C055880	0.26	C055880	0.24	0.020	C055880
Un-Ionized Ammonia	mg/L	<0.00050	C055861	<0.00050	C055861	<0.00050	0.00050	C055861
Field Parameters								
Field pH	pH	7.54	ONSITE	7.47	ONSITE	7.71	N/A	ONSITE
Field Temperature (Fd)	deg. C	13.79	ONSITE	13.64	ONSITE	13.39	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	32	C059044	32	C059044	32	2.0	C059044
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057521	<0.00050	C057521	<0.00050	0.00050	C057521
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057532	<0.00050	C057532	<0.00050	0.00050	C057532
Fluoride (F)	mg/L	0.022	C059037	0.022	C059037	0.022	0.010	C059037
Free Free Cyanide	mg/L	<0.00050	C057536	<0.00050	C057536	<0.00050	0.00050	C057536
Dissolved Organic Carbon (C)	mg/L	3.6	C064358	3.4	C064358	3.4	0.50	C064358
pH	pH	6.45	C059043	6.50	C059043	6.42	N/A	C059043
Reactive Silica	mg/L	0.13	C058458	0.17	C058458	0.20	0.050	C058458
Alkalinity (Total as CaCO ₃)	mg/L	8.59	C059041	8.25	C059041	8.49	0.50	C059041
Total Organic Carbon (C)	mg/L	3.0	C062902	3.0	C062902	3.1	0.50	C062902
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Bicarbonate (HCO ₃)	mg/L	10.5	C059041	10.1	C059041	10.4	0.50	C059041
Carbonate (CO ₃)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Hydroxide (OH)	mg/L	<0.50	C059041	<0.50	C059041	<0.50	0.50	C059041
Total Dissolved Solids	mg/L	36	C057038	24	C057038	32	10	C057038
Total Suspended Solids	mg/L	<1.0	C057050	<1.0	C057050	<1.0	1.0	C057050
Anions								
Orthophosphate (P)	mg/L	<0.0010	C059356	<0.0010	C059351	<0.0010	0.0010	C059356
RDL = Reportable Detection Limit N/A = Not Applicable								



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD995		DRD996		DRD997		
Sampling Date		2025/08/16 13:20		2025/08/16 12:30		2025/08/16 09:40		
COC Number		761493-05-01		761493-05-01		761493-05-01		
	UNITS	BRP-38-1	QC Batch	BRP-38-2	QC Batch	BRP-38-3	RDL	QC Batch
Total Sulphide	mg/L	<0.0018	C058130	<0.0018	C058130	0.0061	0.0018	C058130
Chloride (Cl)	mg/L	<0.50	C058480	<0.50	C058182	<0.50	0.50	C058182
Sulphate (SO4)	mg/L	4.9	C058480	4.9	C058182	4.8	0.50	C058182
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0017	C058642	<0.0010	C058642	0.0011	0.0010	C058642
Total Phosphorus (P)	mg/L	<0.0010 (1)	C058883	<0.0010	C058883	<0.0010 (1)	0.0010	C058883
Total Ammonia (N)	mg/L	<0.0050	C061058	<0.0050	C061056	0.0052	0.0050	C061056
Dissolved Nitrite (N)	mg/L	<0.0010	C058013	<0.0010	C058013	<0.0010	0.0010	C058013
Dissolved Nitrate plus Nitrite (N)	mg/L	0.016	C058013	<0.0030	C058013	<0.0030	0.0030	C058013
Total Nitrogen (N)	mg/L	0.25	C058637	0.26	C058637	0.24	0.020	C058637
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C095968	<0.0050	C095968	<0.0050	0.0050	C095968
Physical Properties								
Turbidity	NTU	<0.10	C056154	<0.10	C056154	<0.10	0.10	C056154
RDL = Reportable Detection Limit								
(1) TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.								



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD998		DRD999			DRE000		
Sampling Date		2025/08/16 11:35		2025/08/16 10:45			2025/08/16 00:00		
COC Number		761493-05-01		761493-05-01			761493-05-01		
	UNITS	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch	TB	RDL	QC Batch
Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	13.5	C055338	13.3	0.50	C055338	<0.50	0.50	C055338
Total Hardness (CaCO ₃)	mg/L	13.7	C055527	13.7	0.50	C055527	<0.50	0.50	C055527
Dissolved Nitrate (N)	mg/L	0.044	C055865	<0.0030	0.0030	C055865	<0.0030	0.0030	C055865
Nitrate (NO ₃)	mg/L	0.20	C055593	<0.013	0.013	C055593	<0.013	0.013	C055593
Nitrite (NO ₂)	mg/L	<0.0033	C055593	<0.0033	0.0033	C055593	<0.0033	0.0033	C055593
Sulphide (as H ₂ S)	mg/L	<0.0020	C055724	<0.0020	0.0020	C055724	<0.0020	0.0020	C055724
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.22	C055880	0.26	0.020	C055880	<0.020	0.020	C055880
Un-Ionized Ammonia	mg/L	<0.00050	C055861	<0.00050	0.00050	C055861			
Field Parameters									
Field pH	pH	7.47	ONSITE	7.49	N/A	ONSITE			
Field Temperature (Fd)	deg. C	13.54	ONSITE	13.46	N/A	ONSITE			
Misc. Inorganics									
Conductivity	uS/cm	32	C059044	33	2.0	C059044	<2.0	2.0	C059044
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057521	<0.00050	0.00050	C057521	<0.00050	0.00050	C057521
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C057532	<0.00050	0.00050	C057532	<0.00050	0.00050	C057532
Fluoride (F)	mg/L	0.022	C059037	0.023	0.010	C059037	<0.010	0.010	C059037
Free Free Cyanide	mg/L	<0.00050	C057536	<0.00050	0.00050	C057536	<0.00050	0.00050	C057536
Dissolved Organic Carbon (C)	mg/L	3.3	C064358	3.5	0.50	C064358	<0.50	0.50	C064358
pH	pH	6.42	C059043	6.41	N/A	C059043	5.39	N/A	C059043
Reactive Silica	mg/L	0.19	C058458	0.19	0.050	C058458	<0.050	0.050	C058458
Alkalinity (Total as CaCO ₃)	mg/L	8.56	C059041	8.48	0.50	C059041	0.62	0.50	C059041
Total Organic Carbon (C)	mg/L	3.1	C062902	3.1	0.50	C062902	<0.50	0.50	C062902
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Bicarbonate (HCO ₃)	mg/L	10.4	C059041	10.3	0.50	C059041	0.75	0.50	C059041
Carbonate (CO ₃)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Hydroxide (OH)	mg/L	<0.50	C059041	<0.50	0.50	C059041	<0.50	0.50	C059041
Total Dissolved Solids	mg/L	28	C057038	36	10	C057038	<10	10	C057038
Total Suspended Solids	mg/L	1.9	C057050	<1.0	1.0	C057050	<1.0	1.0	C057050
Anions									
Orthophosphate (P)	mg/L	<0.0010	C059356	<0.0010	0.0010	C059351	<0.0010	0.0010	C059356
RDL = Reportable Detection Limit									
N/A = Not Applicable									



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DRD998		DRD999			DRE000		
Sampling Date		2025/08/16 11:35		2025/08/16 10:45			2025/08/16 00:00		
COC Number		761493-05-01		761493-05-01			761493-05-01		
	UNITS	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch	TB	RDL	QC Batch
Total Sulphide	mg/L	<0.0018	C058135	<0.0018	0.0018	C058135	<0.0018	0.0018	C058135
Chloride (Cl)	mg/L	<0.50	C058182	<0.50	0.50	C058182	<0.50	0.50	C058182
Sulphate (SO4)	mg/L	4.7	C058182	4.6	0.50	C058182	<0.50	0.50	C058182
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C058642	<0.0010	0.0010	C058642	<0.0010	0.0010	C058642
Total Phosphorus (P)	mg/L	0.0015	C058883	<0.0010	0.0010	C058883	<0.0010	0.0010	C058883
Total Ammonia (N)	mg/L	<0.0050	C061056	<0.0050	0.0050	C061056	<0.0050	0.0050	C061056
Dissolved Nitrite (N)	mg/L	<0.0010	C058013	<0.0010	0.0010	C058013	<0.0010	0.0010	C058013
Dissolved Nitrate plus Nitrite (N)	mg/L	0.044	C058013	<0.0030	0.0030	C058013	<0.0030	0.0030	C058013
Total Nitrogen (N)	mg/L	0.26	C058640	0.26	0.020	C058637	<0.020	0.020	C058637
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	C095968	<0.0050	0.0050	C095968	<0.0050	0.0050	C095968
Physical Properties									
Turbidity	NTU	<0.10	C056154	<0.10	0.10	C056154	<0.10	0.10	C056154
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998	DRD999		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35	2025/08/16 10:45		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000109	0.00000083	0.00000091	0.00000057	0.00000068	0.00000010	C063266
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000051	0.00000104	0.00000049	0.00000073	0.00000052	0.00000010	C062403
RDL = Reportable Detection Limit								

Bureau Veritas ID		DRE000		
Sampling Date		2025/08/16 00:00		
COC Number		761493-05-01		
	UNITS	TB	RDL	QC Batch

Elements				
Total Mercury (Hg)	mg/L	<0.0000001	0.00000010	C063266
Lab Filtered Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000001	0.00000010	C062403
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00196	0.00202	0.00192	0.00198	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000050	0.0000038	0.0000032	0.0000045	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000158	0.000162	0.000164	0.000159	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.00327	0.00327	0.00330	0.00329	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00114	0.00119	0.00114	0.00126	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	2.26	2.27	2.26	2.28	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000047	0.000057	0.000047	0.000053	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.0000146	0.0000159	0.0000153	0.0000145	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.000619	0.000625	0.000614	0.000628	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0185	0.0183	0.0191	0.0186	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.000413	0.000429	0.000419	0.000393	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	1.88	1.89	1.88	1.90	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.0000676	0.0000647	0.0000786	0.0000655	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000127	<0.0000050	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.000858	0.000849	0.000862	0.000879	0.000015	C067921
Dissolved Potassium (K)	mg/L	0.347	0.346	0.349	0.348	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000020	0.000014	0.000020	0.000011	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.0868	0.0867	0.0877	0.0870	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	0.623	0.623	0.617	0.627	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.00763	0.00764	0.00768	0.00760	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	1.66	1.67	1.65	1.68	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000113	0.00000094	0.00000093	0.00000100	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	<0.000030	0.000032	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000264	0.00000283	0.00000247	0.00000271	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000106	0.0000119	0.0000111	0.0000115	0.0000050	C067921
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.000060	<0.000060	0.000065	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000118	0.0000118	0.0000116	0.0000119	0.0000080	C067921
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00576	0.00569	0.00525	0.00551	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000031	0.0000032	0.0000038	0.0000040	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000170	0.000166	0.000169	0.000166	0.0000050	C069772
Total Barium (Ba)	mg/L	0.00349	0.00340	0.00337	0.00345	0.0000080	C069772
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00098	0.00098	0.00097	0.00098	0.00010	C069772
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	2.31	2.29	2.29	2.31	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000061	0.000063	0.000076	0.000059	0.000020	C069772
Total Cobalt (Co)	mg/L	0.0000882	0.0000795	0.0000818	0.0000872	0.0000040	C069772
Total Copper (Cu)	mg/L	0.000708	0.000691	0.000698	0.000716	0.000020	C069772
Total Iron (Fe)	mg/L	0.0819	0.0765	0.0747	0.0801	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000032	<0.0000030	0.0000030	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.000400	0.000415	0.000403	0.000383	0.000050	C069772
Total Magnesium (Mg)	mg/L	1.92	1.92	1.93	1.93	0.00050	C069772
Total Manganese (Mn)	mg/L	0.00446	0.00412	0.00416	0.00441	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.000935	0.000900	0.000933	0.000930	0.000015	C069772
Total Potassium (K)	mg/L	0.377	0.368	0.366	0.366	0.0050	C069772
Total Selenium (Se)	mg/L	0.000016	0.000020	0.000023	0.000022	0.000010	C069772
Total Silicon (Si)	mg/L	0.0879	0.0877	0.0881	0.0866	0.0012	C069772
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	0.646	0.636	0.642	0.642	0.00050	C069772
Total Strontium (Sr)	mg/L	0.00791	0.00781	0.00776	0.00775	0.0000080	C069772
Total Sulphur (S)	mg/L	1.60	1.62	1.64	1.62	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000088	0.00000128	0.00000107	0.00000118	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000101	0.000073	0.000151	0.000128	0.000030	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD995	DRD996	DRD997	DRD998		
Sampling Date		2025/08/16 13:20	2025/08/16 12:30	2025/08/16 09:40	2025/08/16 11:35		
COC Number		761493-05-01	761493-05-01	761493-05-01	761493-05-01		
	UNITS	BRP-38-1	BRP-38-2	BRP-38-3	BRP-38-4	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000366	0.00000329	0.00000350	0.00000338	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000233	0.0000209	0.0000211	0.0000240	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.000135	0.000087	0.000077	0.000086	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000169	0.0000158	0.0000159	0.0000162	0.0000080	C069772
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00188	<0.00010	0.00010	C067921
Dissolved Antimony (Sb)	mg/L	0.0000041	<0.0000030	0.0000030	C067921
Dissolved Arsenic (As)	mg/L	0.000156	<0.0000050	0.0000050	C067921
Dissolved Barium (Ba)	mg/L	0.00327	<0.0000080	0.0000080	C067921
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	0.0000015	C067921
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	0.0000010	C067921
Dissolved Boron (B)	mg/L	0.00114	<0.00010	0.00010	C067921
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Calcium (Ca)	mg/L	2.27	0.0039	0.0020	C067921
Dissolved Chromium (Cr)	mg/L	0.000062	0.000022	0.000020	C067921
Dissolved Cobalt (Co)	mg/L	0.0000156	<0.0000040	0.0000040	C067921
Dissolved Copper (Cu)	mg/L	0.000624	<0.000020	0.000020	C067921
Dissolved Iron (Fe)	mg/L	0.0182	<0.0010	0.0010	C067921
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	0.0000030	C067921
Dissolved Lithium (Li)	mg/L	0.000404	<0.000050	0.000050	C067921
Dissolved Magnesium (Mg)	mg/L	1.86	<0.00050	0.00050	C067921
Dissolved Manganese (Mn)	mg/L	0.0000595	<0.0000040	0.0000040	C067921
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	0.0000068	0.0000050	C067921
Dissolved Nickel (Ni)	mg/L	0.000866	<0.000015	0.000015	C067921
Dissolved Potassium (K)	mg/L	0.344	<0.0050	0.0050	C067921
Dissolved Selenium (Se)	mg/L	0.000012	<0.000010	0.000010	C067921
Dissolved Silicon (Si)	mg/L	0.0861	<0.0012	0.0012	C067921
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	0.0000020	C067921
Dissolved Sodium (Na)	mg/L	0.615	0.00083	0.00050	C067921
Dissolved Strontium (Sr)	mg/L	0.00759	<0.0000080	0.0000080	C067921
Dissolved Sulphur (S)	mg/L	1.64	<0.0010	0.0010	C067921
Dissolved Thallium (Tl)	mg/L	0.00000095	<0.0000008	0.00000080	C067921
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	0.0000050	C067921
Dissolved Titanium (Ti)	mg/L	0.000039	<0.000030	0.000030	C067921
Dissolved Uranium (U)	mg/L	0.00000248	0.00000066	0.00000050	C067921
Dissolved Vanadium (V)	mg/L	0.0000107	<0.0000050	0.0000050	C067921
RDL = Reportable Detection Limit					



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.000063	<0.000060	0.000060	C067921
Dissolved Zirconium (Zr)	mg/L	0.0000118	<0.0000080	0.0000080	C067921
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00532	0.00011	0.00010	C069772
Total Antimony (Sb)	mg/L	0.0000056	<0.0000030	0.0000030	C069772
Total Arsenic (As)	mg/L	0.000160	<0.0000050	0.0000050	C069772
Total Barium (Ba)	mg/L	0.00344	<0.0000080	0.0000080	C069772
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	0.0000015	C069772
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	0.0000010	C069772
Total Boron (B)	mg/L	0.00102	<0.00010	0.00010	C069772
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	0.0000030	C069772
Total Calcium (Ca)	mg/L	2.32	0.0028	0.0020	C069772
Total Chromium (Cr)	mg/L	0.000068	0.000029	0.000020	C069772
Total Cobalt (Co)	mg/L	0.0000777	<0.0000040	0.0000040	C069772
Total Copper (Cu)	mg/L	0.000709	<0.000020	0.000020	C069772
Total Iron (Fe)	mg/L	0.0738	<0.0010	0.0010	C069772
Total Lead (Pb)	mg/L	0.0000033	<0.0000030	0.0000030	C069772
Total Lithium (Li)	mg/L	0.000399	<0.000050	0.000050	C069772
Total Magnesium (Mg)	mg/L	1.92	<0.00050	0.00050	C069772
Total Manganese (Mn)	mg/L	0.00387	<0.0000040	0.0000040	C069772
Total Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000050	C069772
Total Nickel (Ni)	mg/L	0.000941	<0.000015	0.000015	C069772
Total Potassium (K)	mg/L	0.366	<0.0050	0.0050	C069772
Total Selenium (Se)	mg/L	0.000015	<0.000010	0.000010	C069772
Total Silicon (Si)	mg/L	0.0917	<0.0012	0.0012	C069772
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	0.0000020	C069772
Total Sodium (Na)	mg/L	0.643	<0.00050	0.00050	C069772
Total Strontium (Sr)	mg/L	0.00774	<0.0000080	0.0000080	C069772
Total Sulphur (S)	mg/L	1.63	<0.0010	0.0010	C069772
Total Thallium (Tl)	mg/L	0.00000125	<0.0000008	0.00000080	C069772
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	0.0000050	C069772
Total Titanium (Ti)	mg/L	0.000087	0.000040	0.000030	C069772
RDL = Reportable Detection Limit					



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DRD999	DRE000		
Sampling Date		2025/08/16 10:45	2025/08/16 00:00		
COC Number		761493-05-01	761493-05-01		
	UNITS	BRP-38-5	TB	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000390	<0.0000005	0.00000050	C069772
Total Vanadium (V)	mg/L	0.0000234	<0.0000050	0.0000050	C069772
Total Zinc (Zn)	mg/L	0.000127	0.000774	0.000060	C069772
Total Zirconium (Zr)	mg/L	0.0000159	<0.0000080	0.0000080	C069772
RDL = Reportable Detection Limit					



GENERAL COMMENTS

Sample DRD995 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD996 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD997 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD998 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRD999 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample DRE000 [TB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Results relate only to the items tested.



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C056154	Turbidity	2025/08/20			101	80 - 120	<0.10	NTU	NC	20		
C057038	Total Dissolved Solids	2025/08/22	95	80 - 120	98	80 - 120	<10	mg/L	6.5	20		
C057050	Total Suspended Solids	2025/08/21	95	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C057521	Strong Acid Dissoc. Cyanide (CN)	2025/08/22	109	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20		
C057532	Weak Acid Dissoc. Cyanide (CN)	2025/08/22	108	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
C057536	Free Free Cyanide	2025/08/22	107	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20		
C058013	Dissolved Nitrate plus Nitrite (N)	2025/08/21	105	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20		
C058013	Dissolved Nitrite (N)	2025/08/21	108	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C058130	Total Sulphide	2025/08/23	98	80 - 120	93	80 - 120	<0.0018	mg/L	NC	20		
C058135	Total Sulphide	2025/08/23	97	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C058182	Chloride (Cl)	2025/08/21	NC	80 - 120	100	80 - 120	<0.50	mg/L	1.6	20		
C058182	Sulphate (SO4)	2025/08/21	NC	80 - 120	104	80 - 120	<0.50	mg/L	1.7	20		
C058458	Reactive Silica	2025/08/21	91	80 - 120	106	80 - 120	<0.050	mg/L	4.0	20		
C058480	Chloride (Cl)	2025/08/21	104	80 - 120	101	80 - 120	<0.50	mg/L	4.6	20		
C058480	Sulphate (SO4)	2025/08/21	118	80 - 120	104	80 - 120	<0.50	mg/L	2.0	20		
C058637	Total Nitrogen (N)	2025/08/22	111	80 - 120	101	80 - 120	<0.020	mg/L	2.2	20	107	80 - 120
C058640	Total Nitrogen (N)	2025/08/25	109	80 - 120	102	80 - 120	<0.020	mg/L	6.9	20	105	80 - 120
C058642	Dissolved Phosphorus (P)	2025/08/25	99	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C058883	Total Phosphorus (P)	2025/08/25	102	80 - 120	97	80 - 120	<0.0010	mg/L	3.3	20	88	80 - 120
C059037	Fluoride (F)	2025/08/22	97	80 - 120	95	80 - 120	<0.010	mg/L	NC	20		
C059041	Alkalinity (PP as CaCO3)	2025/08/22					<0.50	mg/L	NC	20		
C059041	Alkalinity (Total as CaCO3)	2025/08/22			95	80 - 120	0.84, RDL=0.50 (1)	mg/L	7.4	20		
C059041	Bicarbonate (HCO3)	2025/08/22					1.02, RDL=0.50	mg/L	7.4	20		
C059041	Carbonate (CO3)	2025/08/22					<0.50	mg/L	NC	20		
C059041	Hydroxide (OH)	2025/08/22					<0.50	mg/L	NC	20		
C059043	pH	2025/08/22			100	97 - 103			0.37	N/A		
C059044	Conductivity	2025/08/22			101	90 - 110	<2.0	uS/cm	NC	10		
C059351	Orthophosphate (P)	2025/08/22	110	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20		
C059356	Orthophosphate (P)	2025/08/22	94	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		
C061056	Total Ammonia (N)	2025/08/25	NC	80 - 120	104	80 - 120	<0.0050	mg/L	0.049	20		



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C061058	Total Ammonia (N)	2025/08/25	103	80 - 120	103	80 - 120	<0.0050	mg/L	NC	20		
C062403	Dissolved Mercury (Hg)	2025/08/26	91	80 - 120	96	80 - 120	<0.0000001	mg/L	19	25		
C062902	Total Organic Carbon (C)	2025/08/26	100	75 - 125	99	80 - 120	<0.50	mg/L	NC	20		
C063266	Total Mercury (Hg)	2025/08/26	72 (2)	80 - 120	85	80 - 120	<0.0000001	mg/L	9.0	25		
C064358	Dissolved Organic Carbon (C)	2025/08/27	103	75 - 125	104	80 - 120	<0.50	mg/L	1.7	20		
C067921	Dissolved Aluminum (Al)	2025/09/03	96	80 - 120	97	80 - 120	<0.00010	mg/L	4.2	40		
C067921	Dissolved Antimony (Sb)	2025/09/03	105	80 - 120	105	80 - 120	<0.0000030	mg/L	4.2	40		
C067921	Dissolved Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	40		
C067921	Dissolved Barium (Ba)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000080	mg/L	0.49	40		
C067921	Dissolved Beryllium (Be)	2025/09/03	98	80 - 120	100	80 - 120	<0.0000015	mg/L	3.7	40		
C067921	Dissolved Bismuth (Bi)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000010	mg/L	NC	40		
C067921	Dissolved Boron (B)	2025/09/03	101	80 - 120	102	80 - 120	<0.00010	mg/L	3.0	40		
C067921	Dissolved Cadmium (Cd)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000030	mg/L	7.4	40		
C067921	Dissolved Calcium (Ca)	2025/09/03	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.19	40		
C067921	Dissolved Chromium (Cr)	2025/09/03	101	80 - 120	102	80 - 120	<0.000020	mg/L	9.2	40		
C067921	Dissolved Cobalt (Co)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000040	mg/L	5.7	40		
C067921	Dissolved Copper (Cu)	2025/09/03	99	80 - 120	100	80 - 120	<0.000020	mg/L	1.7	40		
C067921	Dissolved Iron (Fe)	2025/09/03	101	80 - 120	102	80 - 120	<0.0010	mg/L	17	40		
C067921	Dissolved Lead (Pb)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000030	mg/L	NC	40		
C067921	Dissolved Lithium (Li)	2025/09/03	96	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	40		
C067921	Dissolved Magnesium (Mg)	2025/09/03	92	80 - 120	99	80 - 120	<0.00050	mg/L	0.39	40		
C067921	Dissolved Manganese (Mn)	2025/09/03	101	80 - 120	101	80 - 120	<0.0000040	mg/L	4.7	40		
C067921	Dissolved Molybdenum (Mo)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000050	mg/L	4.2	40		
C067921	Dissolved Nickel (Ni)	2025/09/03	99	80 - 120	100	80 - 120	<0.000015	mg/L	0.98	40		
C067921	Dissolved Potassium (K)	2025/09/03	102	80 - 120	103	80 - 120	<0.0050	mg/L	0.60	40		
C067921	Dissolved Selenium (Se)	2025/09/03	98	80 - 120	98	80 - 120	<0.000010	mg/L	3.2	40		
C067921	Dissolved Silicon (Si)	2025/09/03	95	80 - 120	97	80 - 120	<0.0012	mg/L	3.9	40		
C067921	Dissolved Silver (Ag)	2025/09/03	106	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	40		
C067921	Dissolved Sodium (Na)	2025/09/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	0.053	40		
C067921	Dissolved Strontium (Sr)	2025/09/03	NC	80 - 120	102	80 - 120	<0.0000080	mg/L	0.22	40		
C067921	Dissolved Sulphur (S)	2025/09/03	95	80 - 120	98	80 - 120	<0.0010	mg/L	1.2	40		



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C067921	Dissolved Thallium (Tl)	2025/09/03	107	80 - 120	106	80 - 120	<0.0000008	mg/L	6.7	40		
C067921	Dissolved Tin (Sn)	2025/09/03	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	40		
C067921	Dissolved Titanium (Ti)	2025/09/03	100	80 - 120	100	80 - 120	<0.000030	mg/L	NC	40		
C067921	Dissolved Uranium (U)	2025/09/03	95	80 - 120	94	80 - 120	<0.0000005	mg/L	2.7	40		
C067921	Dissolved Vanadium (V)	2025/09/03	99	80 - 120	98	80 - 120	<0.0000050	mg/L	4.6	40		
C067921	Dissolved Zinc (Zn)	2025/09/03	97	80 - 120	99	80 - 120	<0.000060	mg/L	0.37	40		
C067921	Dissolved Zirconium (Zr)	2025/09/03	94	80 - 120	95	80 - 120	<0.0000080	mg/L	2.7	40		
C069772	Total Aluminum (Al)	2025/09/03	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Antimony (Sb)	2025/09/03	105	80 - 120	107	80 - 120	<0.0000030	mg/L	16	40		
C069772	Total Arsenic (As)	2025/09/03	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Barium (Ba)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Beryllium (Be)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000015	mg/L	NC	40		
C069772	Total Bismuth (Bi)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000010	mg/L	NC	40		
C069772	Total Boron (B)	2025/09/03	105	80 - 120	102	80 - 120	<0.00010	mg/L	NC	40		
C069772	Total Cadmium (Cd)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Calcium (Ca)	2025/09/03	102	80 - 120	101	80 - 120	<0.0020	mg/L	25	40		
C069772	Total Chromium (Cr)	2025/09/03	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Cobalt (Co)	2025/09/03	102	80 - 120	103	80 - 120	<0.0000040	mg/L	NC	40		
C069772	Total Copper (Cu)	2025/09/03	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	40		
C069772	Total Iron (Fe)	2025/09/03	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Lead (Pb)	2025/09/03	99	80 - 120	100	80 - 120	<0.0000030	mg/L	NC	40		
C069772	Total Lithium (Li)	2025/09/03	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	40		
C069772	Total Magnesium (Mg)	2025/09/03	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	40		
C069772	Total Manganese (Mn)	2025/09/03	102	80 - 120	102	80 - 120	<0.0000040	mg/L	21	40		
C069772	Total Molybdenum (Mo)	2025/09/03	105	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Nickel (Ni)	2025/09/03	101	80 - 120	102	80 - 120	<0.000015	mg/L	NC	40		
C069772	Total Potassium (K)	2025/09/03	104	80 - 120	104	80 - 120	<0.0050	mg/L	NC	40		
C069772	Total Selenium (Se)	2025/09/03	100	80 - 120	98	80 - 120	<0.000010	mg/L	NC	40		
C069772	Total Silicon (Si)	2025/09/03	94	80 - 120	94	80 - 120	<0.0012	mg/L	NC	40		
C069772	Total Silver (Ag)	2025/09/03	107	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	40		
C069772	Total Sodium (Na)	2025/09/03	103	80 - 120	102	80 - 120	<0.00050	mg/L	NC	40		



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C069772	Total Strontium (Sr)	2025/09/03	100	80 - 120	101	80 - 120	<0.0000080	mg/L	NC	40		
C069772	Total Sulphur (S)	2025/09/03	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	40		
C069772	Total Thallium (Tl)	2025/09/03	106	80 - 120	106	80 - 120	<0.0000008	mg/L	NC	40		
C069772	Total Tin (Sn)	2025/09/03	100	80 - 120	98	80 - 120	<0.0000050	mg/L	1.1	40		
C069772	Total Titanium (Ti)	2025/09/03	100	80 - 120	101	80 - 120	<0.000030	mg/L	25	40		
C069772	Total Uranium (U)	2025/09/03	95	80 - 120	96	80 - 120	<0.0000005	mg/L	NC	40		
C069772	Total Vanadium (V)	2025/09/03	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	40		
C069772	Total Zinc (Zn)	2025/09/03	98	80 - 120	99	80 - 120	<0.000060	mg/L	1.0	40		
C069772	Total Zirconium (Zr)	2025/09/03	98	80 - 120	95	80 - 120	<0.0000080	mg/L	NC	40		
C095968	Radium 226	2025/09/19			97	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Bureau Veritas Job #: C571520
Report Date: 2025/09/22

WSP Canada Inc.
Client Project #: AUGUST AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

CHAIN OF CUSTODY RECORD

CB71520

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #	C41450	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #			
Address:	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4	Project	August AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name		COC #:	Project Manager:
Fax:	(604) 681-8209	Fax:		Title #			
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Sampled By			

Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:			
☐ ATI ☐ CCME ☐ Other:				Metals Field Filtered ? (Y/N) AEMP - Routine Parameters AEMP - Nutrients AEMP - Other Conventional Unintended in Water Radium-226 Low Level Low Level Total Metals with CV Hg Low Level D. Metals w/ CV Hg-Dis Un-ionized ammonia Field pH Field Temp										Please provide advance notice for rush projects. Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission): Date Rushed: Rush Confirmation Number:			
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS																	
Sample Barcode Label	Sample (Location) Identifier	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	AEMP - Routine Parameters	AEMP - Nutrients	AEMP - Other Conventional	Unintended in Water	Radium-226 Low Level	Low Level Total Metals with CV Hg	Low Level D. Metals w/ CV Hg-Dis	Un-ionized ammonia	Field pH	Field Temp	# of Bottles	Comments
1	BRP-38-1	Aug 16, 2025	13:20	Water		✓	✓	✓		✓	✓	✓	✓	7.54	13.79	19	
2	BRP-38-2	1	12:30	1		✓	✓	✓		✓	✓	✓	✓	7.47	13.64	1	
3	BRP-38-3	1	9:40	1		✓	✓	✓		✓	✓	✓	✓	7.71	13.37	1	
4	BRP-38-4	1	11:35	1		✓	✓	✓		✓	✓	✓	✓	7.47	13.54	1	
5	BRP-38-5	1	10:45	1		✓	✓	✓		✓	✓	✓	✓	7.49	13.46	1	
6	TB	1	00:00	1		✓	✓	✓		✓	✓	✓	✓			1	
7																	
8																	
9																	
10																	

Received in Yellowknife

By: J. Heman

AUG 18 2025

Temp: 16°C

CS: Ice

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
Adam Feldberg		25/08/18	8:00	J. Heman		25/08/18	15:00		Time Signature	Temperature (°C) on Receipt	Container Seal intact on Receipt?
										See Act R	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BV.COM/ENVIRONMENTAL-LABORATORY-RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

* ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

White: Bureau Veritas Yellow: Client



EYK-2025-08-055



Your P.O. #: 470000200
 Your Project #: SEPTEMBER AEMP PROGRAM
 Site Location: 176233659
 Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
 Park Place
 Suite 3400-666 Burrard St.
 VANCOUVER, BC
 CANADA V6C 2X8

Report Date: 2025/10/20
 Report #: R3723174
 Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Sample Matrix: Water
 # Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 2320 B m
Alkalinity - Low Level (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	9	N/A	2025/09/17	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	9	N/A	2025/09/18	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	9	N/A	2025/09/18	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/13	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/14	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/03	CAL SOP-00279	SM24th Ed. 5310 A, B
Conductivity @25C (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 2510 B m
Conductivity @25C (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 4500-F C m
Fluoride - Low Level (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	9	N/A	2025/09/18	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	3	N/A	2025/09/17		Auto Calc
Sulphide (as H2S) (1)	1	N/A	2025/09/18		Auto Calc
Sulphide (as H2S) (1)	5	N/A	2025/09/19		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	9	N/A	2025/09/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	9	N/A	2025/09/29	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	1	N/A	2025/10/20	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	8	N/A	2025/09/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/10/20	2025/10/20	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	8	2025/09/26	2025/09/26	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	1	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (1)	7	N/A	2025/09/27	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (1)	1	N/A	2025/09/29	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	2	N/A	2025/09/23	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	7	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	8	N/A	2025/09/18		Auto Calc
Ammonia-N Low Level (Preserved) (1)	9	N/A	2025/09/18	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	9	N/A	2025/09/17		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	9	N/A	2025/09/16	AB SOP-00091	SM 24 4500 NO3m



Your P.O. #: 470000200
Your Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/10/20
Report #: R3723174
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate (as N) (Low Level) (1)	9	2025/09/15	2025/09/17		Auto Calc
pH @25°C (1, 6)	2	N/A	2025/09/18	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (1, 6)	7	N/A	2025/09/19	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	8	N/A	2025/09/15	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	9	N/A	2025/09/17	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/09/16	2025/09/17	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	1	2025/09/17	2025/09/18	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	5	2025/09/18	2025/09/19	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	9	N/A	2025/09/18	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	3	2025/09/16	2025/09/17	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	6	2025/09/17	2025/09/18	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	8	N/A	2025/09/15	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	8	N/A	2025/09/18		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/09/19		Auto Calc
Nitrogen (Total) (1)	8	2025/09/17	2025/09/18	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/09/17	2025/09/19	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/10/14	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/10/15	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/09/17	CAL SOP-00279	SM24th Ed. 5310 A, B
Total Phosphorus Low Level Dissolved (1, 9)	8	2025/09/16	2025/09/19	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	1	2025/09/18	2025/09/19	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	9	2025/09/17	2025/09/17	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	9	2025/09/16	2025/09/16	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	9	N/A	2025/09/16	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	9	N/A	2025/10/16	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.



Your P.O. #: 470000200
Your Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/10/20
Report #: R3723174
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.



Your P.O. #: 470000200
Your Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
Park Place
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VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/10/20
Report #: R3723174
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C578064

Report Date: 2025/10/20

B2Gold Back River Corp.

Client Project #: SEPTEMBER AEMP PROGRAM

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW633			DSW634		
Sampling Date		2025/09/10 11:20			2025/09/10 12:40		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	70.8	0.50	C085513	58.6	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	74.6	0.50	C085512	61.7	0.50	C085512
Dissolved Nitrate (N)	mg/L	2.1	0.20	C086131	1.5	0.20	C086131
Nitrate (NO ₃)	mg/L	9.2	0.89	C085990	6.7	0.89	C085990
Nitrite (NO ₂)	mg/L	0.014	0.0033	C085990	0.016	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.45	0.20	C085520	0.43	0.20	C085520
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C086124	<0.00050	0.00050	C086124
Field Parameters							
Field pH	pH	6.85	N/A	ONSITE	6.91	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.17	N/A	ONSITE	8.23	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	190	2.0	C090059	150	2.0	C090059
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00110	0.00050	C089966	0.00080	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00053 (1)	0.00050	C089967	<0.00050 (1)	0.00050	C089967
Fluoride (F)	mg/L	0.024	0.010	C090048	0.023	0.010	C090048
Free Free Cyanide	mg/L	0.00082	0.00050	C089971	0.00069	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	4.0	0.20	C121931	4.3	0.20	C110740
pH	pH	5.95	N/A	C090054	5.95	N/A	C090054
Reactive Silica	mg/L	0.74	0.050	C090124	0.63	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	4.46	0.50	C090051	4.70	0.50	C090051
Total Organic Carbon (C)	mg/L	4.2	0.20	C123223	4.4	0.20	C123228
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Bicarbonate (HCO ₃)	mg/L	5.44	0.50	C090051	5.74	0.50	C090051
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Hydroxide (OH)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Total Dissolved Solids	mg/L	120	10	C086706	96	10	C086706
Total Suspended Solids	mg/L	1.3	1.0	C086710	1.8	1.0	C086710
RDL = Reportable Detection Limit N/A = Not Applicable (1) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW633			DSW634		
Sampling Date		2025/09/10 11:20			2025/09/10 12:40		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089333	<0.0010	0.0010	C089348
Total Sulphide	mg/L	<0.0018	0.0018	C087190	<0.0018	0.0018	C087195
Chloride (Cl)	mg/L	24	0.50	C089780	18	0.50	C089780
Sulphate (SO ₄)	mg/L	34	0.50	C089780	29	0.50	C089780
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0012	0.0010	C089245	0.0012	0.0010	C089245
Total Ammonia (N)	mg/L	0.30	0.0050	C090057	0.16	0.0050	C090057
Dissolved Nitrite (N)	mg/L	0.0044	0.0010	C087945	0.0048	0.0010	C087945
Dissolved Nitrate plus Nitrite (N)	mg/L	2.1	0.20	C087945	1.5	0.20	C087945
Total Nitrogen (N)	mg/L	2.5	0.10	C089585	1.9	0.020	C089594
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties							
Turbidity	NTU	0.14	0.10	C087321	0.14	0.10	C087321
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW635			DSW636		DSW637		
Sampling Date		2025/09/10 14:05			2025/09/11 09:15		2025/09/11 10:10		
COC Number		C#764869-01-01			C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	60.5	0.50	C085513	14.2	C085513	14.1	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	64.3	0.50	C085512	14.7	C085512	15.0	0.50	C085512
Dissolved Nitrate (N)	mg/L	1.6	0.20	C086131	0.0031	C086131	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	7.3	0.89	C085990	0.014	C085990	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	0.013	0.0033	C085990	<0.0033	C085990	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874	<0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.46	0.20	C085520	0.26	C085520	0.30	0.020	C085520
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C086124	<0.00050	C086124	<0.00050	0.00050	C086124

Field Parameters									
Field pH	pH	6.87	N/A	ONSITE	7.40	ONSITE	7.33	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.22	N/A	ONSITE	7.72	ONSITE	7.72	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	160	2.0	C090059	33	C090059	33	2.0	C087597
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00076	0.00050	C089966	0.00067 (1)	C089966	0.00070 (1)	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050 (2)	0.00050	C089967	<0.00050 (2)	C089967	<0.00050 (2)	0.00050	C089967
Fluoride (F)	mg/L	0.024	0.010	C090048	0.019	C090048	0.020	0.010	C087589
Free Free Cyanide	mg/L	0.00069	0.00050	C089971	0.00068	C089971	0.00078	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	4.0	0.20	C123220	3.4	C110740	3.7	0.20	C110740
pH	pH	5.99	N/A	C090054	6.06	C090054	6.04	N/A	C087583
Reactive Silica	mg/L	0.66	0.050	C090124	0.22	C090124	0.21	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	4.74	0.50	C090051	9.13	C090051	9.10	0.50	C087574
Total Organic Carbon (C)	mg/L	23	0.20	C087888	3.9	C123223	3.7	0.20	C123223
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Bicarbonate (HCO ₃)	mg/L	5.78	0.50	C090051	11.1	C090051	11.1	0.50	C087574
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Hydroxide (OH)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Total Dissolved Solids	mg/L	96	10	C086706	20	C088285	16	10	C088285
Total Suspended Solids	mg/L	1.6	1.0	C086710	1.5	C086712	1.6	1.0	C086712

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(2) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW635			DSW636		DSW637		
Sampling Date		2025/09/10 14:05			2025/09/11 09:15		2025/09/11 10:10		
COC Number		C#764869-01-01			C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089333	<0.0010	C089348	<0.0010	0.0010	C089307
Total Sulphide	mg/L	<0.0018	0.0018	C089533	<0.0018	C091228	<0.0018	0.0018	C087195
Chloride (Cl)	mg/L	19	0.50	C089780	0.61	C089780	0.95	0.50	C089780
Sulphate (SO4)	mg/L	30	0.50	C089780	5.1	C089780	5.0	0.50	C089780
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841	<0.0010	C087841	<0.0010	0.0010	C090358
Total Phosphorus (P)	mg/L	0.0015	0.0010	C089245	0.0020	C089245	0.0017	0.0010	C089245
Total Ammonia (N)	mg/L	0.19	0.0050	C090057	<0.0050	C090057	<0.0050	0.0050	C090057
Dissolved Nitrite (N)	mg/L	0.0038	0.0010	C087945	<0.0010	C087945	<0.0010	0.0010	C087460
Dissolved Nitrate plus Nitrite (N)	mg/L	1.6	0.20	C087945	0.0031	C087945	<0.0030	0.0030	C087460
Total Nitrogen (N)	mg/L	2.1	0.040	C089585	0.26	C089585	0.30	0.020	C089585
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	0.0050	C129626	<0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties									
Turbidity	NTU	0.15	0.10	C087321	<0.10	C087321	0.13	0.10	C087321
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW638		DSW639		DSW640		
Sampling Date		2025/09/11 11:05		2025/09/11 12:25		2025/09/11 13:00		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch

Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	14.4	C085513	14.1	C085513	14.1	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	15.1	C085512	16.5	C085512	14.7	0.50	C085512
Dissolved Nitrate (N)	mg/L	0.0031	C086131	0.0042	C086131	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	0.014	C085990	0.019	C085990	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	<0.0033	C085990	<0.0033	C085990	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	C085874	<0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.26	C085520	0.25	C085520	0.26	0.020	C085520
Un-Ionized Ammonia	mg/L	<0.00050	C086124	<0.00050	C086124	<0.00050	0.00050	C086124

Field Parameters								
Field pH	pH	7.33	ONSITE	7.34	ONSITE	7.31	N/A	ONSITE
Field Temperature (Fd)	deg. C	7.70	ONSITE	7.73	ONSITE	7.74	N/A	ONSITE

Misc. Inorganics								
Conductivity	uS/cm	33	C090059	33	C090059	33	2.0	C087597
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063	C089966	0.00068	C089966	0.00067	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050 (1)	C089967	<0.00050 (1)	C089967	<0.00050 (1)	0.00050	C089967
Fluoride (F)	mg/L	0.021	C090048	0.020	C090048	0.019	0.010	C087589
Free Free Cyanide	mg/L	0.00054	C089971	0.00052	C089971	0.00056	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	3.2	C123220	3.2	C121931	3.3	0.20	C123220
pH	pH	6.16	C090054	6.11	C090054	6.06	N/A	C087583
Reactive Silica	mg/L	0.22	C090132	0.21	C090124	0.26	0.050	C090055
Alkalinity (Total as CaCO ₃)	mg/L	8.92	C090051	8.90	C090051	9.06	0.50	C087574
Total Organic Carbon (C)	mg/L	3.7	C087888	3.6	C123223	3.7	0.20	C123223
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Bicarbonate (HCO ₃)	mg/L	10.9	C090051	10.9	C090051	11.1	0.50	C087574
Carbonate (CO ₃)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Hydroxide (OH)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Total Dissolved Solids	mg/L	20	C088285	16	C088285	16	10	C088285
Total Suspended Solids	mg/L	<1.0	C086712	1.1	C086712	1.2	1.0	C086712

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW638		DSW639		DSW640		
Sampling Date		2025/09/11 11:05		2025/09/11 12:25		2025/09/11 13:00		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C089333	<0.0010	C089333	<0.0010	0.0010	C089307
Total Sulphide	mg/L	<0.0018	C091228	<0.0018	C091228	<0.0018	0.0018	C091228
Chloride (Cl)	mg/L	0.64	C089780	0.58	C089780	0.92	0.50	C089780
Sulphate (SO ₄)	mg/L	5.0	C089780	5.0	C089780	5.1	0.50	C089780
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C087841	0.0011	C087841	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0020	C089245	0.0026	C089245	0.0017	0.0010	C089245
Total Ammonia (N)	mg/L	0.048	C090057	0.018	C090057	<0.0050	0.0050	C090057
Dissolved Nitrite (N)	mg/L	<0.0010	C087945	<0.0010	C087945	<0.0010	0.0010	C087460
Dissolved Nitrate plus Nitrite (N)	mg/L	0.0031	C087945	0.0042	C087945	<0.0030	0.0030	C087460
Total Nitrogen (N)	mg/L	0.26	C089585	0.26	C089585	0.26	0.020	C089585
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C129626	<0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties								
Turbidity	NTU	0.13	C087321	0.13	C087321	0.13	0.10	C087321
RDL = Reportable Detection Limit								



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C085512
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	0.020	C085520
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C090059
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C089967
Fluoride (F)	mg/L	<0.010	0.010	C090048
Free Free Cyanide	mg/L	<0.00050	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	<0.20	0.20	C121931
pH	pH	5.65	N/A	C090054
Reactive Silica	mg/L	<0.050	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	0.68	0.50	C090051
Total Organic Carbon (C)	mg/L	<0.20	0.20	C087888
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051
Bicarbonate (HCO ₃)	mg/L	0.83	0.50	C090051
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051
Hydroxide (OH)	mg/L	<0.50	0.50	C090051
Total Dissolved Solids	mg/L	<10	10	C088285
Total Suspended Solids	mg/L	1.1	1.0	C086712
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089348
Total Sulphide	mg/L	<0.0018	0.0018	C091228
Chloride (Cl)	mg/L	<0.50	0.50	C089780
Sulphate (SO ₄)	mg/L	<0.50	0.50	C089780
RDL = Reportable Detection Limit				
N/A = Not Applicable				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0011	0.0010	C089245
Total Ammonia (N)	mg/L	0.096	0.0050	C090057
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C087945
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C087945
Total Nitrogen (N)	mg/L	<0.020	0.020	C089585
RADIONUCLIDE				
Radium 226	Bq/l	<0.0050	0.0050	C129626
Physical Properties				
Turbidity	NTU	<0.10	0.10	C087321
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635		DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05		2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	QC Batch	BRP-38-1	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000133	0.00000131	0.00000102	C102729	0.00000051	0.00000010	C130278
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000065	0.00000053	0.00000065	C102726	0.00000037	0.00000010	C130280
RDL = Reportable Detection Limit								

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640	DSW641		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00	2025/09/11		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	TB	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000043	0.00000045	0.00000040	0.00000048	<0.0000001	0.00000010	C102729
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000029	0.00000030	0.00000032	0.00000035	<0.0000001	0.00000010	C102726
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0166	0.0124	0.0128	0.00160	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	0.0000200	0.0000181	0.0000175	0.0000076	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	0.000327	0.000320	0.000332	0.000163	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	0.0213	0.0181	0.0184	0.00301	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	0.0000087	0.0000048	0.0000070	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00327	0.00305	0.00296	0.00083	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	0.0000360	0.0000254	0.0000272	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	16.7	13.5	14.0	2.44	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	0.000109	0.000092	0.000109	0.000037	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	0.00209	0.00104	0.00123	0.0000163	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	0.00246	0.00215	0.00224	0.000608	0.000020	C097015
Dissolved Iron (Fe)	mg/L	0.0046	0.0044	0.0045	0.0241	0.0010	C097015
Dissolved Lead (Pb)	mg/L	0.0000065	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	0.00135	0.00128	0.00122	0.000343	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	7.08	6.07	6.20	1.97	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	0.0308	0.0153	0.0177	0.000144	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	0.0000202	0.0000249	0.0000225	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	0.0121	0.00926	0.00974	0.000836	0.000015	C097015
Dissolved Potassium (K)	mg/L	1.63	1.38	1.40	0.354	0.0050	C097015
Dissolved Selenium (Se)	mg/L	0.000045	0.000052	0.000044	0.000017	0.000010	C097015
Dissolved Silicon (Si)	mg/L	0.335	0.267	0.272	0.0936	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	2.71	2.30	2.34	0.677	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	0.0893	0.0702	0.0722	0.00737	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	11.0	9.46	9.45	1.87	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	0.00000576	0.00000497	0.00000549	0.00000140	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	0.000062	0.000032	0.000067	<0.000030	0.000030	C097015
Dissolved Uranium (U)	mg/L	0.00000884	0.00000771	0.00000888	0.00000199	0.00000050	C097015
Dissolved Vanadium (V)	mg/L	0.0000316	0.0000309	0.0000274	0.0000139	0.0000050	C097015
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00349	0.00233	0.00246	0.000063	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	0.0000553	0.0000551	0.0000533	0.0000117	0.0000080	C097015
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0305	0.0224	0.0247	0.00576	0.00010	C096999
Total Antimony (Sb)	mg/L	0.0000230	0.0000195	0.0000203	0.0000098	0.0000030	C096999
Total Arsenic (As)	mg/L	0.000347	0.000321	0.000356	0.000178	0.0000050	C096999
Total Barium (Ba)	mg/L	0.0231	0.0191	0.0197	0.00335	0.0000080	C096999
Total Beryllium (Be)	mg/L	0.0000103	0.0000070	0.0000077	<0.0000015	0.0000015	C096999
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096999
Total Boron (B)	mg/L	0.00403	0.00338	0.00345	0.00150	0.00010	C096999
Total Cadmium (Cd)	mg/L	0.0000367	0.0000228	0.0000243	<0.0000030	0.0000030	C096999
Total Calcium (Ca)	mg/L	17.9	14.5	15.1	2.59	0.0020	C096999
Total Chromium (Cr)	mg/L	0.000058	0.000060	0.000076	0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	0.00224	0.00118	0.00133	0.0000996	0.0000040	C096999
Total Copper (Cu)	mg/L	0.00269	0.00240	0.00246	0.000697	0.000020	C096999
Total Iron (Fe)	mg/L	0.0328	0.0311	0.0327	0.103	0.0010	C096999
Total Lead (Pb)	mg/L	0.0000125	0.0000076	0.0000089	0.0000066	0.0000030	C096999
Total Lithium (Li)	mg/L	0.00155	0.00138	0.00145	0.000418	0.000050	C096999
Total Magnesium (Mg)	mg/L	7.28	6.22	6.43	2.00	0.00050	C096999
Total Manganese (Mn)	mg/L	0.0334	0.0173	0.0200	0.00458	0.0000040	C096999
Total Molybdenum (Mo)	mg/L	0.0000223	0.0000208	0.0000207	<0.0000050	0.0000050	C096999
Total Nickel (Ni)	mg/L	0.0124	0.00945	0.00997	0.000879	0.000015	C096999
Total Potassium (K)	mg/L	1.67	1.40	1.45	0.380	0.0050	C096999
Total Selenium (Se)	mg/L	0.000070	0.000060	0.000059	0.000023	0.000010	C096999
Total Silicon (Si)	mg/L	0.373	0.295	0.309	0.102	0.0012	C096999
Total Silver (Ag)	mg/L	0.0000036	0.0000040	0.0000054	0.0000020	0.0000020	C096999
Total Sodium (Na)	mg/L	2.74	2.34	2.42	0.680	0.00050	C096999
Total Strontium (Sr)	mg/L	0.0944	0.0725	0.0764	0.00763	0.0000080	C096999
Total Sulphur (S)	mg/L	11.7	9.75	10.1	1.93	0.0010	C096999
Total Thallium (Tl)	mg/L	0.00000721	0.00000574	0.00000495	0.00000135	0.00000080	C096999
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
Total Titanium (Ti)	mg/L	0.000183	0.000187	0.000066	<0.000030	0.000030	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000125	0.00000976	0.0000105	0.00000273	0.00000050	C096999
Total Vanadium (V)	mg/L	0.0000464	0.0000387	0.0000378	0.0000261	0.0000050	C096999
Total Zinc (Zn)	mg/L	0.00355	0.00237	0.00256	0.000141	0.000060	C096999
Total Zirconium (Zr)	mg/L	0.0000731	0.0000712	0.0000659	0.0000190	0.0000080	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00170	0.00154	0.00166	0.00161	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	0.0000076	0.0000102	0.0000063	0.0000032	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	0.000152	0.000166	0.000162	0.000160	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	0.00302	0.00307	0.00300	0.00305	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00092	0.00079	0.00136	0.00099	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	2.43	2.48	2.45	2.39	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	0.000058	0.000061	0.000048	0.000042	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	0.0000171	0.0000164	0.0000171	0.0000171	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	0.000620	0.000630	0.000607	0.000604	0.000020	C097015
Dissolved Iron (Fe)	mg/L	0.0233	0.0241	0.0236	0.0234	0.0010	C097015
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	0.000397	0.000314	0.000377	0.000403	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	1.95	1.99	1.93	1.98	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	0.000226	0.000215	0.000203	0.000146	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000104 (1)	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	0.000867	0.000864	0.000860	0.000876	0.000015	C097015
Dissolved Potassium (K)	mg/L	0.358	0.365	0.365	0.362	0.0050	C097015
Dissolved Selenium (Se)	mg/L	0.000011	<0.000010	0.000025	<0.000010	0.000010	C097015
Dissolved Silicon (Si)	mg/L	0.0929	0.0930	0.0930	0.0923	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	0.691	0.689	0.676	0.695	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	0.00732	0.00748	0.00747	0.00741	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	1.89	1.84	1.98	1.89	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	0.00000107	0.00000119	0.00000094	0.00000105	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	0.000161	<0.000030	<0.000030	0.000138	0.000030	C097015
Dissolved Uranium (U)	mg/L	0.00000211	0.00000263	0.00000204	0.00000226	0.00000050	C097015

RDL = Reportable Detection Limit

(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	0.0000114	0.0000133	0.0000130	0.0000117	0.0000050	C097015
Dissolved Zinc (Zn)	mg/L	0.000062	<0.000060	0.000143	0.000069	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	0.0000123	0.0000110	0.0000129	0.0000123	0.0000080	C097015
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00354	0.00336	0.00325	0.00314	0.00010	C096999
Total Antimony (Sb)	mg/L	0.0000082	0.0000107	0.0000122	0.0000049	0.0000030	C096999
Total Arsenic (As)	mg/L	0.000177	0.000175	0.000181	0.000164	0.0000050	C096999
Total Barium (Ba)	mg/L	0.00330	0.00329	0.00338	0.00333	0.0000080	C096999
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C096999
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096999
Total Boron (B)	mg/L	0.00115	0.00109	0.00153	0.00113	0.00010	C096999
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C096999
Total Calcium (Ca)	mg/L	2.61	2.65	2.86	2.56	0.0020	C096999
Total Chromium (Cr)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	0.0000439	0.0000381	0.0000404	0.0000404	0.0000040	C096999
Total Copper (Cu)	mg/L	0.00116	0.000670	0.000674	0.000660	0.000020	C096999
Total Iron (Fe)	mg/L	0.0550	0.0549	0.0535	0.0536	0.0010	C096999
Total Lead (Pb)	mg/L	0.0000042	0.0000062	0.0000039	<0.0000030	0.0000030	C096999
Total Lithium (Li)	mg/L	0.000425	0.000478	0.000555	0.000510	0.000050	C096999
Total Magnesium (Mg)	mg/L	2.05	2.06	2.28	2.02	0.00050	C096999
Total Manganese (Mn)	mg/L	0.00160	0.00157	0.00152	0.00150	0.0000040	C096999
Total Molybdenum (Mo)	mg/L	0.0000059	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
Total Nickel (Ni)	mg/L	0.000869	0.000906	0.000869	0.000894	0.000015	C096999
Total Potassium (K)	mg/L	0.371	0.371	0.386	0.373	0.0050	C096999
Total Selenium (Se)	mg/L	0.000013	0.000024	0.000034	0.000012	0.000010	C096999
Total Silicon (Si)	mg/L	0.103	0.105	0.105	0.106	0.0012	C096999
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C096999
Total Sodium (Na)	mg/L	0.695	0.701	0.786	0.706	0.00050	C096999
Total Strontium (Sr)	mg/L	0.00776	0.00774	0.00813	0.00785	0.0000080	C096999
Total Sulphur (S)	mg/L	2.00	2.00	2.17	2.08	0.0010	C096999
Total Thallium (Tl)	mg/L	0.00000089	0.00000123	<0.0000008	0.00000132	0.00000080	C096999
Total Tin (Sn)	mg/L	0.0000362	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch
Total Titanium (Ti)	mg/L	0.000121	0.000120	<0.000030	0.000040	0.000030	C096999
Total Uranium (U)	mg/L	0.00000325	0.00000262	0.00000279	0.00000317	0.00000050	C096999
Total Vanadium (V)	mg/L	0.0000186	0.0000188	0.0000179	0.0000166	0.00000050	C096999
Total Zinc (Zn)	mg/L	0.000390	0.000103	0.000219	0.000113	0.000060	C096999
Total Zirconium (Zr)	mg/L	0.0000168	0.0000163	0.0000170	0.0000162	0.00000080	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch

Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00010	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	<0.0000080	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00026	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	<0.0020	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	<0.000020	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	<0.0000040	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	<0.000020	0.000020	C097015
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	C097015
Dissolved Lead (Pb)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	<0.000050	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	<0.00050	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	<0.0000040	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	<0.000015	0.000015	C097015
Dissolved Potassium (K)	mg/L	<0.0050	0.0050	C097015
Dissolved Selenium (Se)	mg/L	<0.000010	0.000010	C097015
Dissolved Silicon (Si)	mg/L	<0.0012	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	<0.00050	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	<0.0000080	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	<0.0010	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	<0.0000008	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	<0.000030	0.000030	C097015
Dissolved Uranium (U)	mg/L	<0.0000005	0.00000050	C097015
Dissolved Vanadium (V)	mg/L	<0.0000050	0.0000050	C097015
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.000060	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	<0.000080	0.000080	C097015
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00016	0.00010	C096999
Total Antimony (Sb)	mg/L	<0.000030	0.000030	C096999
Total Arsenic (As)	mg/L	<0.000050	0.000050	C096999
Total Barium (Ba)	mg/L	<0.000080	0.000080	C096999
Total Beryllium (Be)	mg/L	<0.000015	0.000015	C096999
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	C096999
Total Boron (B)	mg/L	0.00026	0.00010	C096999
Total Cadmium (Cd)	mg/L	<0.000030	0.000030	C096999
Total Calcium (Ca)	mg/L	<0.0020	0.0020	C096999
Total Chromium (Cr)	mg/L	<0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	<0.000040	0.000040	C096999
Total Copper (Cu)	mg/L	<0.000020	0.000020	C096999
Total Iron (Fe)	mg/L	<0.0010	0.0010	C096999
Total Lead (Pb)	mg/L	<0.000030	0.000030	C096999
Total Lithium (Li)	mg/L	<0.000050	0.000050	C096999
Total Magnesium (Mg)	mg/L	<0.00050	0.00050	C096999
Total Manganese (Mn)	mg/L	<0.000040	0.000040	C096999
Total Molybdenum (Mo)	mg/L	<0.000050	0.000050	C096999
Total Nickel (Ni)	mg/L	<0.000015	0.000015	C096999
Total Potassium (K)	mg/L	<0.0050	0.0050	C096999
Total Selenium (Se)	mg/L	<0.000010	0.000010	C096999
Total Silicon (Si)	mg/L	0.0019	0.0012	C096999
Total Silver (Ag)	mg/L	<0.000020	0.000020	C096999
Total Sodium (Na)	mg/L	<0.00050	0.00050	C096999
Total Strontium (Sr)	mg/L	<0.000080	0.000080	C096999
Total Sulphur (S)	mg/L	<0.0010	0.0010	C096999
Total Thallium (Tl)	mg/L	<0.000008	0.000008	C096999
Total Tin (Sn)	mg/L	<0.000050	0.000050	C096999
Total Titanium (Ti)	mg/L	<0.000030	0.000030	C096999
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Total Uranium (U)	mg/L	<0.0000005	0.00000050	C096999
Total Vanadium (V)	mg/L	<0.0000050	0.0000050	C096999
Total Zinc (Zn)	mg/L	0.000531	0.000060	C096999
Total Zirconium (Zr)	mg/L	<0.0000080	0.0000080	C096999
RDL = Reportable Detection Limit				



GENERAL COMMENTS

Sample DSW633 [BRP-29A-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW634 [BRP-29A-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW635 [BRP-29A-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

Sample DSW636 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW637 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW638 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

Sample DSW639 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW640 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW641 [TB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments

Elements by ICPMS Ultra-Low Level (tot.): Sample collection for METDULV-W and METTULV-W methods may exhibit potential bias due to incorrect bottle type. Results should be interpreted with caution and potential measurement error considered.

Results relate only to the items tested.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C086706	Total Dissolved Solids	2025/09/17	NC	80 - 120	97	80 - 120	<10	mg/L	0	20		
C086710	Total Suspended Solids	2025/09/16	100	80 - 120	93	80 - 120	<1.0	mg/L	0.39	20		
C086712	Total Suspended Solids	2025/09/16	102	80 - 120	98	80 - 120	<1.0	mg/L	NC	20		
C087190	Total Sulphide	2025/09/17	NC	80 - 120	95	80 - 120	<0.0018	mg/L	17	20		
C087195	Total Sulphide	2025/09/17	101	80 - 120	103	80 - 120	<0.0018	mg/L	NC	20		
C087321	Turbidity	2025/09/16			100	80 - 120	<0.10	NTU	6.3	20		
C087460	Dissolved Nitrate plus Nitrite (N)	2025/09/16	108	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20		
C087460	Dissolved Nitrite (N)	2025/09/16	109	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C087574	Alkalinity (PP as CaCO3)	2025/09/19					<0.50	mg/L	NC	20		
C087574	Alkalinity (Total as CaCO3)	2025/09/19			100	80 - 120	<0.50	mg/L	2.5	20		
C087574	Bicarbonate (HCO3)	2025/09/19					<0.50	mg/L	2.5	20		
C087574	Carbonate (CO3)	2025/09/19					<0.50	mg/L	NC	20		
C087574	Hydroxide (OH)	2025/09/19					<0.50	mg/L	NC	20		
C087583	pH	2025/09/19			100	97 - 103			1.8	N/A		
C087589	Fluoride (F)	2025/09/19	97	80 - 120	99	80 - 120	<0.010	mg/L	5.3	20		
C087597	Conductivity	2025/09/19			101	90 - 110	<2.0	uS/cm	0.30	10		
C087841	Dissolved Phosphorus (P)	2025/09/19	92	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C087888	Total Organic Carbon (C)	2025/09/17	NC	75 - 125	106	80 - 120	<0.20	mg/L	2.5	20		
C087945	Dissolved Nitrate plus Nitrite (N)	2025/09/16	NC	80 - 120	99	80 - 120	<0.0030	mg/L	1.3	20		
C087945	Dissolved Nitrite (N)	2025/09/16	106	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C088285	Total Dissolved Solids	2025/09/18	99	80 - 120	98	80 - 120	<10	mg/L	5.1	20		
C089245	Total Phosphorus (P)	2025/09/17	96	80 - 120	94	80 - 120	<0.0010	mg/L	3.3	20	86	80 - 120
C089307	Orthophosphate (P)	2025/09/17	94	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C089333	Orthophosphate (P)	2025/09/17	91	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C089348	Orthophosphate (P)	2025/09/17	108	80 - 120	115	80 - 120	0.0016, RDL=0.0010 (1)	mg/L	NC	20		
C089533	Total Sulphide	2025/09/18	91	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C089585	Total Nitrogen (N)	2025/09/18	103	80 - 120	106	80 - 120	<0.020	mg/L	3.0	20	103	80 - 120
C089594	Total Nitrogen (N)	2025/09/19	110	80 - 120	106	80 - 120	<0.020	mg/L	NC	20	104	80 - 120
C089780	Chloride (Cl)	2025/09/17	100	80 - 120	100	80 - 120	<0.50	mg/L	3.3	20		
C089780	Sulphate (SO4)	2025/09/17	102	80 - 120	101	80 - 120	<0.50	mg/L	1.3	20		



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C089966	Strong Acid Dissoc. Cyanide (CN)	2025/09/18	99	80 - 120	97	80 - 120	<0.00050	mg/L	7.5	20		
C089967	Weak Acid Dissoc. Cyanide (CN)	2025/09/18	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
C089971	Free Free Cyanide	2025/09/18	98	80 - 120	97	80 - 120	<0.00050	mg/L	1.2	20		
C090048	Fluoride (F)	2025/09/18	101	80 - 120	98	80 - 120	<0.010	mg/L	7.8	20		
C090051	Alkalinity (PP as CaCO3)	2025/09/18					<0.50	mg/L	NC	20		
C090051	Alkalinity (Total as CaCO3)	2025/09/18			99	80 - 120	<0.50	mg/L	3.8	20		
C090051	Bicarbonate (HCO3)	2025/09/18					<0.50	mg/L	3.8	20		
C090051	Carbonate (CO3)	2025/09/18					<0.50	mg/L	NC	20		
C090051	Hydroxide (OH)	2025/09/18					<0.50	mg/L	NC	20		
C090054	pH	2025/09/18			100	97 - 103			1.9	N/A		
C090055	Reactive Silica	2025/09/18	NC	80 - 120	101	80 - 120	<0.050	mg/L	1.6	20		
C090057	Total Ammonia (N)	2025/09/18	NC	80 - 120	102	80 - 120	<0.0050	mg/L	0.10	20		
C090059	Conductivity	2025/09/18			102	90 - 110	<2.0	uS/cm	0	10		
C090124	Reactive Silica	2025/09/18	102	80 - 120	104	80 - 120	<0.050	mg/L	3.0	20		
C090132	Reactive Silica	2025/09/18	103	80 - 120	100	80 - 120	<0.050	mg/L	11	20		
C090358	Dissolved Phosphorus (P)	2025/09/22	NC	80 - 120	94	80 - 120	<0.0010	mg/L	3.9	20	86	N/A
C091228	Total Sulphide	2025/09/19	14 (2)	80 - 120	93	80 - 120	<0.0018	mg/L	7.3	20		
C096999	Total Aluminum (Al)	2025/09/25	106	80 - 120	107	80 - 120	<0.00010	mg/L	5.4	40		
C096999	Total Antimony (Sb)	2025/09/25	106	80 - 120	108	80 - 120	<0.0000030	mg/L	NC	40		
C096999	Total Arsenic (As)	2025/09/25	101	80 - 120	102	80 - 120	<0.0000050	mg/L	0.61	40		
C096999	Total Barium (Ba)	2025/09/25	107	80 - 120	107	80 - 120	<0.0000080	mg/L	0.92	40		
C096999	Total Beryllium (Be)	2025/09/25	100	80 - 120	99	80 - 120	<0.0000015	mg/L	NC	40		
C096999	Total Bismuth (Bi)	2025/09/25	103	80 - 120	103	80 - 120	<0.0000010	mg/L	NC	40		
C096999	Total Boron (B)	2025/09/25	93	80 - 120	94	80 - 120	<0.00010	mg/L	22	40		
C096999	Total Cadmium (Cd)	2025/09/25	99	80 - 120	101	80 - 120	<0.0000030	mg/L	NC	40		
C096999	Total Calcium (Ca)	2025/09/25	114	80 - 120	113	80 - 120	<0.0020	mg/L	7.2	40		
C096999	Total Chromium (Cr)	2025/09/25	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	40		
C096999	Total Cobalt (Co)	2025/09/25	104	80 - 120	104	80 - 120	<0.0000040	mg/L	2.8	40		
C096999	Total Copper (Cu)	2025/09/25	103	80 - 120	104	80 - 120	<0.000020	mg/L	1.3	40		
C096999	Total Iron (Fe)	2025/09/25	105	80 - 120	107	80 - 120	<0.0010	mg/L	0.37	40		
C096999	Total Lead (Pb)	2025/09/25	102	80 - 120	102	80 - 120	<0.0000030	mg/L	1.0	40		



Bureau Veritas Job #: C578064
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QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C096999	Total Lithium (Li)	2025/09/25	93	80 - 120	93	80 - 120	<0.000050	mg/L	1.5	40		
C096999	Total Magnesium (Mg)	2025/09/25	104	80 - 120	107	80 - 120	<0.00050	mg/L	6.5	40		
C096999	Total Manganese (Mn)	2025/09/25	103	80 - 120	104	80 - 120	<0.0000040	mg/L	4.9	40		
C096999	Total Molybdenum (Mo)	2025/09/25	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C096999	Total Nickel (Ni)	2025/09/25	104	80 - 120	104	80 - 120	<0.000015	mg/L	3.0	40		
C096999	Total Potassium (K)	2025/09/25	108	80 - 120	109	80 - 120	<0.0050	mg/L	2.4	40		
C096999	Total Selenium (Se)	2025/09/25	96	80 - 120	95	80 - 120	<0.000010	mg/L	4.8	40		
C096999	Total Silicon (Si)	2025/09/25	96	80 - 120	96	80 - 120	<0.0012	mg/L	1.7	40		
C096999	Total Silver (Ag)	2025/09/25	95	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	40		
C096999	Total Sodium (Na)	2025/09/25	102	80 - 120	106	80 - 120	<0.00050	mg/L	7.9	40		
C096999	Total Strontium (Sr)	2025/09/25	98	80 - 120	101	80 - 120	<0.0000080	mg/L	3.3	40		
C096999	Total Sulphur (S)	2025/09/25	101	80 - 120	101	80 - 120	<0.0010	mg/L	6.3	40		
C096999	Total Thallium (Tl)	2025/09/25	107	80 - 120	107	80 - 120	<0.0000008	mg/L	40	40		
C096999	Total Tin (Sn)	2025/09/25	104	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	40		
C096999	Total Titanium (Ti)	2025/09/25	104	80 - 120	104	80 - 120	<0.000030	mg/L	NC	40		
C096999	Total Uranium (U)	2025/09/25	103	80 - 120	104	80 - 120	<0.0000005	mg/L	12	40		
C096999	Total Vanadium (V)	2025/09/25	104	80 - 120	104	80 - 120	<0.0000050	mg/L	2.4	40		
C096999	Total Zinc (Zn)	2025/09/25	100	80 - 120	101	80 - 120	<0.000060	mg/L	32	40		
C096999	Total Zirconium (Zr)	2025/09/25	105	80 - 120	105	80 - 120	<0.0000080	mg/L	4.7	40		
C097015	Dissolved Aluminum (Al)	2025/09/27	107	80 - 120	108	80 - 120	<0.00010	mg/L	0.12	40		
C097015	Dissolved Antimony (Sb)	2025/09/27	106	80 - 120	107	80 - 120	<0.0000030	mg/L	25	40		
C097015	Dissolved Arsenic (As)	2025/09/27	101	80 - 120	103	80 - 120	<0.0000050	mg/L	5.3	40		
C097015	Dissolved Barium (Ba)	2025/09/27	106	80 - 120	107	80 - 120	<0.0000080	mg/L	0.50	40		
C097015	Dissolved Beryllium (Be)	2025/09/27	100	80 - 120	103	80 - 120	<0.0000015	mg/L	NC	40		
C097015	Dissolved Bismuth (Bi)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000010	mg/L	NC	40		
C097015	Dissolved Boron (B)	2025/09/27	92	80 - 120	95	80 - 120	<0.00010	mg/L	22	40		
C097015	Dissolved Cadmium (Cd)	2025/09/27	100	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C097015	Dissolved Calcium (Ca)	2025/09/27	118	80 - 120	114	80 - 120	<0.0020	mg/L	2.0	40		
C097015	Dissolved Chromium (Cr)	2025/09/27	104	80 - 120	106	80 - 120	<0.000020	mg/L	39	40		
C097015	Dissolved Cobalt (Co)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000040	mg/L	1.9	40		
C097015	Dissolved Copper (Cu)	2025/09/27	102	80 - 120	104	80 - 120	<0.000020	mg/L	0.53	40		



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QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C097015	Dissolved Iron (Fe)	2025/09/27	107	80 - 120	109	80 - 120	<0.0010	mg/L	2.9	40		
C097015	Dissolved Lead (Pb)	2025/09/27	102	80 - 120	103	80 - 120	<0.0000030	mg/L	NC	40		
C097015	Dissolved Lithium (Li)	2025/09/27	94	80 - 120	96	80 - 120	<0.000050	mg/L	5.5	40		
C097015	Dissolved Magnesium (Mg)	2025/09/27	107	80 - 120	108	80 - 120	<0.00050	mg/L	1.2	40		
C097015	Dissolved Manganese (Mn)	2025/09/27	104	80 - 120	106	80 - 120	<0.0000040	mg/L	27	40		
C097015	Dissolved Molybdenum (Mo)	2025/09/27	99	80 - 120	102	80 - 120	<0.0000050	mg/L	100 (2)	40		
C097015	Dissolved Nickel (Ni)	2025/09/27	102	80 - 120	105	80 - 120	<0.000015	mg/L	3.2	40		
C097015	Dissolved Potassium (K)	2025/09/27	108	80 - 120	110	80 - 120	<0.0050	mg/L	0.22	40		
C097015	Dissolved Selenium (Se)	2025/09/27	97	80 - 120	100	80 - 120	<0.000010	mg/L	NC	40		
C097015	Dissolved Silicon (Si)	2025/09/27	97	80 - 120	98	80 - 120	<0.0012	mg/L	0.57	40		
C097015	Dissolved Silver (Ag)	2025/09/27	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	40		
C097015	Dissolved Sodium (Na)	2025/09/27	103	80 - 120	106	80 - 120	<0.00050	mg/L	0.82	40		
C097015	Dissolved Strontium (Sr)	2025/09/27	101	80 - 120	103	80 - 120	<0.0000080	mg/L	0.30	40		
C097015	Dissolved Sulphur (S)	2025/09/27	102	80 - 120	104	80 - 120	<0.0010	mg/L	1.6	40		
C097015	Dissolved Thallium (Tl)	2025/09/27	106	80 - 120	109	80 - 120	<0.0000008	mg/L	4.9	40		
C097015	Dissolved Tin (Sn)	2025/09/27	104	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	40		
C097015	Dissolved Titanium (Ti)	2025/09/27	104	80 - 120	109	80 - 120	<0.000030	mg/L	NC	40		
C097015	Dissolved Uranium (U)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000005	mg/L	13	40		
C097015	Dissolved Vanadium (V)	2025/09/27	103	80 - 120	104	80 - 120	<0.0000050	mg/L	7.0	40		
C097015	Dissolved Zinc (Zn)	2025/09/27	101	80 - 120	102	80 - 120	<0.000060	mg/L	5.9	40		
C097015	Dissolved Zirconium (Zr)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000080	mg/L	6.8	40		
C102726	Dissolved Mercury (Hg)	2025/09/26	101	80 - 120	98	80 - 120	<0.0000001	mg/L	19	25		
C102729	Total Mercury (Hg)	2025/10/01	113	80 - 120	95	80 - 120	<0.0000001	mg/L	2.6	25		
C110740	Dissolved Organic Carbon (C)	2025/10/03	73 (2)	75 - 125	102	80 - 120	<0.20	mg/L	0.71	20		
C121931	Dissolved Organic Carbon (C)	2025/10/12	NC	75 - 125	96	80 - 120	<0.20	mg/L	4.1	20		
C123220	Dissolved Organic Carbon (C)	2025/10/14	108	75 - 125	100	80 - 120	<0.20	mg/L	1.4	20		
C123223	Total Organic Carbon (C)	2025/10/14	NC	75 - 125	99	80 - 120	<0.20	mg/L	3.8	20		
C123228	Total Organic Carbon (C)	2025/10/15	108	75 - 125	100	80 - 120	<0.20	mg/L				
C129626	Radium 226	2025/10/16			88	85 - 115	<0.0050	Bq/l				
C130278	Total Mercury (Hg)	2025/10/20			104	80 - 120	<0.0000001	mg/L				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C130280	Dissolved Mercury (Hg)	2025/10/20			99	80 - 120	<0.0000001	mg/L				
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration) NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL). (1) Method blank exceeds acceptance limits, 2x RDL acceptable for low level analysis (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.												



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C578064

2025/09/12 12:20

CHAIN OF CUSTODY RECORD

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SEP 11 2025

Temp:
CS:

Ice: _____

C578064
2025/09/12 12:20

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:											
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #:	C41460	Bureau Veritas Job #:	Bottle Order #:										
Address:	Accounts Payable Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Beatriz Cupe-Flores Saskatoon SK S7H 0T4	P.O. #:	September AEMP program												
Tel:	(604) 681-8371	Tel:		Project Name:		COC #:	Project Manager:										
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Site #:													
Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				Turnaround Time (TAT) Required:									
☐ ATI ☐ CCME ☐ Other								Please provide advance notice for rush projects.									
								Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.									
								Rush Specific TAT (if applies to entire submission) Date Required: Rush Confirmation Number: Call us for details									
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS						Comments											
	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	AEMP - Routine Parameters	AEMP - Nutrients	AEMP - Other Conventional	Ultra Low Level Total Metals + Hg	Ultra Low Level Dissolved Metals + Hg (Lab fil)	Radium-226 Low Level	Un-ionized ammonia	Field pH	Field temperature	# of bottles	
1	BRP-29A-1	BRP-29A-1	Sept 10, 2025	11:20	water		✓	✓	✓	✓	✓	✓	✓	6.85	8.17	19	
2	BRP-29A-2	BRP-29A-2	↓	12:40	↓		✓	✓	✓	✓	✓	✓	✓	6.91	8.23	↓	
3	BRP-29A-3	BRP-29A-3	↓	14:05	↓		✓	✓	✓	✓	✓	✓	✓	6.87	8.22	↓	
4	BRP-29A-4	BRP-29A-4															
5	BRP-29A-5	BRP-29A-5															
6	BRP-31-3	BRP-31-3															
7	BRP-31-4	BRP-31-4															
8	BRP-32-1	BRP-32-1															
9	BRP-32-2	BRP-32-2															
10	BRP-32-3	BRP-32-3															
RELINQUISHED BY: (Signature/Print)		Date: (YYMMDD)	Time	RECEIVED BY: (Signature/Print)		Date: (YYMMDD)	Time	# Jars used and not submitted		Time Samples		Temperature (°C) on Receipt		Closely Held Inlet or Cooler?			
Adam Feldberg		25/09/12	7:00	Saskatoon Plant		25/09/12	15:20							☒ Yes ☐ No			
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNED BY THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL/LABORATORY/RESOURCES/CDOT-TERMS-AND-CONDITIONS . * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. * ALL SAMPLES ARE HELD FOR 90 DAYS AFTER SAMPLE RECEIPT, FOR SPECIFIC CONTACT YOUR PROJECT MANAGER.																	



EYK-2025-09-034

Bureau Veritas Canada (2019) Inc.

Received in Yellowknife

By: *J. [Signature]*
@ 12:20
SEP 12 2025 sec KCPN

Temp: *no*
CS: *no* Ice: *yes*



Your P.O. #: 470000200
 Your Project #: SEPTEMBER AEMP PROGRAM
 Site Location: 176233659
 Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
 Park Place
 Suite 3400-666 Burrard St.
 VANCOUVER, BC
 CANADA V6C 2X8

Report Date: 2025/10/20
 Report #: R3723174
 Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Sample Matrix: Water
 # Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 2320 B m
Alkalinity - Low Level (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	9	N/A	2025/09/17	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	9	N/A	2025/09/18	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	9	N/A	2025/09/18	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/13	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/14	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (DOC) by Combustion (1, 4)	3	N/A	2025/10/03	CAL SOP-00279	SM24th Ed. 5310 A, B
Conductivity @25C (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 2510 B m
Conductivity @25C (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	2	N/A	2025/09/18	AB SOP-00005	SM 24 4500-F C m
Fluoride - Low Level (1)	7	N/A	2025/09/19	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	9	N/A	2025/09/18	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	3	N/A	2025/09/17		Auto Calc
Sulphide (as H2S) (1)	1	N/A	2025/09/18		Auto Calc
Sulphide (as H2S) (1)	5	N/A	2025/09/19		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	9	N/A	2025/09/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	9	N/A	2025/09/29	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	1	N/A	2025/10/20	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	8	N/A	2025/09/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/10/20	2025/10/20	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	8	2025/09/26	2025/09/26	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	1	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (1)	7	N/A	2025/09/27	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (1)	1	N/A	2025/09/29	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	2	N/A	2025/09/23	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	7	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	8	N/A	2025/09/18		Auto Calc
Ammonia-N Low Level (Preserved) (1)	9	N/A	2025/09/18	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	9	N/A	2025/09/17		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	9	N/A	2025/09/16	AB SOP-00091	SM 24 4500 NO3m



Your P.O. #: 470000200
 Your Project #: SEPTEMBER AEMP PROGRAM
 Site Location: 176233659
 Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
 Park Place
 Suite 3400-666 Burrard St.
 VANCOUVER, BC
 CANADA V6C 2X8

Report Date: 2025/10/20
 Report #: R3723174
 Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Sample Matrix: Water
 # Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate (as N) (Low Level) (1)	9	2025/09/15	2025/09/17		Auto Calc
pH @25°C (1, 6)	2	N/A	2025/09/18	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (1, 6)	7	N/A	2025/09/19	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	8	N/A	2025/09/15	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	9	N/A	2025/09/17	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	3	2025/09/16	2025/09/17	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	1	2025/09/17	2025/09/18	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	5	2025/09/18	2025/09/19	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	9	N/A	2025/09/18	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	3	2025/09/16	2025/09/17	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	6	2025/09/17	2025/09/18	AB SOP-00065	SM 24 2540 C m
Temperature (Field) (1)	8	N/A	2025/09/15	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	8	N/A	2025/09/18		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/09/19		Auto Calc
Nitrogen (Total) (1)	8	2025/09/17	2025/09/18	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/09/17	2025/09/19	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/10/14	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/10/15	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (Total Organic) by Combustion (1, 8)	3	N/A	2025/09/17	CAL SOP-00279	SM24th Ed. 5310 A, B
Total Phosphorus Low Level Dissolved (1, 9)	8	2025/09/16	2025/09/19	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	1	2025/09/18	2025/09/19	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	9	2025/09/17	2025/09/17	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	9	2025/09/16	2025/09/16	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	9	N/A	2025/09/16	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	9	N/A	2025/10/16	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.



Your P.O. #: 470000200
Your Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/10/20
Report #: R3723174
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.



Your P.O. #: 470000200
Your Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

B2Gold Back River Corp.
Park Place
Suite 3400-666 Burrard St.
VANCOUVER, BC
CANADA V6C 2X8

Report Date: 2025/10/20
Report #: R3723174
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C578064

Received: 2025/09/12, 12:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Melissa McIntosh, Customer Solutions Representative
Email: melissa.mcintosh@bureauveritas.com
Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW633			DSW634		
Sampling Date		2025/09/10 11:20			2025/09/10 12:40		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	70.8	0.50	C085513	58.6	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	74.6	0.50	C085512	61.7	0.50	C085512
Dissolved Nitrate (N)	mg/L	2.1	0.20	C086131	1.5	0.20	C086131
Nitrate (NO ₃)	mg/L	9.2	0.89	C085990	6.7	0.89	C085990
Nitrite (NO ₂)	mg/L	0.014	0.0033	C085990	0.016	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.45	0.20	C085520	0.43	0.20	C085520
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C086124	<0.00050	0.00050	C086124
Field Parameters							
Field pH	pH	6.85	N/A	ONSITE	6.91	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.17	N/A	ONSITE	8.23	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	190	2.0	C090059	150	2.0	C090059
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00110	0.00050	C089966	0.00080	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00053 (1)	0.00050	C089967	<0.00050 (1)	0.00050	C089967
Fluoride (F)	mg/L	0.024	0.010	C090048	0.023	0.010	C090048
Free Free Cyanide	mg/L	0.00082	0.00050	C089971	0.00069	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	4.0	0.20	C121931	4.3	0.20	C110740
pH	pH	5.95	N/A	C090054	5.95	N/A	C090054
Reactive Silica	mg/L	0.74	0.050	C090124	0.63	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	4.46	0.50	C090051	4.70	0.50	C090051
Total Organic Carbon (C)	mg/L	4.2	0.20	C123223	4.4	0.20	C123228
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Bicarbonate (HCO ₃)	mg/L	5.44	0.50	C090051	5.74	0.50	C090051
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Hydroxide (OH)	mg/L	<0.50	0.50	C090051	<0.50	0.50	C090051
Total Dissolved Solids	mg/L	120	10	C086706	96	10	C086706
Total Suspended Solids	mg/L	1.3	1.0	C086710	1.8	1.0	C086710
RDL = Reportable Detection Limit N/A = Not Applicable (1) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW633			DSW634		
Sampling Date		2025/09/10 11:20			2025/09/10 12:40		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-1	RDL	QC Batch	BRP-29A-2	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089333	<0.0010	0.0010	C089348
Total Sulphide	mg/L	<0.0018	0.0018	C087190	<0.0018	0.0018	C087195
Chloride (Cl)	mg/L	24	0.50	C089780	18	0.50	C089780
Sulphate (SO ₄)	mg/L	34	0.50	C089780	29	0.50	C089780
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0012	0.0010	C089245	0.0012	0.0010	C089245
Total Ammonia (N)	mg/L	0.30	0.0050	C090057	0.16	0.0050	C090057
Dissolved Nitrite (N)	mg/L	0.0044	0.0010	C087945	0.0048	0.0010	C087945
Dissolved Nitrate plus Nitrite (N)	mg/L	2.1	0.20	C087945	1.5	0.20	C087945
Total Nitrogen (N)	mg/L	2.5	0.10	C089585	1.9	0.020	C089594
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties							
Turbidity	NTU	0.14	0.10	C087321	0.14	0.10	C087321
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW635			DSW636		DSW637		
Sampling Date		2025/09/10 14:05			2025/09/11 09:15		2025/09/11 10:10		
COC Number		C#764869-01-01			C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	60.5	0.50	C085513	14.2	C085513	14.1	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	64.3	0.50	C085512	14.7	C085512	15.0	0.50	C085512
Dissolved Nitrate (N)	mg/L	1.6	0.20	C086131	0.0031	C086131	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	7.3	0.89	C085990	0.014	C085990	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	0.013	0.0033	C085990	<0.0033	C085990	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874	<0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.46	0.20	C085520	0.26	C085520	0.30	0.020	C085520
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C086124	<0.00050	C086124	<0.00050	0.00050	C086124

Field Parameters									
Field pH	pH	6.87	N/A	ONSITE	7.40	ONSITE	7.33	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.22	N/A	ONSITE	7.72	ONSITE	7.72	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	160	2.0	C090059	33	C090059	33	2.0	C087597
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00076	0.00050	C089966	0.00067 (1)	C089966	0.00070 (1)	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050 (2)	0.00050	C089967	<0.00050 (2)	C089967	<0.00050 (2)	0.00050	C089967
Fluoride (F)	mg/L	0.024	0.010	C090048	0.019	C090048	0.020	0.010	C087589
Free Free Cyanide	mg/L	0.00069	0.00050	C089971	0.00068	C089971	0.00078	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	4.0	0.20	C123220	3.4	C110740	3.7	0.20	C110740
pH	pH	5.99	N/A	C090054	6.06	C090054	6.04	N/A	C087583
Reactive Silica	mg/L	0.66	0.050	C090124	0.22	C090124	0.21	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	4.74	0.50	C090051	9.13	C090051	9.10	0.50	C087574
Total Organic Carbon (C)	mg/L	23	0.20	C087888	3.9	C123223	3.7	0.20	C123223
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Bicarbonate (HCO ₃)	mg/L	5.78	0.50	C090051	11.1	C090051	11.1	0.50	C087574
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Hydroxide (OH)	mg/L	<0.50	0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Total Dissolved Solids	mg/L	96	10	C086706	20	C088285	16	10	C088285
Total Suspended Solids	mg/L	1.6	1.0	C086710	1.5	C086712	1.6	1.0	C086712

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(2) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW635			DSW636		DSW637		
Sampling Date		2025/09/10 14:05			2025/09/11 09:15		2025/09/11 10:10		
COC Number		C#764869-01-01			C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-3	RDL	QC Batch	BRP-38-1	QC Batch	BRP-38-2	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089333	<0.0010	C089348	<0.0010	0.0010	C089307
Total Sulphide	mg/L	<0.0018	0.0018	C089533	<0.0018	C091228	<0.0018	0.0018	C087195
Chloride (Cl)	mg/L	19	0.50	C089780	0.61	C089780	0.95	0.50	C089780
Sulphate (SO4)	mg/L	30	0.50	C089780	5.1	C089780	5.0	0.50	C089780
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841	<0.0010	C087841	<0.0010	0.0010	C090358
Total Phosphorus (P)	mg/L	0.0015	0.0010	C089245	0.0020	C089245	0.0017	0.0010	C089245
Total Ammonia (N)	mg/L	0.19	0.0050	C090057	<0.0050	C090057	<0.0050	0.0050	C090057
Dissolved Nitrite (N)	mg/L	0.0038	0.0010	C087945	<0.0010	C087945	<0.0010	0.0010	C087460
Dissolved Nitrate plus Nitrite (N)	mg/L	1.6	0.20	C087945	0.0031	C087945	<0.0030	0.0030	C087460
Total Nitrogen (N)	mg/L	2.1	0.040	C089585	0.26	C089585	0.30	0.020	C089585
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	0.0050	C129626	<0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties									
Turbidity	NTU	0.15	0.10	C087321	<0.10	C087321	0.13	0.10	C087321
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW638		DSW639		DSW640		
Sampling Date		2025/09/11 11:05		2025/09/11 12:25		2025/09/11 13:00		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch

Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	14.4	C085513	14.1	C085513	14.1	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	15.1	C085512	16.5	C085512	14.7	0.50	C085512
Dissolved Nitrate (N)	mg/L	0.0031	C086131	0.0042	C086131	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	0.014	C085990	0.019	C085990	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	<0.0033	C085990	<0.0033	C085990	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	C085874	<0.0020	C085874	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.26	C085520	0.25	C085520	0.26	0.020	C085520
Un-Ionized Ammonia	mg/L	<0.00050	C086124	<0.00050	C086124	<0.00050	0.00050	C086124

Field Parameters								
Field pH	pH	7.33	ONSITE	7.34	ONSITE	7.31	N/A	ONSITE
Field Temperature (Fd)	deg. C	7.70	ONSITE	7.73	ONSITE	7.74	N/A	ONSITE

Misc. Inorganics								
Conductivity	uS/cm	33	C090059	33	C090059	33	2.0	C087597
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063	C089966	0.00068	C089966	0.00067	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050 (1)	C089967	<0.00050 (1)	C089967	<0.00050 (1)	0.00050	C089967
Fluoride (F)	mg/L	0.021	C090048	0.020	C090048	0.019	0.010	C087589
Free Free Cyanide	mg/L	0.00054	C089971	0.00052	C089971	0.00056	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	3.2	C123220	3.2	C121931	3.3	0.20	C123220
pH	pH	6.16	C090054	6.11	C090054	6.06	N/A	C087583
Reactive Silica	mg/L	0.22	C090132	0.21	C090124	0.26	0.050	C090055
Alkalinity (Total as CaCO ₃)	mg/L	8.92	C090051	8.90	C090051	9.06	0.50	C087574
Total Organic Carbon (C)	mg/L	3.7	C087888	3.6	C123223	3.7	0.20	C123223
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Bicarbonate (HCO ₃)	mg/L	10.9	C090051	10.9	C090051	11.1	0.50	C087574
Carbonate (CO ₃)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Hydroxide (OH)	mg/L	<0.50	C090051	<0.50	C090051	<0.50	0.50	C087574
Total Dissolved Solids	mg/L	20	C088285	16	C088285	16	10	C088285
Total Suspended Solids	mg/L	<1.0	C086712	1.1	C086712	1.2	1.0	C086712

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW638		DSW639		DSW640		
Sampling Date		2025/09/11 11:05		2025/09/11 12:25		2025/09/11 13:00		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-38-3	QC Batch	BRP-38-4	QC Batch	BRP-38-5	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C089333	<0.0010	C089333	<0.0010	0.0010	C089307
Total Sulphide	mg/L	<0.0018	C091228	<0.0018	C091228	<0.0018	0.0018	C091228
Chloride (Cl)	mg/L	0.64	C089780	0.58	C089780	0.92	0.50	C089780
Sulphate (SO ₄)	mg/L	5.0	C089780	5.0	C089780	5.1	0.50	C089780
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C087841	0.0011	C087841	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0020	C089245	0.0026	C089245	0.0017	0.0010	C089245
Total Ammonia (N)	mg/L	0.048	C090057	0.018	C090057	<0.0050	0.0050	C090057
Dissolved Nitrite (N)	mg/L	<0.0010	C087945	<0.0010	C087945	<0.0010	0.0010	C087460
Dissolved Nitrate plus Nitrite (N)	mg/L	0.0031	C087945	0.0042	C087945	<0.0030	0.0030	C087460
Total Nitrogen (N)	mg/L	0.26	C089585	0.26	C089585	0.26	0.020	C089585
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C129626	<0.0050	C129626	<0.0050	0.0050	C129626
Physical Properties								
Turbidity	NTU	0.13	C087321	0.13	C087321	0.13	0.10	C087321
RDL = Reportable Detection Limit								



RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	0.50	C085513
Total Hardness (CaCO ₃)	mg/L	<0.50	0.50	C085512
Dissolved Nitrate (N)	mg/L	<0.0030	0.0030	C086131
Nitrate (NO ₃)	mg/L	<0.013	0.013	C085990
Nitrite (NO ₂)	mg/L	<0.0033	0.0033	C085990
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C085874
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	0.020	C085520
Misc. Inorganics				
Conductivity	uS/cm	<2.0	2.0	C090059
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C089966
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C089967
Fluoride (F)	mg/L	<0.010	0.010	C090048
Free Free Cyanide	mg/L	<0.00050	0.00050	C089971
Dissolved Organic Carbon (C)	mg/L	<0.20	0.20	C121931
pH	pH	5.65	N/A	C090054
Reactive Silica	mg/L	<0.050	0.050	C090124
Alkalinity (Total as CaCO ₃)	mg/L	0.68	0.50	C090051
Total Organic Carbon (C)	mg/L	<0.20	0.20	C087888
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C090051
Bicarbonate (HCO ₃)	mg/L	0.83	0.50	C090051
Carbonate (CO ₃)	mg/L	<0.50	0.50	C090051
Hydroxide (OH)	mg/L	<0.50	0.50	C090051
Total Dissolved Solids	mg/L	<10	10	C088285
Total Suspended Solids	mg/L	1.1	1.0	C086712
Anions				
Orthophosphate (P)	mg/L	<0.0010	0.0010	C089348
Total Sulphide	mg/L	<0.0018	0.0018	C091228
Chloride (Cl)	mg/L	<0.50	0.50	C089780
Sulphate (SO ₄)	mg/L	<0.50	0.50	C089780
RDL = Reportable Detection Limit N/A = Not Applicable				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C087841
Total Phosphorus (P)	mg/L	0.0011	0.0010	C089245
Total Ammonia (N)	mg/L	0.096	0.0050	C090057
Dissolved Nitrite (N)	mg/L	<0.0010	0.0010	C087945
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	0.0030	C087945
Total Nitrogen (N)	mg/L	<0.020	0.020	C089585
RADIONUCLIDE				
Radium 226	Bq/l	<0.0050	0.0050	C129626
Physical Properties				
Turbidity	NTU	<0.10	0.10	C087321
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635		DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05		2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	QC Batch	BRP-38-1	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000133	0.00000131	0.00000102	C102729	0.00000051	0.00000010	C130278
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000065	0.00000053	0.00000065	C102726	0.00000037	0.00000010	C130280
RDL = Reportable Detection Limit								

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640	DSW641		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00	2025/09/11		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	TB	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000043	0.00000045	0.00000040	0.00000048	<0.0000001	0.00000010	C102729
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000029	0.00000030	0.00000032	0.00000035	<0.0000001	0.00000010	C102726
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0166	0.0124	0.0128	0.00160	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	0.0000200	0.0000181	0.0000175	0.0000076	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	0.000327	0.000320	0.000332	0.000163	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	0.0213	0.0181	0.0184	0.00301	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	0.0000087	0.0000048	0.0000070	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00327	0.00305	0.00296	0.00083	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	0.0000360	0.0000254	0.0000272	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	16.7	13.5	14.0	2.44	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	0.000109	0.000092	0.000109	0.000037	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	0.00209	0.00104	0.00123	0.0000163	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	0.00246	0.00215	0.00224	0.000608	0.000020	C097015
Dissolved Iron (Fe)	mg/L	0.0046	0.0044	0.0045	0.0241	0.0010	C097015
Dissolved Lead (Pb)	mg/L	0.0000065	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	0.00135	0.00128	0.00122	0.000343	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	7.08	6.07	6.20	1.97	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	0.0308	0.0153	0.0177	0.000144	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	0.0000202	0.0000249	0.0000225	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	0.0121	0.00926	0.00974	0.000836	0.000015	C097015
Dissolved Potassium (K)	mg/L	1.63	1.38	1.40	0.354	0.0050	C097015
Dissolved Selenium (Se)	mg/L	0.000045	0.000052	0.000044	0.000017	0.000010	C097015
Dissolved Silicon (Si)	mg/L	0.335	0.267	0.272	0.0936	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	2.71	2.30	2.34	0.677	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	0.0893	0.0702	0.0722	0.00737	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	11.0	9.46	9.45	1.87	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	0.00000576	0.00000497	0.00000549	0.00000140	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	0.000062	0.000032	0.000067	<0.000030	0.000030	C097015
Dissolved Uranium (U)	mg/L	0.00000884	0.00000771	0.00000888	0.00000199	0.00000050	C097015
Dissolved Vanadium (V)	mg/L	0.0000316	0.0000309	0.0000274	0.0000139	0.0000050	C097015
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00349	0.00233	0.00246	0.000063	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	0.0000553	0.0000551	0.0000533	0.0000117	0.0000080	C097015
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0305	0.0224	0.0247	0.00576	0.00010	C096999
Total Antimony (Sb)	mg/L	0.0000230	0.0000195	0.0000203	0.0000098	0.0000030	C096999
Total Arsenic (As)	mg/L	0.000347	0.000321	0.000356	0.000178	0.0000050	C096999
Total Barium (Ba)	mg/L	0.0231	0.0191	0.0197	0.00335	0.0000080	C096999
Total Beryllium (Be)	mg/L	0.0000103	0.0000070	0.0000077	<0.0000015	0.0000015	C096999
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096999
Total Boron (B)	mg/L	0.00403	0.00338	0.00345	0.00150	0.00010	C096999
Total Cadmium (Cd)	mg/L	0.0000367	0.0000228	0.0000243	<0.0000030	0.0000030	C096999
Total Calcium (Ca)	mg/L	17.9	14.5	15.1	2.59	0.0020	C096999
Total Chromium (Cr)	mg/L	0.000058	0.000060	0.000076	0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	0.00224	0.00118	0.00133	0.0000996	0.0000040	C096999
Total Copper (Cu)	mg/L	0.00269	0.00240	0.00246	0.000697	0.000020	C096999
Total Iron (Fe)	mg/L	0.0328	0.0311	0.0327	0.103	0.0010	C096999
Total Lead (Pb)	mg/L	0.0000125	0.0000076	0.0000089	0.0000066	0.0000030	C096999
Total Lithium (Li)	mg/L	0.00155	0.00138	0.00145	0.000418	0.000050	C096999
Total Magnesium (Mg)	mg/L	7.28	6.22	6.43	2.00	0.00050	C096999
Total Manganese (Mn)	mg/L	0.0334	0.0173	0.0200	0.00458	0.0000040	C096999
Total Molybdenum (Mo)	mg/L	0.0000223	0.0000208	0.0000207	<0.0000050	0.0000050	C096999
Total Nickel (Ni)	mg/L	0.0124	0.00945	0.00997	0.000879	0.000015	C096999
Total Potassium (K)	mg/L	1.67	1.40	1.45	0.380	0.0050	C096999
Total Selenium (Se)	mg/L	0.000070	0.000060	0.000059	0.000023	0.000010	C096999
Total Silicon (Si)	mg/L	0.373	0.295	0.309	0.102	0.0012	C096999
Total Silver (Ag)	mg/L	0.0000036	0.0000040	0.0000054	0.0000020	0.0000020	C096999
Total Sodium (Na)	mg/L	2.74	2.34	2.42	0.680	0.00050	C096999
Total Strontium (Sr)	mg/L	0.0944	0.0725	0.0764	0.00763	0.0000080	C096999
Total Sulphur (S)	mg/L	11.7	9.75	10.1	1.93	0.0010	C096999
Total Thallium (Tl)	mg/L	0.00000721	0.00000574	0.00000495	0.00000135	0.00000080	C096999
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
Total Titanium (Ti)	mg/L	0.000183	0.000187	0.000066	<0.000030	0.000030	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW633	DSW634	DSW635	DSW636		
Sampling Date		2025/09/10 11:20	2025/09/10 12:40	2025/09/10 14:05	2025/09/11 09:15		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-38-1	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000125	0.00000976	0.0000105	0.00000273	0.00000050	C096999
Total Vanadium (V)	mg/L	0.0000464	0.0000387	0.0000378	0.0000261	0.0000050	C096999
Total Zinc (Zn)	mg/L	0.00355	0.00237	0.00256	0.000141	0.000060	C096999
Total Zirconium (Zr)	mg/L	0.0000731	0.0000712	0.0000659	0.0000190	0.0000080	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00170	0.00154	0.00166	0.00161	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	0.0000076	0.0000102	0.0000063	0.0000032	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	0.000152	0.000166	0.000162	0.000160	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	0.00302	0.00307	0.00300	0.00305	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00092	0.00079	0.00136	0.00099	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	2.43	2.48	2.45	2.39	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	0.000058	0.000061	0.000048	0.000042	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	0.0000171	0.0000164	0.0000171	0.0000171	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	0.000620	0.000630	0.000607	0.000604	0.000020	C097015
Dissolved Iron (Fe)	mg/L	0.0233	0.0241	0.0236	0.0234	0.0010	C097015
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	0.000397	0.000314	0.000377	0.000403	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	1.95	1.99	1.93	1.98	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	0.000226	0.000215	0.000203	0.000146	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	<0.0000050	0.0000104 (1)	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	0.000867	0.000864	0.000860	0.000876	0.000015	C097015
Dissolved Potassium (K)	mg/L	0.358	0.365	0.365	0.362	0.0050	C097015
Dissolved Selenium (Se)	mg/L	0.000011	<0.000010	0.000025	<0.000010	0.000010	C097015
Dissolved Silicon (Si)	mg/L	0.0929	0.0930	0.0930	0.0923	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	0.691	0.689	0.676	0.695	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	0.00732	0.00748	0.00747	0.00741	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	1.89	1.84	1.98	1.89	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	0.00000107	0.00000119	0.00000094	0.00000105	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	0.000161	<0.000030	<0.000030	0.000138	0.000030	C097015
Dissolved Uranium (U)	mg/L	0.00000211	0.00000263	0.00000204	0.00000226	0.00000050	C097015

RDL = Reportable Detection Limit

(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	0.0000114	0.0000133	0.0000130	0.0000117	0.0000050	C097015
Dissolved Zinc (Zn)	mg/L	0.000062	<0.000060	0.000143	0.000069	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	0.0000123	0.0000110	0.0000129	0.0000123	0.0000080	C097015
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00354	0.00336	0.00325	0.00314	0.00010	C096999
Total Antimony (Sb)	mg/L	0.0000082	0.0000107	0.0000122	0.0000049	0.0000030	C096999
Total Arsenic (As)	mg/L	0.000177	0.000175	0.000181	0.000164	0.0000050	C096999
Total Barium (Ba)	mg/L	0.00330	0.00329	0.00338	0.00333	0.0000080	C096999
Total Beryllium (Be)	mg/L	<0.0000015	<0.0000015	<0.0000015	<0.0000015	0.0000015	C096999
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096999
Total Boron (B)	mg/L	0.00115	0.00109	0.00153	0.00113	0.00010	C096999
Total Cadmium (Cd)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C096999
Total Calcium (Ca)	mg/L	2.61	2.65	2.86	2.56	0.0020	C096999
Total Chromium (Cr)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	0.0000439	0.0000381	0.0000404	0.0000404	0.0000040	C096999
Total Copper (Cu)	mg/L	0.00116	0.000670	0.000674	0.000660	0.000020	C096999
Total Iron (Fe)	mg/L	0.0550	0.0549	0.0535	0.0536	0.0010	C096999
Total Lead (Pb)	mg/L	0.0000042	0.0000062	0.0000039	<0.0000030	0.0000030	C096999
Total Lithium (Li)	mg/L	0.000425	0.000478	0.000555	0.000510	0.000050	C096999
Total Magnesium (Mg)	mg/L	2.05	2.06	2.28	2.02	0.00050	C096999
Total Manganese (Mn)	mg/L	0.00160	0.00157	0.00152	0.00150	0.0000040	C096999
Total Molybdenum (Mo)	mg/L	0.0000059	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
Total Nickel (Ni)	mg/L	0.000869	0.000906	0.000869	0.000894	0.000015	C096999
Total Potassium (K)	mg/L	0.371	0.371	0.386	0.373	0.0050	C096999
Total Selenium (Se)	mg/L	0.000013	0.000024	0.000034	0.000012	0.000010	C096999
Total Silicon (Si)	mg/L	0.103	0.105	0.105	0.106	0.0012	C096999
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C096999
Total Sodium (Na)	mg/L	0.695	0.701	0.786	0.706	0.00050	C096999
Total Strontium (Sr)	mg/L	0.00776	0.00774	0.00813	0.00785	0.0000080	C096999
Total Sulphur (S)	mg/L	2.00	2.00	2.17	2.08	0.0010	C096999
Total Thallium (Tl)	mg/L	0.00000089	0.00000123	<0.0000008	0.00000132	0.00000080	C096999
Total Tin (Sn)	mg/L	0.0000362	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW637	DSW638	DSW639	DSW640		
Sampling Date		2025/09/11 10:10	2025/09/11 11:05	2025/09/11 12:25	2025/09/11 13:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-38-2	BRP-38-3	BRP-38-4	BRP-38-5	RDL	QC Batch
Total Titanium (Ti)	mg/L	0.000121	0.000120	<0.000030	0.000040	0.000030	C096999
Total Uranium (U)	mg/L	0.00000325	0.00000262	0.00000279	0.00000317	0.00000050	C096999
Total Vanadium (V)	mg/L	0.0000186	0.0000188	0.0000179	0.0000166	0.00000050	C096999
Total Zinc (Zn)	mg/L	0.000390	0.000103	0.000219	0.000113	0.000060	C096999
Total Zirconium (Zr)	mg/L	0.0000168	0.0000163	0.0000170	0.0000162	0.0000080	C096999
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch

Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00010	0.00010	C097015
Dissolved Antimony (Sb)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Arsenic (As)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Barium (Ba)	mg/L	<0.0000080	0.0000080	C097015
Dissolved Beryllium (Be)	mg/L	<0.0000015	0.0000015	C097015
Dissolved Bismuth (Bi)	mg/L	<0.0000010	0.0000010	C097015
Dissolved Boron (B)	mg/L	0.00026	0.00010	C097015
Dissolved Cadmium (Cd)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Calcium (Ca)	mg/L	<0.0020	0.0020	C097015
Dissolved Chromium (Cr)	mg/L	<0.000020	0.000020	C097015
Dissolved Cobalt (Co)	mg/L	<0.0000040	0.0000040	C097015
Dissolved Copper (Cu)	mg/L	<0.000020	0.000020	C097015
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	C097015
Dissolved Lead (Pb)	mg/L	<0.0000030	0.0000030	C097015
Dissolved Lithium (Li)	mg/L	<0.000050	0.000050	C097015
Dissolved Magnesium (Mg)	mg/L	<0.00050	0.00050	C097015
Dissolved Manganese (Mn)	mg/L	<0.0000040	0.0000040	C097015
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Nickel (Ni)	mg/L	<0.000015	0.000015	C097015
Dissolved Potassium (K)	mg/L	<0.0050	0.0050	C097015
Dissolved Selenium (Se)	mg/L	<0.000010	0.000010	C097015
Dissolved Silicon (Si)	mg/L	<0.0012	0.0012	C097015
Dissolved Silver (Ag)	mg/L	<0.0000020	0.0000020	C097015
Dissolved Sodium (Na)	mg/L	<0.00050	0.00050	C097015
Dissolved Strontium (Sr)	mg/L	<0.0000080	0.0000080	C097015
Dissolved Sulphur (S)	mg/L	<0.0010	0.0010	C097015
Dissolved Thallium (Tl)	mg/L	<0.0000008	0.00000080	C097015
Dissolved Tin (Sn)	mg/L	<0.0000050	0.0000050	C097015
Dissolved Titanium (Ti)	mg/L	<0.000030	0.000030	C097015
Dissolved Uranium (U)	mg/L	<0.0000005	0.00000050	C097015
Dissolved Vanadium (V)	mg/L	<0.0000050	0.0000050	C097015
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.000060	0.000060	C097015
Dissolved Zirconium (Zr)	mg/L	<0.0000080	0.0000080	C097015
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00016	0.00010	C096999
Total Antimony (Sb)	mg/L	<0.0000030	0.0000030	C096999
Total Arsenic (As)	mg/L	<0.0000050	0.0000050	C096999
Total Barium (Ba)	mg/L	<0.0000080	0.0000080	C096999
Total Beryllium (Be)	mg/L	<0.0000015	0.0000015	C096999
Total Bismuth (Bi)	mg/L	<0.0000010	0.0000010	C096999
Total Boron (B)	mg/L	0.00026	0.00010	C096999
Total Cadmium (Cd)	mg/L	<0.0000030	0.0000030	C096999
Total Calcium (Ca)	mg/L	<0.0020	0.0020	C096999
Total Chromium (Cr)	mg/L	<0.000020	0.000020	C096999
Total Cobalt (Co)	mg/L	<0.0000040	0.0000040	C096999
Total Copper (Cu)	mg/L	<0.000020	0.000020	C096999
Total Iron (Fe)	mg/L	<0.0010	0.0010	C096999
Total Lead (Pb)	mg/L	<0.0000030	0.0000030	C096999
Total Lithium (Li)	mg/L	<0.000050	0.000050	C096999
Total Magnesium (Mg)	mg/L	<0.00050	0.00050	C096999
Total Manganese (Mn)	mg/L	<0.0000040	0.0000040	C096999
Total Molybdenum (Mo)	mg/L	<0.0000050	0.0000050	C096999
Total Nickel (Ni)	mg/L	<0.000015	0.000015	C096999
Total Potassium (K)	mg/L	<0.0050	0.0050	C096999
Total Selenium (Se)	mg/L	<0.000010	0.000010	C096999
Total Silicon (Si)	mg/L	0.0019	0.0012	C096999
Total Silver (Ag)	mg/L	<0.0000020	0.0000020	C096999
Total Sodium (Na)	mg/L	<0.00050	0.00050	C096999
Total Strontium (Sr)	mg/L	<0.0000080	0.0000080	C096999
Total Sulphur (S)	mg/L	<0.0010	0.0010	C096999
Total Thallium (Tl)	mg/L	<0.0000008	0.00000080	C096999
Total Tin (Sn)	mg/L	<0.0000050	0.0000050	C096999
Total Titanium (Ti)	mg/L	<0.000030	0.000030	C096999
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DSW641		
Sampling Date		2025/09/11		
COC Number		C#764869-01-01		
	UNITS	TB	RDL	QC Batch
Total Uranium (U)	mg/L	<0.0000005	0.00000050	C096999
Total Vanadium (V)	mg/L	<0.0000050	0.0000050	C096999
Total Zinc (Zn)	mg/L	0.000531	0.000060	C096999
Total Zirconium (Zr)	mg/L	<0.0000080	0.0000080	C096999
RDL = Reportable Detection Limit				



GENERAL COMMENTS

Sample DSW633 [BRP-29A-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW634 [BRP-29A-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW635 [BRP-29A-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

Sample DSW636 [BRP-38-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW637 [BRP-38-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW638 [BRP-38-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

Sample DSW639 [BRP-38-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW640 [BRP-38-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion. Sample was analyzed past method specified hold time for Carbon (Total Organic) by Combustion.

Sample DSW641 [TB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for Carbon (DOC) by Combustion.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments

Elements by ICPMS Ultra-Low Level (tot.): Sample collection for METDULV-W and METTULV-W methods may exhibit potential bias due to incorrect bottle type. Results should be interpreted with caution and potential measurement error considered.

Results relate only to the items tested.



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C086706	Total Dissolved Solids	2025/09/17	NC	80 - 120	97	80 - 120	<10	mg/L	0	20		
C086710	Total Suspended Solids	2025/09/16	100	80 - 120	93	80 - 120	<1.0	mg/L	0.39	20		
C086712	Total Suspended Solids	2025/09/16	102	80 - 120	98	80 - 120	<1.0	mg/L	NC	20		
C087190	Total Sulphide	2025/09/17	NC	80 - 120	95	80 - 120	<0.0018	mg/L	17	20		
C087195	Total Sulphide	2025/09/17	101	80 - 120	103	80 - 120	<0.0018	mg/L	NC	20		
C087321	Turbidity	2025/09/16			100	80 - 120	<0.10	NTU	6.3	20		
C087460	Dissolved Nitrate plus Nitrite (N)	2025/09/16	108	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20		
C087460	Dissolved Nitrite (N)	2025/09/16	109	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
C087574	Alkalinity (PP as CaCO3)	2025/09/19					<0.50	mg/L	NC	20		
C087574	Alkalinity (Total as CaCO3)	2025/09/19			100	80 - 120	<0.50	mg/L	2.5	20		
C087574	Bicarbonate (HCO3)	2025/09/19					<0.50	mg/L	2.5	20		
C087574	Carbonate (CO3)	2025/09/19					<0.50	mg/L	NC	20		
C087574	Hydroxide (OH)	2025/09/19					<0.50	mg/L	NC	20		
C087583	pH	2025/09/19			100	97 - 103			1.8	N/A		
C087589	Fluoride (F)	2025/09/19	97	80 - 120	99	80 - 120	<0.010	mg/L	5.3	20		
C087597	Conductivity	2025/09/19			101	90 - 110	<2.0	uS/cm	0.30	10		
C087841	Dissolved Phosphorus (P)	2025/09/19	92	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
C087888	Total Organic Carbon (C)	2025/09/17	NC	75 - 125	106	80 - 120	<0.20	mg/L	2.5	20		
C087945	Dissolved Nitrate plus Nitrite (N)	2025/09/16	NC	80 - 120	99	80 - 120	<0.0030	mg/L	1.3	20		
C087945	Dissolved Nitrite (N)	2025/09/16	106	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C088285	Total Dissolved Solids	2025/09/18	99	80 - 120	98	80 - 120	<10	mg/L	5.1	20		
C089245	Total Phosphorus (P)	2025/09/17	96	80 - 120	94	80 - 120	<0.0010	mg/L	3.3	20	86	80 - 120
C089307	Orthophosphate (P)	2025/09/17	94	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C089333	Orthophosphate (P)	2025/09/17	91	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C089348	Orthophosphate (P)	2025/09/17	108	80 - 120	115	80 - 120	0.0016, RDL=0.0010 (1)	mg/L	NC	20		
C089533	Total Sulphide	2025/09/18	91	80 - 120	95	80 - 120	<0.0018	mg/L	NC	20		
C089585	Total Nitrogen (N)	2025/09/18	103	80 - 120	106	80 - 120	<0.020	mg/L	3.0	20	103	80 - 120
C089594	Total Nitrogen (N)	2025/09/19	110	80 - 120	106	80 - 120	<0.020	mg/L	NC	20	104	80 - 120
C089780	Chloride (Cl)	2025/09/17	100	80 - 120	100	80 - 120	<0.50	mg/L	3.3	20		
C089780	Sulphate (SO4)	2025/09/17	102	80 - 120	101	80 - 120	<0.50	mg/L	1.3	20		



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C089966	Strong Acid Dissoc. Cyanide (CN)	2025/09/18	99	80 - 120	97	80 - 120	<0.00050	mg/L	7.5	20		
C089967	Weak Acid Dissoc. Cyanide (CN)	2025/09/18	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20		
C089971	Free Free Cyanide	2025/09/18	98	80 - 120	97	80 - 120	<0.00050	mg/L	1.2	20		
C090048	Fluoride (F)	2025/09/18	101	80 - 120	98	80 - 120	<0.010	mg/L	7.8	20		
C090051	Alkalinity (PP as CaCO3)	2025/09/18					<0.50	mg/L	NC	20		
C090051	Alkalinity (Total as CaCO3)	2025/09/18			99	80 - 120	<0.50	mg/L	3.8	20		
C090051	Bicarbonate (HCO3)	2025/09/18					<0.50	mg/L	3.8	20		
C090051	Carbonate (CO3)	2025/09/18					<0.50	mg/L	NC	20		
C090051	Hydroxide (OH)	2025/09/18					<0.50	mg/L	NC	20		
C090054	pH	2025/09/18			100	97 - 103			1.9	N/A		
C090055	Reactive Silica	2025/09/18	NC	80 - 120	101	80 - 120	<0.050	mg/L	1.6	20		
C090057	Total Ammonia (N)	2025/09/18	NC	80 - 120	102	80 - 120	<0.0050	mg/L	0.10	20		
C090059	Conductivity	2025/09/18			102	90 - 110	<2.0	uS/cm	0	10		
C090124	Reactive Silica	2025/09/18	102	80 - 120	104	80 - 120	<0.050	mg/L	3.0	20		
C090132	Reactive Silica	2025/09/18	103	80 - 120	100	80 - 120	<0.050	mg/L	11	20		
C090358	Dissolved Phosphorus (P)	2025/09/22	NC	80 - 120	94	80 - 120	<0.0010	mg/L	3.9	20	86	N/A
C091228	Total Sulphide	2025/09/19	14 (2)	80 - 120	93	80 - 120	<0.0018	mg/L	7.3	20		
C096999	Total Aluminum (Al)	2025/09/25	106	80 - 120	107	80 - 120	<0.00010	mg/L	5.4	40		
C096999	Total Antimony (Sb)	2025/09/25	106	80 - 120	108	80 - 120	<0.0000030	mg/L	NC	40		
C096999	Total Arsenic (As)	2025/09/25	101	80 - 120	102	80 - 120	<0.0000050	mg/L	0.61	40		
C096999	Total Barium (Ba)	2025/09/25	107	80 - 120	107	80 - 120	<0.0000080	mg/L	0.92	40		
C096999	Total Beryllium (Be)	2025/09/25	100	80 - 120	99	80 - 120	<0.0000015	mg/L	NC	40		
C096999	Total Bismuth (Bi)	2025/09/25	103	80 - 120	103	80 - 120	<0.0000010	mg/L	NC	40		
C096999	Total Boron (B)	2025/09/25	93	80 - 120	94	80 - 120	<0.00010	mg/L	22	40		
C096999	Total Cadmium (Cd)	2025/09/25	99	80 - 120	101	80 - 120	<0.0000030	mg/L	NC	40		
C096999	Total Calcium (Ca)	2025/09/25	114	80 - 120	113	80 - 120	<0.0020	mg/L	7.2	40		
C096999	Total Chromium (Cr)	2025/09/25	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	40		
C096999	Total Cobalt (Co)	2025/09/25	104	80 - 120	104	80 - 120	<0.0000040	mg/L	2.8	40		
C096999	Total Copper (Cu)	2025/09/25	103	80 - 120	104	80 - 120	<0.000020	mg/L	1.3	40		
C096999	Total Iron (Fe)	2025/09/25	105	80 - 120	107	80 - 120	<0.0010	mg/L	0.37	40		
C096999	Total Lead (Pb)	2025/09/25	102	80 - 120	102	80 - 120	<0.0000030	mg/L	1.0	40		



Bureau Veritas Job #: C578064
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QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C096999	Total Lithium (Li)	2025/09/25	93	80 - 120	93	80 - 120	<0.000050	mg/L	1.5	40		
C096999	Total Magnesium (Mg)	2025/09/25	104	80 - 120	107	80 - 120	<0.00050	mg/L	6.5	40		
C096999	Total Manganese (Mn)	2025/09/25	103	80 - 120	104	80 - 120	<0.0000040	mg/L	4.9	40		
C096999	Total Molybdenum (Mo)	2025/09/25	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	40		
C096999	Total Nickel (Ni)	2025/09/25	104	80 - 120	104	80 - 120	<0.000015	mg/L	3.0	40		
C096999	Total Potassium (K)	2025/09/25	108	80 - 120	109	80 - 120	<0.0050	mg/L	2.4	40		
C096999	Total Selenium (Se)	2025/09/25	96	80 - 120	95	80 - 120	<0.000010	mg/L	4.8	40		
C096999	Total Silicon (Si)	2025/09/25	96	80 - 120	96	80 - 120	<0.0012	mg/L	1.7	40		
C096999	Total Silver (Ag)	2025/09/25	95	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	40		
C096999	Total Sodium (Na)	2025/09/25	102	80 - 120	106	80 - 120	<0.00050	mg/L	7.9	40		
C096999	Total Strontium (Sr)	2025/09/25	98	80 - 120	101	80 - 120	<0.0000080	mg/L	3.3	40		
C096999	Total Sulphur (S)	2025/09/25	101	80 - 120	101	80 - 120	<0.0010	mg/L	6.3	40		
C096999	Total Thallium (Tl)	2025/09/25	107	80 - 120	107	80 - 120	<0.0000008	mg/L	40	40		
C096999	Total Tin (Sn)	2025/09/25	104	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	40		
C096999	Total Titanium (Ti)	2025/09/25	104	80 - 120	104	80 - 120	<0.000030	mg/L	NC	40		
C096999	Total Uranium (U)	2025/09/25	103	80 - 120	104	80 - 120	<0.0000005	mg/L	12	40		
C096999	Total Vanadium (V)	2025/09/25	104	80 - 120	104	80 - 120	<0.0000050	mg/L	2.4	40		
C096999	Total Zinc (Zn)	2025/09/25	100	80 - 120	101	80 - 120	<0.000060	mg/L	32	40		
C096999	Total Zirconium (Zr)	2025/09/25	105	80 - 120	105	80 - 120	<0.0000080	mg/L	4.7	40		
C097015	Dissolved Aluminum (Al)	2025/09/27	107	80 - 120	108	80 - 120	<0.00010	mg/L	0.12	40		
C097015	Dissolved Antimony (Sb)	2025/09/27	106	80 - 120	107	80 - 120	<0.0000030	mg/L	25	40		
C097015	Dissolved Arsenic (As)	2025/09/27	101	80 - 120	103	80 - 120	<0.0000050	mg/L	5.3	40		
C097015	Dissolved Barium (Ba)	2025/09/27	106	80 - 120	107	80 - 120	<0.0000080	mg/L	0.50	40		
C097015	Dissolved Beryllium (Be)	2025/09/27	100	80 - 120	103	80 - 120	<0.0000015	mg/L	NC	40		
C097015	Dissolved Bismuth (Bi)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000010	mg/L	NC	40		
C097015	Dissolved Boron (B)	2025/09/27	92	80 - 120	95	80 - 120	<0.00010	mg/L	22	40		
C097015	Dissolved Cadmium (Cd)	2025/09/27	100	80 - 120	102	80 - 120	<0.0000030	mg/L	NC	40		
C097015	Dissolved Calcium (Ca)	2025/09/27	118	80 - 120	114	80 - 120	<0.0020	mg/L	2.0	40		
C097015	Dissolved Chromium (Cr)	2025/09/27	104	80 - 120	106	80 - 120	<0.000020	mg/L	39	40		
C097015	Dissolved Cobalt (Co)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000040	mg/L	1.9	40		
C097015	Dissolved Copper (Cu)	2025/09/27	102	80 - 120	104	80 - 120	<0.000020	mg/L	0.53	40		



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QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C097015	Dissolved Iron (Fe)	2025/09/27	107	80 - 120	109	80 - 120	<0.0010	mg/L	2.9	40		
C097015	Dissolved Lead (Pb)	2025/09/27	102	80 - 120	103	80 - 120	<0.0000030	mg/L	NC	40		
C097015	Dissolved Lithium (Li)	2025/09/27	94	80 - 120	96	80 - 120	<0.000050	mg/L	5.5	40		
C097015	Dissolved Magnesium (Mg)	2025/09/27	107	80 - 120	108	80 - 120	<0.00050	mg/L	1.2	40		
C097015	Dissolved Manganese (Mn)	2025/09/27	104	80 - 120	106	80 - 120	<0.0000040	mg/L	27	40		
C097015	Dissolved Molybdenum (Mo)	2025/09/27	99	80 - 120	102	80 - 120	<0.0000050	mg/L	100 (2)	40		
C097015	Dissolved Nickel (Ni)	2025/09/27	102	80 - 120	105	80 - 120	<0.000015	mg/L	3.2	40		
C097015	Dissolved Potassium (K)	2025/09/27	108	80 - 120	110	80 - 120	<0.0050	mg/L	0.22	40		
C097015	Dissolved Selenium (Se)	2025/09/27	97	80 - 120	100	80 - 120	<0.000010	mg/L	NC	40		
C097015	Dissolved Silicon (Si)	2025/09/27	97	80 - 120	98	80 - 120	<0.0012	mg/L	0.57	40		
C097015	Dissolved Silver (Ag)	2025/09/27	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	40		
C097015	Dissolved Sodium (Na)	2025/09/27	103	80 - 120	106	80 - 120	<0.00050	mg/L	0.82	40		
C097015	Dissolved Strontium (Sr)	2025/09/27	101	80 - 120	103	80 - 120	<0.0000080	mg/L	0.30	40		
C097015	Dissolved Sulphur (S)	2025/09/27	102	80 - 120	104	80 - 120	<0.0010	mg/L	1.6	40		
C097015	Dissolved Thallium (Tl)	2025/09/27	106	80 - 120	109	80 - 120	<0.0000008	mg/L	4.9	40		
C097015	Dissolved Tin (Sn)	2025/09/27	104	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	40		
C097015	Dissolved Titanium (Ti)	2025/09/27	104	80 - 120	109	80 - 120	<0.000030	mg/L	NC	40		
C097015	Dissolved Uranium (U)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000005	mg/L	13	40		
C097015	Dissolved Vanadium (V)	2025/09/27	103	80 - 120	104	80 - 120	<0.0000050	mg/L	7.0	40		
C097015	Dissolved Zinc (Zn)	2025/09/27	101	80 - 120	102	80 - 120	<0.000060	mg/L	5.9	40		
C097015	Dissolved Zirconium (Zr)	2025/09/27	103	80 - 120	105	80 - 120	<0.0000080	mg/L	6.8	40		
C102726	Dissolved Mercury (Hg)	2025/09/26	101	80 - 120	98	80 - 120	<0.0000001	mg/L	19	25		
C102729	Total Mercury (Hg)	2025/10/01	113	80 - 120	95	80 - 120	<0.0000001	mg/L	2.6	25		
C110740	Dissolved Organic Carbon (C)	2025/10/03	73 (2)	75 - 125	102	80 - 120	<0.20	mg/L	0.71	20		
C121931	Dissolved Organic Carbon (C)	2025/10/12	NC	75 - 125	96	80 - 120	<0.20	mg/L	4.1	20		
C123220	Dissolved Organic Carbon (C)	2025/10/14	108	75 - 125	100	80 - 120	<0.20	mg/L	1.4	20		
C123223	Total Organic Carbon (C)	2025/10/14	NC	75 - 125	99	80 - 120	<0.20	mg/L	3.8	20		
C123228	Total Organic Carbon (C)	2025/10/15	108	75 - 125	100	80 - 120	<0.20	mg/L				
C129626	Radium 226	2025/10/16			88	85 - 115	<0.0050	Bq/l				
C130278	Total Mercury (Hg)	2025/10/20			104	80 - 120	<0.0000001	mg/L				



Bureau Veritas Job #: C578064
Report Date: 2025/10/20

QUALITY ASSURANCE REPORT(CONT'D)

B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C130280	Dissolved Mercury (Hg)	2025/10/20			99	80 - 120	<0.0000001	mg/L				
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration) NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL). (1) Method blank exceeds acceptance limits, 2x RDL acceptable for low level analysis (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.												



Bureau Veritas Job #: C578064
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B2Gold Back River Corp.
Client Project #: SEPTEMBER AEMP PROGRAM
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Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Steven Simpson, Lab Director

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C578064

2025/09/12 12:20

Received in Yellowknife
By: MECA

SEP 11 2025

Temp: 15°C
CS: Ice: _____

2025/09/12 12:20



Bureau Veritas
6500 19th N.E. Calgary, Alberta Canada T2E 6P6 Tel: (403) 291-3077 Toll free: 800-563-6266 Fax: (403) 291-9888 www.bvna.com

CHAIN OF CUSTODY RECORD

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INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Quotation #:	C41460	Bureau Veritas Job #:	Bottle Order #:
Address:	Accounts Payable Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Beatriz Cupe-Flores Saskatoon SK S7H 0T4	P.O. #:	September AEMP program		
Tel:	(604) 681-8371	Tel:		Project Name:		COC #:	Project Manager:
Email:	BR.accounts payable@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Date #:			Melissa McIntosh
Regulatory Criteria:		Special Instructions:		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required:	
☐ ATI ☐ CCME ☐ Other				AEMP-Routine Parameters AEMP- Nutrients AEMP- Other Conventional Ultra Low Level Total Metals + Hg Ultra Low Level Dissolved Metals + Hg (Lab III) Radium-226 Low Level Un-ionized ammonia Field pH Field temperature		Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 7 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Rush Required: ☐ Rush Coordination Number: _____ (call lab for it)	
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS							
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Mobile Field Filtered? (Y/N)	Field pH	Field temperature
1. 	BRP-29A-1	Sept 10, 2015	11:20	water	✓	6.85	8.17
2. 	BRP-29A-2	↓	12:40	↓	✓	6.91	8.23
3. 	BRP-29A-3	↓	14:05	↓	✓	6.87	8.22
4. 	BRP-29A-4						
5. 	BRP-29A-5						
6. 	BRP-31-3						
7. 	BRP-31-4						
8. 	BRP-32-1						
9. 	BRP-32-2						
10. 	BRP-32-3						

* RELINQUISHED BY: (Signature/Print)

Adam Feldberg

Date: (YYMMDD)

25/09/15

Time

7:00

RECEIVED BY: (Signature/Print)

Saskatoon Kuen

Date: (YYMMDD)

10/25/09/13

Time

15:20

Jars used and not submitted

0

Laboratory Use Only

Temperature (°C) on Receipt

15

Container Seal Intact on Receipt?

☒ Yes ☐ No

* Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas's standard terms and conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms which are available for viewing at www.bvna.com/environmental/LABORATORY/CHOC/CHOC-TERMS-AND-CONDITIONS.

* It is the responsibility of the relinquisher to ensure the accuracy of the chain of custody record. An incomplete chain of custody may result in analytical data delays.

* All samples are held for 90 days after sample receipt. For specific information, contact your project manager.

Received in Yellowknife

Bureau Veritas



EYK-2025-09-034

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Received in Yellowknife

By: L. J. [Signature]

SEP 29 2025

Temp: 1 / 1
CS: no Ice: yes



Your P.O. #: 470000200
 Your Project #: September AEMP program
 Site Location: 176233659
 Your C.O.C. #: C#764869-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/10/27
 Report #: R3725650
 Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C579084

Received: 2025/09/16, 10:30

Sample Matrix: Water
 # Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	12	N/A	2025/09/23	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	12	N/A	2025/09/22	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	12	N/A	2025/09/22	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	12	N/A	2025/09/22	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) by Combustion (1, 4)	12	N/A	2025/10/03	CAL SOP-00279	SM24th Ed. 5310 A, B
Conductivity @25C (1)	12	N/A	2025/09/23	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	12	N/A	2025/09/23	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	12	N/A	2025/09/22	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	12	N/A	2025/09/20		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	12	N/A	2025/09/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	12	N/A	2025/09/29	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	3	N/A	2025/10/09	BBY7SOP-00022	EPA 1631E m
Ultra Low Mercury - Diss, lab filtered (2)	9	N/A	2025/09/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	1	2025/09/26	2025/10/03	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	11	2025/09/26	2025/09/26	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	11	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (diss) (1)	1	N/A	2025/09/27	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	9	N/A	2025/09/23	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	3	N/A	2025/09/25	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	9	N/A	2025/09/24		Auto Calc
Ammonia-N Low Level (Preserved) (1)	12	N/A	2025/09/24	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	5	N/A	2025/09/22		Auto Calc
Nitrate and Nitrite (1)	5	N/A	2025/09/23		Auto Calc
Nitrate and Nitrite (1)	2	N/A	2025/09/24		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	7	N/A	2025/09/20	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	5	N/A	2025/09/21	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	5	2025/09/17	2025/09/22		Auto Calc
Nitrate (as N) (Low Level) (1)	5	2025/09/17	2025/09/23		Auto Calc
Nitrate (as N) (Low Level) (1)	2	2025/09/17	2025/09/24		Auto Calc
pH @25°C (1, 6)	12	N/A	2025/09/23	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	9	N/A	2025/09/17	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	12	N/A	2025/09/20	AB SOP-00025	SM 24 4500-P A, F m



Your P.O. #: 470000200
Your Project #: September AEMP program
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/10/27
Report #: R3725650
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C579084

Received: 2025/09/16, 10:30

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Sulphide (1)	11	2025/09/19	2025/09/20	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	1	2025/09/25	2025/09/25	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	12	N/A	2025/09/25	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	12	2025/09/19	2025/09/22	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	12	N/A	2025/09/29		Auto Calc
Temperature (Field) (1)	9	N/A	2025/09/17	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	11	N/A	2025/09/25		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	1	N/A	2025/09/26		Auto Calc
Nitrogen (Total) (1)	2	2025/10/09	2025/10/09	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	9	2025/09/24	2025/09/25	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/09/24	2025/09/26	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) by Combustion (1, 8)	10	N/A	2025/10/03	CAL SOP-00279	SM24th Ed. 5310 A, B
Carbon (Total Organic) by Combustion (1, 8)	2	N/A	2025/10/07	CAL SOP-00279	SM24th Ed. 5310 A, B
Total Phosphorus Low Level Dissolved (1, 9)	5	2025/09/23	2025/09/24	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	7	2025/09/24	2025/09/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	12	2025/09/24	2025/09/25	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	12	2025/09/19	2025/09/20	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	12	N/A	2025/09/18	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	12	N/A	2025/10/24	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or



Your P.O. #: 470000200
Your Project #: September AEMP program
Site Location: 176233659
Your C.O.C. #: C#764869-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/10/27
Report #: R3725650
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C579084

Received: 2025/09/16, 10:30

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
- (2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5
- (3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9
- (4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (8) TOC present in the sample should be considered as non-purgeable TOC.
- (9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Bureau Veritas Job #: C579084

Report Date: 2025/10/27

WSP Canada Inc.

Client Project #: September AEMP program

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD468			DTD469		
Sampling Date		2025/09/13 08:30			2025/09/13 09:20		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-4	RDL	QC Batch	BRP-29A-5	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	56.1	0.50	C088545	54.5	0.50	C088545
Total Hardness (CaCO ₃)	mg/L	59.5	0.50	C089822	58.4	0.50	C089822
Dissolved Nitrate (N)	mg/L	1.4	0.20	C089831	1.4	0.20	C089831
Nitrate (NO ₃)	mg/L	6.0	0.89	C089158	6.1	0.89	C089158
Nitrite (NO ₂)	mg/L	0.013	0.0033	C089158	0.012	0.0033	C089158
Sulphide (as H ₂ S)	mg/L	0.0057	0.0020	C089139	<0.0020	0.0020	C089139
Calculated Total Dissolved Solids	mg/L	79	10	C089425	78	10	C089425
Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.8	1.0	C089432	0.33	0.20	C089432
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C089898	<0.00050	0.00050	C089898
Field Parameters							
Field pH	pH	7.18	N/A	ONSITE	7.03	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.27	N/A	ONSITE	8.27	N/A	ONSITE
Misc. Inorganics							
Conductivity	uS/cm	150	2.0	C097113	150	2.0	C097113
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C094877	<0.00050	0.00050	C094877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C094886	<0.00050	0.00050	C094886
Fluoride (F)	mg/L	0.022	0.010	C097114	0.022	0.010	C097114
Free Free Cyanide	mg/L	<0.00050	0.00050	C095939	<0.00050	0.00050	C095939
Dissolved Organic Carbon (C)	mg/L	4.1	0.20	C109313	4.1	0.20	C109313
pH	pH	5.97	N/A	C097110	5.98	N/A	C097110
Reactive Silica	mg/L	0.61	0.050	C100236	0.55	0.050	C100250
Alkalinity (Total as CaCO ₃)	mg/L	5.12	0.50	C097106	5.09	0.50	C097106
Total Organic Carbon (C)	mg/L	4.6	0.20	C110739	4.8	0.20	C110739
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Bicarbonate (HCO ₃)	mg/L	6.25	0.50	C097106	6.21	0.50	C097106
Carbonate (CO ₃)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Hydroxide (OH)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Total Dissolved Solids	mg/L	76	10	C091792	52	10	C091792
Total Suspended Solids	mg/L	<1.0	1.0	C092414	<1.0	1.0	C092414
RDL = Reportable Detection Limit							
N/A = Not Applicable							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD468			DTD469		
Sampling Date		2025/09/13 08:30			2025/09/13 09:20		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-29A-4	RDL	QC Batch	BRP-29A-5	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C093484	<0.0010	0.0010	C093484
Total Sulphide	mg/L	0.0053	0.0018	C091236	<0.0018	0.0018	C091236
Chloride (Cl)	mg/L	17	0.50	C093798	17	0.50	C093798
Sulphate (SO ₄)	mg/L	29	0.50	C093798	29	0.50	C093798
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C098198	0.0015	0.0010	C096796
Total Phosphorus (P)	mg/L	0.0017	0.0010	C098901	0.0075	0.0010	C098947
Total Ammonia (N)	mg/L	0.16	0.0050	C098163	0.15	0.0050	C098163
Dissolved Nitrite (N)	mg/L	0.0038	0.0010	C093844	0.0037	0.0010	C093844
Dissolved Nitrate plus Nitrite (N)	mg/L	1.4	0.20	C093844	1.4	0.20	C093844
Total Nitrogen (N)	mg/L	3.1	1.0	C098133	1.7 (1)	0.20	C117110
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C138599	<0.0050	0.0050	C138599
Physical Properties							
Turbidity	NTU	0.20	0.10	C090185	0.10	0.10	C090185
RDL = Reportable Detection Limit							
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD470		DTD471			DTD472		
Sampling Date		2025/09/13 11:35		2025/09/13 11:00			2025/09/13 12:50		
COC Number		C#764869-01-01		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-31-3	QC Batch	BRP-31-4	RDL	QC Batch	BRP-32-1	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	59.2	C088545	59.0	0.50	C088545	32.4	0.50	C088545
Total Hardness (CaCO ₃)	mg/L	60.9	C089822	61.5	0.50	C089822	34.3	0.50	C089822
Dissolved Nitrate (N)	mg/L	1.6	C089831	1.6	0.20	C089831	0.52	0.040	C089831
Nitrate (NO ₃)	mg/L	7.1	C089158	7.1	0.89	C089899	2.3	0.18	C089899
Nitrite (NO ₂)	mg/L	0.013	C089158	0.012	0.0033	C089899	0.0060	0.0033	C089899
Sulphide (as H ₂ S)	mg/L	<0.0020	C089139	0.017	0.0020	C089139	<0.0020	0.0020	C089139
Calculated Total Dissolved Solids	mg/L	84	C089901	84	10	C089901	44	10	C089901
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.34	C089432	0.34	0.20	C089432	0.34	0.040	C089432
Un-Ionized Ammonia	mg/L	<0.00050	C089898	<0.00050	0.00050	C089898	<0.00050	0.00050	C089898

Field Parameters									
Field pH	pH	7.07	ONSITE	7.02	N/A	ONSITE	7.51	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.47	ONSITE	8.43	N/A	ONSITE	8.51	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	160	C097113	160	2.0	C097113	85	2.0	C097113
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094877	<0.00050	0.00050	C094877	<0.00050	0.00050	C094877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094886	<0.00050	0.00050	C094886	<0.00050	0.00050	C094886
Fluoride (F)	mg/L	0.021	C097114	0.022	0.010	C097114	0.022	0.010	C097114
Free Free Cyanide	mg/L	<0.00050	C095939	<0.00050	0.00050	C095939	<0.00050	0.00050	C095939
Dissolved Organic Carbon (C)	mg/L	4.3	C109313	4.6	0.20	C110740	4.2	0.20	C109313
pH	pH	5.99	C097110	5.99	N/A	C097110	6.04	N/A	C097110
Reactive Silica	mg/L	0.63	C100250	0.63	0.050	C100250	<0.050	0.050	C100250
Alkalinity (Total as CaCO ₃)	mg/L	4.93	C097106	5.21	0.50	C097106	6.16	0.50	C097106
Total Organic Carbon (C)	mg/L	4.9	C110739	4.6	0.20	C115018	4.8	0.20	C110739
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106	<0.50	0.50	C097106
Bicarbonate (HCO ₃)	mg/L	6.02	C097106	6.35	0.50	C097106	7.52	0.50	C097106
Carbonate (CO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106	<0.50	0.50	C097106
Hydroxide (OH)	mg/L	<0.50	C097106	<0.50	0.50	C097106	<0.50	0.50	C097106
Total Dissolved Solids	mg/L	84	C091792	48	10	C091792	28	10	C091792
Total Suspended Solids	mg/L	<1.0	C092414	1.1	1.0	C092414	1.3	1.0	C092414

RDL = Reportable Detection Limit
N/A = Not Applicable



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD470		DTD471			DTD472		
Sampling Date		2025/09/13 11:35		2025/09/13 11:00			2025/09/13 12:50		
COC Number		C#764869-01-01		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-31-3	QC Batch	BRP-31-4	RDL	QC Batch	BRP-32-1	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	C093484	<0.0010	0.0010	C093484	<0.0010	0.0010	C093484
Total Sulphide	mg/L	<0.0018	C091236	0.016	0.0018	C091236	<0.0018	0.0018	C091236
Chloride (Cl)	mg/L	19	C093798	19	0.50	C093798	6.0	0.50	C093798
Sulphate (SO4)	mg/L	31	C093798	31	0.50	C093798	19	0.50	C093798
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C096796	<0.0010	0.0010	C096796	<0.0010	0.0010	C098198
Total Phosphorus (P)	mg/L	0.0014	C098947	0.0032	0.0010	C098901	0.0035	0.0010	C098947
Total Ammonia (N)	mg/L	0.18	C098163	0.18	0.0050	C098163	0.013	0.0050	C098163
Dissolved Nitrite (N)	mg/L	0.0040	C094287	0.0037	0.0010	C093844	0.0018	0.0010	C094287
Dissolved Nitrate plus Nitrite (N)	mg/L	1.6	C094287	1.6	0.20	C093844	0.52	0.040	C094287
Total Nitrogen (N)	mg/L	2.0	C098133	1.9	0.020	C098133	0.86	0.020	C098133
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	C138599	<0.0050	0.0050	C138599	<0.0050	0.0050	C138599
Physical Properties									
Turbidity	NTU	0.12	C090185	0.12	0.10	C090185	0.13	0.10	C090185
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD473		DTD474		DTD475		
Sampling Date		2025/09/14 09:45		2025/09/14 10:35		2025/09/14 12:30		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-32-2	QC Batch	BRP-32-3	QC Batch	BRP-32-4	RDL	QC Batch

Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	32.9	C088545	32.6	C088545	33.0	0.50	C088545
Total Hardness (CaCO ₃)	mg/L	34.5	C089822	35.0	C089822	34.1	0.50	C089822
Dissolved Nitrate (N)	mg/L	0.52	C089831	0.51	C089831	0.52	0.040	C089831
Nitrate (NO ₃)	mg/L	2.3	C089899	2.3	C089899	2.3	0.18	C089899
Nitrite (NO ₂)	mg/L	0.0060	C089899	0.0060	C089899	0.0060	0.0033	C089899
Sulphide (as H ₂ S)	mg/L	<0.0020	C089139	<0.0020	C089139	0.0030	0.0020	C089896
Calculated Total Dissolved Solids	mg/L	44	C089901	44	C089901	44	10	C089901
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.30	C089432	0.30	C089432	0.28	0.040	C089432
Un-Ionized Ammonia	mg/L	<0.00050	C089898	<0.00050	C089898	<0.00050	0.00050	C089898

Field Parameters								
Field pH	pH	7.35	ONSITE	7.17	ONSITE	7.13	N/A	ONSITE
Field Temperature (Fd)	deg. C	8.67	ONSITE	8.68	ONSITE	8.77	N/A	ONSITE

Misc. Inorganics								
Conductivity	uS/cm	86	C097113	84	C097113	86	2.0	C097113
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094877	<0.00050	C094877	<0.00050	0.00050	C094877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094886	<0.00050	C094886	<0.00050	0.00050	C094886
Fluoride (F)	mg/L	0.022	C097114	0.023	C097114	0.022	0.010	C097114
Free Free Cyanide	mg/L	<0.00050	C095939	<0.00050	C095939	<0.00050	0.00050	C095939
Dissolved Organic Carbon (C)	mg/L	4.4	C110740	4.5	C110740	4.2	0.20	C109313
pH	pH	6.04	C097110	6.14	C097110	6.03	N/A	C097110
Reactive Silica	mg/L	0.065	C100705	0.084	C100236	<0.050	0.050	C100250
Alkalinity (Total as CaCO ₃)	mg/L	6.03	C097106	6.12	C097106	6.09	0.50	C097106
Total Organic Carbon (C)	mg/L	4.6	C110739	4.9	C110739	4.8	0.20	C110739
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C097106	<0.50	C097106	<0.50	0.50	C097106
Bicarbonate (HCO ₃)	mg/L	7.36	C097106	7.46	C097106	7.43	0.50	C097106
Carbonate (CO ₃)	mg/L	<0.50	C097106	<0.50	C097106	<0.50	0.50	C097106
Hydroxide (OH)	mg/L	<0.50	C097106	<0.50	C097106	<0.50	0.50	C097106
Total Dissolved Solids	mg/L	36	C091792	24	C091792	32	10	C091792
Total Suspended Solids	mg/L	<1.0	C092414	<1.0	C092414	1.3	1.0	C092414

RDL = Reportable Detection Limit
N/A = Not Applicable



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD473		DTD474		DTD475		
Sampling Date		2025/09/14 09:45		2025/09/14 10:35		2025/09/14 12:30		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-32-2	QC Batch	BRP-32-3	QC Batch	BRP-32-4	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C093484	<0.0010	C093484	<0.0010	0.0010	C093484
Total Sulphide	mg/L	<0.0018	C091236	<0.0018	C091236	0.0028	0.0018	C091236
Chloride (Cl)	mg/L	6.0	C093798	6.4	C093798	6.1	0.50	C093798
Sulphate (SO ₄)	mg/L	19	C093798	19	C093798	19	0.50	C093798
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C096796	<0.0010	C098198	<0.0010	0.0010	C096796
Total Phosphorus (P)	mg/L	0.0019	C098901	0.0018	C098947	0.0017	0.0010	C098896
Total Ammonia (N)	mg/L	0.010	C098163	0.010	C098163	0.059	0.0050	C098163
Dissolved Nitrite (N)	mg/L	0.0018	C094287	0.0017	C093842	0.0018	0.0010	C094287
Dissolved Nitrate plus Nitrite (N)	mg/L	0.52	C094287	0.51	C093842	0.52	0.040	C094287
Total Nitrogen (N)	mg/L	0.82	C098133	0.81	C098133	0.80	0.020	C098133
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C138599	<0.0050	C138599	<0.0050	0.0050	C138599
Physical Properties								
Turbidity	NTU	0.15	C090185	0.14	C090185	0.14	0.10	C090185
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD476			DTD477		
Sampling Date		2025/09/14 13:15			2025/09/13 09:25		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-32-5	RDL	QC Batch	FD	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO ₃)	mg/L	32.5	0.50	C088545	55.7	0.50	C088545
Total Hardness (CaCO ₃)	mg/L	35.3	0.50	C089822	57.7	0.50	C089822
Dissolved Nitrate (N)	mg/L	0.50	0.040	C089831	1.4	0.20	C089831
Nitrate (NO ₃)	mg/L	2.2	0.18	C089899	6.2	0.89	C089899
Nitrite (NO ₂)	mg/L	0.0060	0.0033	C089899	0.013	0.0033	C089899
Sulphide (as H ₂ S)	mg/L	<0.0020	0.0020	C089896	<0.0020	0.0020	C089896
Calculated Total Dissolved Solids	mg/L	44	10	C089901	78	10	C089901
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.27	0.040	C089432	0.26	0.20	C089432
Un-Ionized Ammonia	mg/L	<0.00050	0.00050	C089898			
Field Parameters							
Field pH	pH	7.14	N/A	ONSITE			
Field Temperature (Fd)	deg. C	8.81	N/A	ONSITE			
Misc. Inorganics							
Conductivity	uS/cm	84	2.0	C097113	140	2.0	C097113
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C094877	<0.00050	0.00050	C094877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	C094886	<0.00050	0.00050	C094886
Fluoride (F)	mg/L	0.021	0.010	C097114	0.022	0.010	C097114
Free Free Cyanide	mg/L	<0.00050	0.00050	C095939	<0.00050	0.00050	C095939
Dissolved Organic Carbon (C)	mg/L	4.2	0.20	C109313	4.0	0.20	C109313
pH	pH	6.02	N/A	C097110	5.98	N/A	C097110
Reactive Silica	mg/L	0.19	0.050	C100236	0.70	0.050	C100250
Alkalinity (Total as CaCO ₃)	mg/L	5.86	0.50	C097106	5.08	0.50	C097106
Total Organic Carbon (C)	mg/L	4.6	0.20	C110739	4.7	0.20	C110739
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Bicarbonate (HCO ₃)	mg/L	7.15	0.50	C097106	6.20	0.50	C097106
Carbonate (CO ₃)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Hydroxide (OH)	mg/L	<0.50	0.50	C097106	<0.50	0.50	C097106
Total Dissolved Solids	mg/L	32	10	C091792	56	10	C091792
Total Suspended Solids	mg/L	<1.0	1.0	C092414	<1.0	1.0	C092414
RDL = Reportable Detection Limit							
N/A = Not Applicable							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD476			DTD477		
Sampling Date		2025/09/14 13:15			2025/09/13 09:25		
COC Number		C#764869-01-01			C#764869-01-01		
	UNITS	BRP-32-5	RDL	QC Batch	FD	RDL	QC Batch
Anions							
Orthophosphate (P)	mg/L	<0.0010	0.0010	C093484	<0.0010	0.0010	C093484
Total Sulphide	mg/L	<0.0018	0.0018	C091236	<0.0018	0.0018	C091236
Chloride (Cl)	mg/L	6.4	0.50	C093798	17	0.50	C093798
Sulphate (SO4)	mg/L	19	0.50	C093798	29	0.50	C093798
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0010	0.0010	C098198	<0.0010	0.0010	C098198
Total Phosphorus (P)	mg/L	0.0021	0.0010	C098947	0.0018	0.0010	C098947
Total Ammonia (N)	mg/L	0.010	0.0050	C098163	0.15	0.0050	C098163
Dissolved Nitrite (N)	mg/L	0.0018	0.0010	C093842	0.0038	0.0010	C094287
Dissolved Nitrate plus Nitrite (N)	mg/L	0.50	0.040	C093842	1.4	0.20	C094287
Total Nitrogen (N)	mg/L	0.77	0.020	C098135	1.7 (1)	0.20	C117110
RADIONUCLIDE							
Radium 226	Bq/l	<0.0050	0.0050	C138599	<0.0050	0.0050	C138599
Physical Properties							
Turbidity	NTU	0.11	0.10	C090185	0.11	0.10	C090185
RDL = Reportable Detection Limit							
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD478		DTD479		
Sampling Date		2025/09/14 13:55		2025/09/13 11:55		
COC Number		C#764869-01-01		C#764869-01-01		
	UNITS	EB	QC Batch	FB	RDL	QC Batch
Calculated Parameters						
Dissolved Hardness (CaCO ₃)	mg/L	<0.50	C089897	<0.50	0.50	C089897
Total Hardness (CaCO ₃)	mg/L	<0.50	C089822	<0.50	0.50	C089822
Dissolved Nitrate (N)	mg/L	<0.0030	C089831	0.0033	0.0030	C089831
Nitrate (NO ₃)	mg/L	<0.013	C089899	0.015	0.013	C089899
Nitrite (NO ₂)	mg/L	<0.0033	C089899	<0.0033	0.0033	C089899
Sulphide (as H ₂ S)	mg/L	<0.0020	C089896	<0.0020	0.0020	C089896
Calculated Total Dissolved Solids	mg/L	<10	C089901	<10	10	C089901
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.046	C089432	0.033	0.020	C089432
Misc. Inorganics						
Conductivity	uS/cm	<2.0	C097113	<2.0	2.0	C097113
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094877	<0.00050	0.00050	C094877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C094886	<0.00050	0.00050	C094886
Fluoride (F)	mg/L	<0.010	C097114	<0.010	0.010	C097114
Free Free Cyanide	mg/L	<0.00050	C095939	<0.00050	0.00050	C095939
Dissolved Organic Carbon (C)	mg/L	<0.20	C110740	<0.20	0.20	C110740
pH	pH	5.46	C097110	5.33	N/A	C097110
Reactive Silica	mg/L	<0.050	C100236	<0.050	0.050	C100250
Alkalinity (Total as CaCO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106
Total Organic Carbon (C)	mg/L	<0.20	C110739	<0.20	0.20	C115018
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106
Bicarbonate (HCO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106
Carbonate (CO ₃)	mg/L	<0.50	C097106	<0.50	0.50	C097106
Hydroxide (OH)	mg/L	<0.50	C097106	<0.50	0.50	C097106
Total Dissolved Solids	mg/L	<10	C091792	<10	10	C091792
Total Suspended Solids	mg/L	<1.0	C092414	<1.0	1.0	C092414
Anions						
Orthophosphate (P)	mg/L	<0.0010	C093484	<0.0010	0.0010	C093484
Total Sulphide	mg/L	<0.0018	C091236	<0.0018	0.0018	C101294
Chloride (Cl)	mg/L	<0.50	C093798	<0.50	0.50	C093798
RDL = Reportable Detection Limit N/A = Not Applicable						



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DTD478		DTD479		
Sampling Date		2025/09/14 13:55		2025/09/13 11:55		
COC Number		C#764869-01-01		C#764869-01-01		
	UNITS	EB	QC Batch	FB	RDL	QC Batch
Sulphate (SO4)	mg/L	<0.50	C093798	<0.50	0.50	C093798
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0010	C098198	<0.0010	0.0010	C098198
Total Phosphorus (P)	mg/L	<0.0010	C098901	<0.0010	0.0010	C098947
Total Ammonia (N)	mg/L	<0.0050	C098163	<0.0050	0.0050	C098163
Dissolved Nitrite (N)	mg/L	<0.0010	C093844	<0.0010	0.0010	C093844
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.0030	C093844	0.0033	0.0030	C093844
Total Nitrogen (N)	mg/L	0.046	C098133	0.036	0.020	C098133
RADIONUCLIDE						
Radium 226	Bq/l	<0.0050	C138599	<0.0050	0.0050	C138599
Physical Properties						
Turbidity	NTU	<0.10	C090186	<0.10	0.10	C090186
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DTD468		DTD469		DTD470		
Sampling Date		2025/09/13 08:30		2025/09/13 09:20		2025/09/13 11:35		
COC Number		C#764869-01-01		C#764869-01-01		C#764869-01-01		
	UNITS	BRP-29A-4	QC Batch	BRP-29A-5	QC Batch	BRP-31-3	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000132 (1)	C102729	0.00000084	C102729	0.00000122	0.00000010	C102729
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000073	C102726	0.00000105	C117708	0.00000059	0.00000010	C102726
RDL = Reportable Detection Limit								
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity.								

Bureau Veritas ID		DTD471	DTD472	DTD473	DTD474	DTD475		
Sampling Date		2025/09/13 11:00	2025/09/13 12:50	2025/09/14 09:45	2025/09/14 10:35	2025/09/14 12:30		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-31-4	BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000125	0.00000053	0.00000073	0.00000063	0.00000056	0.00000010	C102729
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000068	0.00000050	0.00000053	0.00000036	0.00000035	0.00000010	C102726
RDL = Reportable Detection Limit								

Bureau Veritas ID		DTD476		DTD477	DTD478		
Sampling Date		2025/09/14 13:15		2025/09/13 09:25	2025/09/14 13:55		
COC Number		C#764869-01-01		C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-5	QC Batch	FD	EB	RDL	QC Batch

Elements							
Total Mercury (Hg)	mg/L	0.00000070	C102729	0.00000076	0.00000199	0.00000010	C102729
Lab Filtered Elements							
Dissolved Mercury (Hg)	mg/L	0.00000046	C117708	0.00000061	<0.0000001	0.00000010	C102726
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DTD479		
Sampling Date		2025/09/13 11:55		
COC Number		C#764869-01-01		
	UNITS	FB	RDL	QC Batch
Elements				
Total Mercury (Hg)	mg/L	0.00000029	0.00000010	C110129
Lab Filtered Elements				
Dissolved Mercury (Hg)	mg/L	0.00000045	0.00000010	C117708
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD468	DTD469	DTD470	DTD471		
Sampling Date		2025/09/13 08:30	2025/09/13 09:20	2025/09/13 11:35	2025/09/13 11:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-4	BRP-29A-5	BRP-31-3	BRP-31-4	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0119	0.0116	0.0127	0.0137	0.00010	C097011
Dissolved Antimony (Sb)	mg/L	0.0000187	0.0000165	0.0000143	0.0000199	0.0000030	C097011
Dissolved Arsenic (As)	mg/L	0.000321	0.000307	0.000323	0.000312	0.0000050	C097011
Dissolved Barium (Ba)	mg/L	0.0173	0.0171	0.0184	0.0185	0.0000080	C097011
Dissolved Beryllium (Be)	mg/L	0.0000061	0.0000054	0.0000056	0.0000064	0.0000015	C097011
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097011
Dissolved Boron (B)	mg/L	0.00314	0.00301	0.00327	0.00330	0.00010	C097011
Dissolved Cadmium (Cd)	mg/L	0.0000210	0.0000223	0.0000255	0.0000254	0.0000030	C097011
Dissolved Calcium (Ca)	mg/L	12.7	12.3	13.4	13.4	0.0020	C097011
Dissolved Chromium (Cr)	mg/L	0.000081	0.000084	0.000103	0.000099	0.000020	C097011
Dissolved Cobalt (Co)	mg/L	0.000959	0.000889	0.00112	0.00114	0.0000040	C097011
Dissolved Copper (Cu)	mg/L	0.00208	0.00210	0.00217	0.00217	0.000020	C097011
Dissolved Iron (Fe)	mg/L	0.0049	0.0049	0.0057	0.0052	0.0010	C097011
Dissolved Lead (Pb)	mg/L	0.0000032	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097011
Dissolved Lithium (Li)	mg/L	0.00125	0.00121	0.00130	0.00130	0.000050	C097011
Dissolved Magnesium (Mg)	mg/L	5.90	5.79	6.27	6.19	0.00050	C097011
Dissolved Manganese (Mn)	mg/L	0.0136	0.0123	0.0164	0.0165	0.0000040	C097011
Dissolved Molybdenum (Mo)	mg/L	0.0000243	0.0000245	0.0000185	0.0000231	0.0000050	C097011
Dissolved Nickel (Ni)	mg/L	0.00900	0.00878	0.00955	0.00949	0.000015	C097011
Dissolved Potassium (K)	mg/L	1.33	1.30	1.41	1.41	0.0050	C097011
Dissolved Selenium (Se)	mg/L	0.000050	0.000034	0.000030	0.000055	0.000010	C097011
Dissolved Silicon (Si)	mg/L	0.242	0.231	0.274	0.270	0.0012	C097011
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097011
Dissolved Sodium (Na)	mg/L	2.21	2.16	2.34	2.32	0.00050	C097011
Dissolved Strontium (Sr)	mg/L	0.0685	0.0672	0.0737	0.0729	0.0000080	C097011
Dissolved Sulphur (S)	mg/L	9.16	9.52	9.65	9.48	0.0010	C097011
Dissolved Thallium (Tl)	mg/L	0.00000445	0.00000478	0.00000459	0.00000489	0.00000080	C097011
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097011
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	<0.000030	<0.000030	0.000030	C097011
Dissolved Uranium (U)	mg/L	0.00000706	0.00000809	0.00000839	0.00000810	0.00000050	C097011
Dissolved Vanadium (V)	mg/L	0.0000252	0.0000282	0.0000292	0.0000299	0.0000050	C097011
RDL = Reportable Detection Limit							



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD468	DTD469	DTD470	DTD471		
Sampling Date		2025/09/13 08:30	2025/09/13 09:20	2025/09/13 11:35	2025/09/13 11:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-4	BRP-29A-5	BRP-31-3	BRP-31-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00252	0.00208	0.00269	0.00249	0.000060	C097011
Dissolved Zirconium (Zr)	mg/L	0.0000544	0.0000505	0.0000565	0.0000559	0.0000080	C097011
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0211	0.0200	0.0221	0.0219	0.00010	C096967
Total Antimony (Sb)	mg/L	0.0000192	0.0000166	0.0000192	0.0000190	0.0000030	C096967
Total Arsenic (As)	mg/L	0.000339	0.000337	0.000352	0.000348	0.0000050	C096967
Total Barium (Ba)	mg/L	0.0187	0.0182	0.0191	0.0193	0.0000080	C096967
Total Beryllium (Be)	mg/L	0.0000059	0.0000069	0.0000067	0.0000072	0.0000015	C096967
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096967
Total Boron (B)	mg/L	0.00317	0.00316	0.00318	0.00317	0.00010	C096967
Total Cadmium (Cd)	mg/L	0.0000209	0.0000215	0.0000221	0.0000251	0.0000030	C096967
Total Calcium (Ca)	mg/L	13.8	13.5	14.1	14.2	0.0020	C096967
Total Chromium (Cr)	mg/L	0.000101	0.000073	0.000084	0.000104	0.000020	C096967
Total Cobalt (Co)	mg/L	0.00111	0.00102	0.00122	0.00127	0.0000040	C096967
Total Copper (Cu)	mg/L	0.00239	0.00235	0.00242	0.00242	0.000020	C096967
Total Iron (Fe)	mg/L	0.0305	0.0303	0.0331	0.0315	0.0010	C096967
Total Lead (Pb)	mg/L	0.0000063	0.0000062	0.0000436	0.0000077	0.0000030	C096967
Total Lithium (Li)	mg/L	0.00123	0.00123	0.00126	0.00124	0.000050	C096967
Total Magnesium (Mg)	mg/L	6.10	6.01	6.23	6.29	0.00050	C096967
Total Manganese (Mn)	mg/L	0.0154	0.0142	0.0179	0.0185	0.0000040	C096967
Total Molybdenum (Mo)	mg/L	0.0000222	0.0000214	0.0000183	0.0000210	0.0000050	C096967
Total Nickel (Ni)	mg/L	0.00938	0.00910	0.00977	0.00981	0.000015	C096967
Total Potassium (K)	mg/L	1.38	1.35	1.42	1.44	0.0050	C096967
Total Selenium (Se)	mg/L	0.000047	0.000052	0.000060	0.000039	0.000010	C096967
Total Silicon (Si)	mg/L	0.254	0.247	0.282	0.279	0.0012	C096967
Total Silver (Ag)	mg/L	0.0000026	0.0000031	<0.0000020	0.0000031	0.0000020	C096967
Total Sodium (Na)	mg/L	2.29	2.26	2.36	2.37	0.00050	C096967
Total Strontium (Sr)	mg/L	0.0698	0.0683	0.0727	0.0738	0.0000080	C096967
Total Sulphur (S)	mg/L	9.47	9.38	9.82	9.72	0.0010	C096967
Total Thallium (Tl)	mg/L	0.00000608	0.00000455	0.00000474	0.00000454	0.00000080	C096967
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096967
Total Titanium (Ti)	mg/L	0.000324	0.000128	<0.000030	0.000121	0.000030	C096967
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD468	DTD469	DTD470	DTD471		
Sampling Date		2025/09/13 08:30	2025/09/13 09:20	2025/09/13 11:35	2025/09/13 11:00		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-29A-4	BRP-29A-5	BRP-31-3	BRP-31-4	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000103	0.0000109	0.0000104	0.00000958	0.00000050	C096967
Total Vanadium (V)	mg/L	0.0000374	0.0000383	0.0000386	0.0000404	0.0000050	C096967
Total Zinc (Zn)	mg/L	0.00238	0.00227	0.00258	0.00261	0.000060	C096967
Total Zirconium (Zr)	mg/L	0.0000645	0.0000729	0.0000675	0.0000663	0.0000080	C096967
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD472	DTD473	DTD474	DTD475		
Sampling Date		2025/09/13 12:50	2025/09/14 09:45	2025/09/14 10:35	2025/09/14 12:30		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00663	0.00659	0.00679	0.00633	0.00010	C097011
Dissolved Antimony (Sb)	mg/L	0.0000129	0.0000131	0.0000165	0.0000140	0.0000030	C097011
Dissolved Arsenic (As)	mg/L	0.000268	0.000269	0.000288	0.000262	0.0000050	C097011
Dissolved Barium (Ba)	mg/L	0.00982	0.00994	0.00986	0.0100	0.0000080	C097011
Dissolved Beryllium (Be)	mg/L	0.0000019	0.0000023	0.0000026	0.0000017	0.0000015	C097011
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097011
Dissolved Boron (B)	mg/L	0.00243	0.00242	0.00245	0.00246	0.00010	C097011
Dissolved Cadmium (Cd)	mg/L	0.0000044	0.0000047	0.0000032	0.0000043	0.0000030	C097011
Dissolved Calcium (Ca)	mg/L	6.73	6.81	6.74	6.82	0.0020	C097011
Dissolved Chromium (Cr)	mg/L	0.000075	0.000076	0.000088	0.000060	0.000020	C097011
Dissolved Cobalt (Co)	mg/L	0.000102	0.0000978	0.000102	0.0000999	0.0000040	C097011
Dissolved Copper (Cu)	mg/L	0.00158	0.00162	0.00159	0.00163	0.000020	C097011
Dissolved Iron (Fe)	mg/L	0.0038	0.0039	0.0040	0.0041	0.0010	C097011
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C097011
Dissolved Lithium (Li)	mg/L	0.000939	0.000936	0.000951	0.000946	0.000050	C097011
Dissolved Magnesium (Mg)	mg/L	3.79	3.87	3.84	3.87	0.00050	C097011
Dissolved Manganese (Mn)	mg/L	0.000884	0.000944	0.000936	0.000936	0.0000040	C097011
Dissolved Molybdenum (Mo)	mg/L	0.0000186	0.0000241	0.0000198	0.0000246	0.0000050	C097011
Dissolved Nickel (Ni)	mg/L	0.00503	0.00506	0.00497	0.00508	0.000015	C097011
Dissolved Potassium (K)	mg/L	0.758	0.762	0.760	0.759	0.0050	C097011
Dissolved Selenium (Se)	mg/L	0.000039	0.000015	0.000019	0.000036	0.000010	C097011
Dissolved Silicon (Si)	mg/L	0.0305	0.0315	0.0312	0.0305	0.0012	C097011
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097011
Dissolved Sodium (Na)	mg/L	1.34	1.36	1.35	1.36	0.00050	C097011
Dissolved Strontium (Sr)	mg/L	0.0318	0.0319	0.0320	0.0322	0.0000080	C097011
Dissolved Sulphur (S)	mg/L	6.31	6.27	6.36	6.28	0.0010	C097011
Dissolved Thallium (Tl)	mg/L	0.00000229	0.00000206	0.00000252	0.00000252	0.00000080	C097011
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097011
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	<0.000030	<0.000030	0.000030	C097011
Dissolved Uranium (U)	mg/L	0.00000719	0.00000639	0.00000687	0.00000666	0.00000050	C097011
Dissolved Vanadium (V)	mg/L	0.0000250	0.0000237	0.0000248	0.0000250	0.0000050	C097011
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD472	DTD473	DTD474	DTD475		
Sampling Date		2025/09/13 12:50	2025/09/14 09:45	2025/09/14 10:35	2025/09/14 12:30		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.000459	0.000460	0.000503	0.000464	0.000060	C097011
Dissolved Zirconium (Zr)	mg/L	0.0000468	0.0000465	0.0000459	0.0000462	0.0000080	C097011
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0109	0.0101	0.0105	0.0101	0.00010	C096967
Total Antimony (Sb)	mg/L	0.0000176	0.0000188	0.0000119	0.0000170	0.0000030	C096967
Total Arsenic (As)	mg/L	0.000278	0.000277	0.000294	0.000279	0.0000050	C096967
Total Barium (Ba)	mg/L	0.0103	0.0105	0.0104	0.0102	0.0000080	C096967
Total Beryllium (Be)	mg/L	0.0000022	0.0000015	0.0000019	0.0000026	0.0000015	C096967
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096967
Total Boron (B)	mg/L	0.00247	0.00234	0.00243	0.00230	0.00010	C096967
Total Cadmium (Cd)	mg/L	0.0000066	0.0000059	0.0000045	0.0000047	0.0000030	C096967
Total Calcium (Ca)	mg/L	7.26	7.29	7.41	7.23	0.0020	C096967
Total Chromium (Cr)	mg/L	0.000097	0.000082	0.000080	0.000078	0.000020	C096967
Total Cobalt (Co)	mg/L	0.000195	0.000196	0.000197	0.000198	0.0000040	C096967
Total Copper (Cu)	mg/L	0.00184	0.00178	0.00182	0.00176	0.000020	C096967
Total Iron (Fe)	mg/L	0.0223	0.0203	0.0216	0.0212	0.0010	C096967
Total Lead (Pb)	mg/L	0.0000070	<0.0000030	0.0000036	0.0000031	0.0000030	C096967
Total Lithium (Li)	mg/L	0.000978	0.000877	0.000935	0.000911	0.000050	C096967
Total Magnesium (Mg)	mg/L	3.93	3.96	4.01	3.90	0.00050	C096967
Total Manganese (Mn)	mg/L	0.00313	0.00298	0.00310	0.00304	0.0000040	C096967
Total Molybdenum (Mo)	mg/L	0.0000243	0.0000194	0.0000175	0.0000234	0.0000050	C096967
Total Nickel (Ni)	mg/L	0.00531	0.00530	0.00532	0.00518	0.000015	C096967
Total Potassium (K)	mg/L	0.777	0.790	0.792	0.779	0.0050	C096967
Total Selenium (Se)	mg/L	0.000029	0.000026	0.000028	0.000030	0.000010	C096967
Total Silicon (Si)	mg/L	0.0350	0.0346	0.0351	0.0368	0.0012	C096967
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000038	0.0000020	C096967
Total Sodium (Na)	mg/L	1.40	1.40	1.42	1.38	0.00050	C096967
Total Strontium (Sr)	mg/L	0.0321	0.0324	0.0325	0.0318	0.0000080	C096967
Total Sulphur (S)	mg/L	6.40	6.44	6.40	6.30	0.0010	C096967
Total Thallium (Tl)	mg/L	0.00000205	0.00000253	0.00000291	0.00000225	0.00000080	C096967
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096967
Total Titanium (Ti)	mg/L	0.000200	0.000099	0.000112	<0.000030	0.000030	C096967
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD472	DTD473	DTD474	DTD475		
Sampling Date		2025/09/13 12:50	2025/09/14 09:45	2025/09/14 10:35	2025/09/14 12:30		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-1	BRP-32-2	BRP-32-3	BRP-32-4	RDL	QC Batch
Total Uranium (U)	mg/L	0.00000817	0.00000878	0.00000793	0.00000869	0.00000050	C096967
Total Vanadium (V)	mg/L	0.0000366	0.0000350	0.0000353	0.0000360	0.0000050	C096967
Total Zinc (Zn)	mg/L	0.000562	0.000506	0.000562	0.000501	0.000060	C096967
Total Zirconium (Zr)	mg/L	0.0000509	0.0000509	0.0000547	0.0000514	0.0000080	C096967
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD476	DTD477	DTD478	DTD479		
Sampling Date		2025/09/14 13:15	2025/09/13 09:25	2025/09/14 13:55	2025/09/13 11:55		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-5	FD	EB	FB	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00632	0.0114	<0.00010	<0.00010	0.00010	C097011
Dissolved Antimony (Sb)	mg/L	0.0000112	0.0000152	<0.0000030	<0.0000030	0.0000030	C097011
Dissolved Arsenic (As)	mg/L	0.000277	0.000322	<0.0000050	<0.0000050	0.0000050	C097011
Dissolved Barium (Ba)	mg/L	0.00993	0.0173	<0.0000080	<0.0000080	0.0000080	C097011
Dissolved Beryllium (Be)	mg/L	0.0000023	0.0000046	<0.0000015	<0.0000015	0.0000015	C097011
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C097011
Dissolved Boron (B)	mg/L	0.00238	0.00308	<0.00010	<0.00010	0.00010	C097011
Dissolved Cadmium (Cd)	mg/L	0.0000043	0.0000208	<0.0000030	<0.0000030	0.0000030	C097011
Dissolved Calcium (Ca)	mg/L	6.73	12.6	0.0034	0.0031	0.0020	C097011
Dissolved Chromium (Cr)	mg/L	0.000071	0.000095	<0.000020	<0.000020	0.000020	C097011
Dissolved Cobalt (Co)	mg/L	0.000105	0.000903	<0.0000040	<0.0000040	0.0000040	C097011
Dissolved Copper (Cu)	mg/L	0.00162	0.00210	<0.000020	<0.000020	0.000020	C097011
Dissolved Iron (Fe)	mg/L	0.0039	0.0050	<0.0010	<0.0010	0.0010	C097011
Dissolved Lead (Pb)	mg/L	<0.0000030	0.0000108	<0.0000030	<0.0000030	0.0000030	C097011
Dissolved Lithium (Li)	mg/L	0.00101	0.00124	<0.000050	<0.000050	0.000050	C097011
Dissolved Magnesium (Mg)	mg/L	3.80	5.91	0.00050	<0.00050	0.00050	C097011
Dissolved Manganese (Mn)	mg/L	0.000942	0.0128	<0.0000040	<0.0000040	0.0000040	C097011
Dissolved Molybdenum (Mo)	mg/L	0.0000309	0.0000229	<0.0000050 (1)	0.0000072	0.0000050	C097011
Dissolved Nickel (Ni)	mg/L	0.00505	0.00885	<0.000015	<0.000015	0.000015	C097011
Dissolved Potassium (K)	mg/L	0.753	1.31	<0.0050	<0.0050	0.0050	C097011
Dissolved Selenium (Se)	mg/L	0.000026	0.000049	<0.000010	<0.000010	0.000010	C097011
Dissolved Silicon (Si)	mg/L	0.0303	0.236	<0.0012	<0.0012	0.0012	C097011
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C097011
Dissolved Sodium (Na)	mg/L	1.34	2.20	0.00474	<0.00050	0.00050	C097011
Dissolved Strontium (Sr)	mg/L	0.0319	0.0679	<0.0000080	<0.0000080	0.0000080	C097011
Dissolved Sulphur (S)	mg/L	6.37	9.09	<0.0010	<0.0010	0.0010	C097011
Dissolved Thallium (Tl)	mg/L	0.00000255	0.00000484	<0.0000008	<0.0000008	0.00000080	C097011
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C097011
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	<0.000030	<0.000030	0.000030	C097011
Dissolved Uranium (U)	mg/L	0.00000687	0.00000855	<0.0000005	<0.0000005	0.00000050	C097011

RDL = Reportable Detection Limit

(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD476	DTD477	DTD478	DTD479		
Sampling Date		2025/09/14 13:15	2025/09/13 09:25	2025/09/14 13:55	2025/09/13 11:55		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-5	FD	EB	FB	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	0.0000252	0.0000286	<0.0000050	<0.0000050	0.0000050	C097011
Dissolved Zinc (Zn)	mg/L	0.000454	0.00223	<0.000060	<0.000060	0.000060	C097011
Dissolved Zirconium (Zr)	mg/L	0.0000451	0.0000510	<0.0000080	<0.0000080	0.0000080	C097011
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00984	0.0205	<0.00010	0.00093	0.00010	C096967
Total Antimony (Sb)	mg/L	0.0000171	0.0000170	<0.0000030	0.0000046	0.0000030	C096967
Total Arsenic (As)	mg/L	0.000270	0.000333	<0.0000050	<0.0000050	0.0000050	C096967
Total Barium (Ba)	mg/L	0.0103	0.0177	<0.0000080	0.0000635	0.0000080	C096967
Total Beryllium (Be)	mg/L	0.0000026	0.0000060	<0.0000015	<0.0000015	0.0000015	C096967
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C096967
Total Boron (B)	mg/L	0.00268	0.00306	<0.00010	<0.00010	0.00010	C096967
Total Cadmium (Cd)	mg/L	0.0000059	0.0000242	<0.0000030	<0.0000030	0.0000030	C096967
Total Calcium (Ca)	mg/L	7.78	13.3	<0.0020	0.0036	0.0020	C096967
Total Chromium (Cr)	mg/L	0.000086	0.000076	<0.000020	<0.000020	0.000020	C096967
Total Cobalt (Co)	mg/L	0.000197	0.00103	<0.0000040	<0.0000040	0.0000040	C096967
Total Copper (Cu)	mg/L	0.00177	0.00236	0.000080	0.000022	0.000020	C096967
Total Iron (Fe)	mg/L	0.0207	0.0312	<0.0010	0.0017	0.0010	C096967
Total Lead (Pb)	mg/L	0.0000034	0.0000768	<0.0000030	0.0000058	0.0000030	C096967
Total Lithium (Li)	mg/L	0.000927	0.00121	<0.000050	<0.000050	0.000050	C096967
Total Magnesium (Mg)	mg/L	3.85	5.94	<0.00050	0.00111	0.00050	C096967
Total Manganese (Mn)	mg/L	0.00303	0.0145	<0.0000040	0.0000473	0.0000040	C096967
Total Molybdenum (Mo)	mg/L	0.0000273	0.0000175	<0.0000050	<0.0000050	0.0000050	C096967
Total Nickel (Ni)	mg/L	0.00520	0.00909	<0.000015	<0.000015	0.000015	C096967
Total Potassium (K)	mg/L	0.786	1.33	<0.0050	<0.0050	0.0050	C096967
Total Selenium (Se)	mg/L	0.000042	0.000051	<0.000010	<0.000010	0.000010	C096967
Total Silicon (Si)	mg/L	0.0339	0.246	<0.0012	0.0015	0.0012	C096967
Total Silver (Ag)	mg/L	0.0000023	0.0000023	<0.0000020	<0.0000020	0.0000020	C096967
Total Sodium (Na)	mg/L	1.48	2.25	0.00451	<0.00050	0.00050	C096967
Total Strontium (Sr)	mg/L	0.0323	0.0675	<0.0000080	0.0000086	0.0000080	C096967
Total Sulphur (S)	mg/L	6.69	9.23	<0.0010	<0.0010	0.0010	C096967
Total Thallium (Tl)	mg/L	0.00000239	0.00000474	<0.0000008	<0.0000008	0.00000080	C096967
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C096967
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
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ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DTD476	DTD477	DTD478	DTD479		
Sampling Date		2025/09/14 13:15	2025/09/13 09:25	2025/09/14 13:55	2025/09/13 11:55		
COC Number		C#764869-01-01	C#764869-01-01	C#764869-01-01	C#764869-01-01		
	UNITS	BRP-32-5	FD	EB	FB	RDL	QC Batch
Total Titanium (Ti)	mg/L	0.000048	<0.000030	<0.000030	0.000095	0.000030	C096967
Total Uranium (U)	mg/L	0.00000875	0.0000101	<0.0000005	<0.0000005	0.00000050	C096967
Total Vanadium (V)	mg/L	0.0000357	0.0000376	<0.0000050	<0.0000050	0.0000050	C096967
Total Zinc (Zn)	mg/L	0.000526	0.00234	<0.000060	0.000098	0.000060	C096967
Total Zirconium (Zr)	mg/L	0.0000536	0.0000652	<0.0000080	<0.0000080	0.0000080	C096967
RDL = Reportable Detection Limit							



GENERAL COMMENTS

Sample DTD468 [BRP-29A-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD469 [BRP-29A-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD470 [BRP-31-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD471 [BRP-31-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD472 [BRP-32-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD473 [BRP-32-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD474 [BRP-32-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD475 [BRP-32-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD476 [BRP-32-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD477 [FD] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD478 [EB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DTD479 [FB] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL). Sample was analyzed past method specified hold time for Total Sulphide.

Results relate only to the items tested.



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C090185	Turbidity	2025/09/18			100	80 - 120	<0.10	NTU	2.2	20		
C090186	Turbidity	2025/09/18			101	80 - 120	<0.10	NTU	5.8	20		
C091236	Total Sulphide	2025/09/20	88	80 - 120	98	80 - 120	<0.0018	mg/L	NC	20		
C091792	Total Dissolved Solids	2025/09/22	97	80 - 120	95	80 - 120	<10	mg/L	NC	20		
C092414	Total Suspended Solids	2025/09/20	93	80 - 120	107	80 - 120	<1.0	mg/L	NC	20		
C093484	Orthophosphate (P)	2025/09/20	92	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20		
C093798	Chloride (Cl)	2025/09/22	101	80 - 120	102	80 - 120	<0.50	mg/L	13	20		
C093798	Sulphate (SO4)	2025/09/22	NC	80 - 120	99	80 - 120	<0.50	mg/L	2.0	20		
C093842	Dissolved Nitrate plus Nitrite (N)	2025/09/20	116	80 - 120	102	80 - 120	0.0035, RDL=0.0030 (1)	mg/L	6.9	20		
C093842	Dissolved Nitrite (N)	2025/09/20	101	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
C093844	Dissolved Nitrate plus Nitrite (N)	2025/09/20	NC	80 - 120	117	80 - 120	<0.0030	mg/L	1.1	20		
C093844	Dissolved Nitrite (N)	2025/09/20	NC	80 - 120	100	80 - 120	<0.0010	mg/L	3.0	20		
C094287	Dissolved Nitrate plus Nitrite (N)	2025/09/21	NC	80 - 120	99	80 - 120	0.0042, RDL=0.0030 (1)	mg/L	1.2	20		
C094287	Dissolved Nitrite (N)	2025/09/21	104	80 - 120	104	80 - 120	<0.0010	mg/L	1.3	20		
C094877	Strong Acid Dissoc. Cyanide (CN)	2025/09/22	101	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20		
C094886	Weak Acid Dissoc. Cyanide (CN)	2025/09/22	104	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20		
C095939	Free Free Cyanide	2025/09/22	104	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20		
C096796	Dissolved Phosphorus (P)	2025/09/24	99	80 - 120	91	80 - 120	0.0014, RDL=0.0010 (1)	mg/L	0.87	20	84	80 - 120
C096967	Total Aluminum (Al)	2025/09/25	105	80 - 120	109	80 - 120	<0.00010	mg/L	11	40		
C096967	Total Antimony (Sb)	2025/09/25	105	80 - 120	108	80 - 120	<0.0000030	mg/L	13	40		
C096967	Total Arsenic (As)	2025/09/25	101	80 - 120	103	80 - 120	<0.0000050	mg/L	2.0	40		
C096967	Total Barium (Ba)	2025/09/25	107	80 - 120	109	80 - 120	<0.0000080	mg/L	0	40		
C096967	Total Beryllium (Be)	2025/09/25	101	80 - 120	98	80 - 120	<0.0000015	mg/L	21	40		
C096967	Total Bismuth (Bi)	2025/09/25	102	80 - 120	106	80 - 120	<0.0000010	mg/L	NC	40		
C096967	Total Boron (B)	2025/09/25	96	80 - 120	93	80 - 120	<0.00010	mg/L	14	40		
C096967	Total Cadmium (Cd)	2025/09/25	100	80 - 120	102	80 - 120	<0.0000030	mg/L	17	40		



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C096967	Total Calcium (Ca)	2025/09/25	NC	80 - 120	115	80 - 120	<0.0020	mg/L	5.0	40		
C096967	Total Chromium (Cr)	2025/09/25	104	80 - 120	106	80 - 120	<0.000020	mg/L	11	40		
C096967	Total Cobalt (Co)	2025/09/25	103	80 - 120	105	80 - 120	<0.0000040	mg/L	2.0	40		
C096967	Total Copper (Cu)	2025/09/25	102	80 - 120	105	80 - 120	<0.000020	mg/L	1.1	40		
C096967	Total Iron (Fe)	2025/09/25	107	80 - 120	108	80 - 120	<0.0010	mg/L	5.7	40		
C096967	Total Lead (Pb)	2025/09/25	102	80 - 120	105	80 - 120	<0.0000030	mg/L	11	40		
C096967	Total Lithium (Li)	2025/09/25	97	80 - 120	93	80 - 120	<0.000050	mg/L	8.0	40		
C096967	Total Magnesium (Mg)	2025/09/25	87	80 - 120	109	80 - 120	<0.00050	mg/L	0.54	40		
C096967	Total Manganese (Mn)	2025/09/25	102	80 - 120	106	80 - 120	<0.0000040	mg/L	3.3	40		
C096967	Total Molybdenum (Mo)	2025/09/25	101	80 - 120	104	80 - 120	<0.0000050	mg/L	32	40		
C096967	Total Nickel (Ni)	2025/09/25	101	80 - 120	105	80 - 120	<0.000015	mg/L	0.25	40		
C096967	Total Potassium (K)	2025/09/25	107	80 - 120	110	80 - 120	<0.0050	mg/L	0.71	40		
C096967	Total Selenium (Se)	2025/09/25	97	80 - 120	96	80 - 120	<0.000010	mg/L	11	40		
C096967	Total Silicon (Si)	2025/09/25	97	80 - 120	97	80 - 120	<0.0012	mg/L	2.2	40		
C096967	Total Silver (Ag)	2025/09/25	95	80 - 120	96	80 - 120	<0.0000020	mg/L	13	40		
C096967	Total Sodium (Na)	2025/09/25	102	80 - 120	109	80 - 120	<0.00050	mg/L	5.2	40		
C096967	Total Strontium (Sr)	2025/09/25	99	80 - 120	103	80 - 120	<0.0000080	mg/L	1.2	40		
C096967	Total Sulphur (S)	2025/09/25	102	80 - 120	109	80 - 120	<0.0010	mg/L	3.3	40		
C096967	Total Thallium (Tl)	2025/09/25	106	80 - 120	108	80 - 120	<0.0000008	mg/L	5.3	40		
C096967	Total Tin (Sn)	2025/09/25	102	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	40		
C096967	Total Titanium (Ti)	2025/09/25	99	80 - 120	106	80 - 120	<0.000030	mg/L	NC	40		
C096967	Total Uranium (U)	2025/09/25	104	80 - 120	106	80 - 120	<0.0000005	mg/L	3.9	40		
C096967	Total Vanadium (V)	2025/09/25	104	80 - 120	111	80 - 120	<0.0000050	mg/L	3.6	40		
C096967	Total Zinc (Zn)	2025/09/25	101	80 - 120	103	80 - 120	<0.000060	mg/L	0.30	40		
C096967	Total Zirconium (Zr)	2025/09/25	106	80 - 120	102	80 - 120	<0.0000080	mg/L	4.9	40		
C097011	Dissolved Aluminum (Al)	2025/09/25	107	80 - 120	108	80 - 120	<0.00010	mg/L	NC	40		
C097011	Dissolved Antimony (Sb)	2025/09/25	106	80 - 120	107	80 - 120	<0.0000030	mg/L	NC	40		
C097011	Dissolved Arsenic (As)	2025/09/25	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	40		
C097011	Dissolved Barium (Ba)	2025/09/25	105	80 - 120	106	80 - 120	<0.0000080	mg/L	NC	40		
C097011	Dissolved Beryllium (Be)	2025/09/25	102	80 - 120	104	80 - 120	<0.0000015	mg/L	NC	40		
C097011	Dissolved Bismuth (Bi)	2025/09/25	104	80 - 120	106	80 - 120	<0.0000010	mg/L	NC	40		



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QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C097011	Dissolved Boron (B)	2025/09/25	95	80 - 120	97	80 - 120	<0.00010	mg/L	NC	40		
C097011	Dissolved Cadmium (Cd)	2025/09/25	101	80 - 120	101	80 - 120	<0.0000030	mg/L	NC	40		
C097011	Dissolved Calcium (Ca)	2025/09/25	115	80 - 120	117	80 - 120	<0.0020	mg/L	7.1	40		
C097011	Dissolved Chromium (Cr)	2025/09/25	105	80 - 120	105	80 - 120	<0.000020	mg/L	NC	40		
C097011	Dissolved Cobalt (Co)	2025/09/25	104	80 - 120	104	80 - 120	<0.0000040	mg/L	NC	40		
C097011	Dissolved Copper (Cu)	2025/09/25	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	40		
C097011	Dissolved Iron (Fe)	2025/09/25	107	80 - 120	108	80 - 120	<0.0010	mg/L	NC	40		
C097011	Dissolved Lead (Pb)	2025/09/25	102	80 - 120	103	80 - 120	<0.0000030	mg/L	NC	40		
C097011	Dissolved Lithium (Li)	2025/09/25	97	80 - 120	101	80 - 120	<0.000050	mg/L	NC	40		
C097011	Dissolved Magnesium (Mg)	2025/09/25	107	80 - 120	108	80 - 120	<0.00050	mg/L	0.82	40		
C097011	Dissolved Manganese (Mn)	2025/09/25	105	80 - 120	105	80 - 120	<0.0000040	mg/L	NC	40		
C097011	Dissolved Molybdenum (Mo)	2025/09/25	101	80 - 120	102	80 - 120	<0.0000050	mg/L	156 (2)	40		
C097011	Dissolved Nickel (Ni)	2025/09/25	103	80 - 120	103	80 - 120	<0.000015	mg/L	NC	40		
C097011	Dissolved Potassium (K)	2025/09/25	108	80 - 120	108	80 - 120	<0.0050	mg/L	NC	40		
C097011	Dissolved Selenium (Se)	2025/09/25	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	40		
C097011	Dissolved Silicon (Si)	2025/09/25	99	80 - 120	102	80 - 120	<0.0012	mg/L	NC	40		
C097011	Dissolved Silver (Ag)	2025/09/25	96	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	40		
C097011	Dissolved Sodium (Na)	2025/09/25	105	80 - 120	106	80 - 120	<0.00050	mg/L	8.0	40		
C097011	Dissolved Strontium (Sr)	2025/09/25	102	80 - 120	102	80 - 120	<0.0000080	mg/L	NC	40		
C097011	Dissolved Sulphur (S)	2025/09/25	105	80 - 120	105	80 - 120	<0.0010	mg/L	NC	40		
C097011	Dissolved Thallium (Tl)	2025/09/25	109	80 - 120	109	80 - 120	<0.0000008	mg/L	NC	40		
C097011	Dissolved Tin (Sn)	2025/09/25	102	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	40		
C097011	Dissolved Titanium (Ti)	2025/09/25	102	80 - 120	105	80 - 120	<0.000030	mg/L	NC	40		
C097011	Dissolved Uranium (U)	2025/09/25	105	80 - 120	105	80 - 120	<0.0000005	mg/L	NC	40		
C097011	Dissolved Vanadium (V)	2025/09/25	103	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	40		
C097011	Dissolved Zinc (Zn)	2025/09/25	101	80 - 120	101	80 - 120	<0.000060	mg/L	NC	40		
C097011	Dissolved Zirconium (Zr)	2025/09/25	103	80 - 120	104	80 - 120	<0.0000080	mg/L	NC	40		
C097106	Alkalinity (PP as CaCO3)	2025/09/23					<0.50	mg/L	NC	20		
C097106	Alkalinity (Total as CaCO3)	2025/09/23			100	80 - 120	<0.50	mg/L	4.5	20		
C097106	Bicarbonate (HCO3)	2025/09/23					<0.50	mg/L	4.5	20		
C097106	Carbonate (CO3)	2025/09/23					<0.50	mg/L	NC	20		



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C097106	Hydroxide (OH)	2025/09/23					<0.50	mg/L	NC	20		
C097110	pH	2025/09/23			100	97 - 103			0.54	N/A		
C097113	Conductivity	2025/09/23			99	90 - 110	<2.0	uS/cm	NC	10		
C097114	Fluoride (F)	2025/09/23	95	80 - 120	97	80 - 120	<0.010	mg/L	0.96	20		
C098133	Total Nitrogen (N)	2025/09/25	89	80 - 120	111	80 - 120	<0.020	mg/L	0.73	20	105	80 - 120
C098135	Total Nitrogen (N)	2025/09/26	96	80 - 120	112	80 - 120	<0.020	mg/L	3.8	20	105	N/A
C098163	Total Ammonia (N)	2025/09/24	104	80 - 120	105	80 - 120	<0.0050	mg/L	0.070	20		
C098198	Dissolved Phosphorus (P)	2025/09/25	93	80 - 120	93	80 - 120	0.0011, RDL=0.0010 (1)	mg/L	NC	20	87	80 - 120
C098896	Total Phosphorus (P)	2025/09/25	93	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20	84	80 - 120
C098901	Total Phosphorus (P)	2025/09/25	NC	80 - 120	95	80 - 120	<0.0010	mg/L	1.5	20	87	80 - 120
C098947	Total Phosphorus (P)	2025/09/25	93	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20	86	80 - 120
C100236	Reactive Silica	2025/09/25	93	80 - 120	104	80 - 120	<0.050	mg/L	1.4	20		
C100250	Reactive Silica	2025/09/25	NC	80 - 120	104	80 - 120	<0.050	mg/L	2.8	20		
C100705	Reactive Silica	2025/09/25	NC	80 - 120	98	80 - 120	<0.050	mg/L	2.8	20		
C101294	Total Sulphide	2025/09/25	82	80 - 120	94	80 - 120	<0.0018	mg/L	NC	20		
C102726	Dissolved Mercury (Hg)	2025/09/26	101	80 - 120	98	80 - 120	<0.0000001	mg/L	19	25		
C102729	Total Mercury (Hg)	2025/10/01	113	80 - 120	95	80 - 120	<0.0000001	mg/L	2.6	25		
C109313	Dissolved Organic Carbon (C)	2025/10/03	NC	75 - 125	96	80 - 120	<0.20	mg/L	0.079	20		
C110129	Total Mercury (Hg)	2025/10/03	108	80 - 120	106	80 - 120	<0.0000001	mg/L	0.45	25		
C110739	Total Organic Carbon (C)	2025/10/03	98	75 - 125	102	80 - 120	<0.20	mg/L	0.79	20		
C110740	Dissolved Organic Carbon (C)	2025/10/03	73 (2)	75 - 125	102	80 - 120	<0.20	mg/L	0.71	20		
C115018	Total Organic Carbon (C)	2025/10/07	105	75 - 125	104	80 - 120	<0.20	mg/L	0.99	20		
C117110	Total Nitrogen (N)	2025/10/09	NC	80 - 120	114	80 - 120	<0.020	mg/L	12	20	105	80 - 120
C117708	Dissolved Mercury (Hg)	2025/10/09			109	80 - 120	<0.0000001	mg/L				



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C138599	Radium 226	2025/10/24			92	85 - 115	<0.0050	Bq/l				
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration) NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$). (1) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.												



Bureau Veritas Job #: C579084
Report Date: 2025/10/27

WSP Canada Inc.
Client Project #: September AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Steven Simpson, Lab Director

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Mauro Oselin, P.Chem., QP, Scientific Specialist

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Your P.O. #: 470000200
 Your Project #: August AEMP program
 Site Location: 176233659
 Your C.O.C. #: 761493-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
 1721 8th Street East
 Saskatoon, SK
 Canada S7H 0T4

Report Date: 2025/11/03
 Report #: R3728565
 Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C570633

Received: 2025/08/14, 14:00

Sample Matrix: Water
 # Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Low Level (1)	12	N/A	2025/08/17	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC (1)	1	N/A	2025/08/16	AB SOP-00020	SM24-4500-Cl/SO4-E m
Low level chloride/sulphate by AC (1)	11	N/A	2025/08/19	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (total) (1)	12	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	12	N/A	2025/08/20	CAL SOP-00270	SM 24 4500-CN m
Carbon (DOC) (1, 4)	12	N/A	2025/08/23	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C (1)	12	N/A	2025/08/17	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level (1)	12	N/A	2025/08/17	AB SOP-00005	SM 24 4500-F C m
Free Cyanide (1)	12	N/A	2025/08/20	CAL SOP-00270	Skalar I291-301w/r m
Sulphide (as H2S) (1)	6	N/A	2025/08/20		Auto Calc
Sulphide (as H2S) (1)	6	N/A	2025/08/21		Auto Calc
Hardness Total (calculated as CaCO3) (1, 5)	12	N/A	2025/08/22	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (1)	12	N/A	2025/08/22	BBY WI-00033	Auto Calc
Ultra Low Mercury - Diss, lab filtered (2)	12	N/A	2025/08/26	BBY7SOP-00022	EPA 1631E m
Ultra Low Level Mercury - Total (2)	12	2025/08/22	2025/08/22	BBY7SOP-00022	EPA 1631E m
Elements by ICPMS Ultra-Low Level (diss) (1)	12	N/A	2025/08/20	CAL SOP-00265	EPA 6020b R2 m
Elements by ICPMS Ultra-Low Level (tot.) (1)	12	N/A	2025/08/21	CAL SOP-00265	EPA 6020b R2 m
Un-Ionized Ammonia (NH3) as N (1)	11	N/A	2025/08/19		Auto Calc
Ammonia-N Low Level (Preserved) (1)	12	N/A	2025/08/19	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite (1)	12	N/A	2025/08/18		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (LL) (1)	12	N/A	2025/08/16	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N) (Low Level) (1)	12	2025/08/15	2025/08/18		Auto Calc
pH @25°C (1, 6)	12	N/A	2025/08/17	AB SOP-00005	SM 24 4500-H+B m
pH (Field) (1)	11	N/A	2025/08/16	Field Test	Field Test
Orthophosphate LL by Automated Analyzer (1, 7)	12	N/A	2025/08/16	AB SOP-00025	SM 24 4500-P A, F m
Total Sulphide (1)	6	2025/08/19	2025/08/20	AB SOP-00080	SM 24 4500 S2-A D Fm
Total Sulphide (1)	6	2025/08/20	2025/08/21	AB SOP-00080	SM 24 4500 S2-A D Fm
Silica (Reactive) (1)	12	N/A	2025/08/21	AB SOP-00011	EPA 370.1 R1978 m
Total Dissolved Solids (Filt. Residue) (1)	1	2025/08/16	2025/08/17	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	6	2025/08/18	2025/08/19	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue) (1)	5	2025/08/19	2025/08/20	AB SOP-00065	SM 24 2540 C m
Total Dissolved Solids (Calculated) (1)	12	N/A	2025/08/22		Auto Calc



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: 761493-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/11/03
Report #: R3728565
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C570633

Received: 2025/08/14, 14:00

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Temperature (Field) (1)	11	N/A	2025/08/16	Field Test	Field Test
Total Kjeldahl Nitrogen (Total) (1)	7	N/A	2025/08/20		Auto Calc
Total Kjeldahl Nitrogen (Total) (1)	5	N/A	2025/08/21		Auto Calc
Nitrogen (Total) (1)	7	2025/08/19	2025/08/20	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/08/20	2025/08/21	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	3	2025/08/21	2025/08/21	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total) (1)	1	2025/08/24	2025/08/25	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (1, 8)	12	N/A	2025/08/23	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (1, 9)	8	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Dissolved (1, 9)	4	2025/08/21	2025/08/21	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	7	2025/08/19	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	3	2025/08/20	2025/08/20	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total (1)	2	2025/08/21	2025/08/21	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR) (1)	1	2025/08/17	2025/08/18	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	6	2025/08/18	2025/08/19	AB SOP-00061	SM 24 2540 D m
Total Suspended Solids (NFR) (1)	5	2025/08/19	2025/08/19	AB SOP-00061	SM 24 2540 D m
Turbidity (1)	12	N/A	2025/08/16	CAL SOP-00081	SM 24 2130 B m
Radium-226 Low Level (3, 10)	12	N/A	2025/09/16	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless



Your P.O. #: 470000200
Your Project #: August AEMP program
Site Location: 176233659
Your C.O.C. #: 761493-01-01

Attention: Beatriz Cupe-Flores

WSP Canada Inc.
1721 8th Street East
Saskatoon, SK
Canada S7H 0T4

Report Date: 2025/11/03
Report #: R3728565
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C570633

Received: 2025/08/14, 14:00

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Rd., Unit 4, Mississauga, Ontario, L5N 5L9

(4) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

(5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(6) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

(7) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(8) TOC present in the sample should be considered as non-purgeable TOC.

(9) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

(10) Radium-226 results have not been corrected for blanks.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (780) 577-7100

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Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY543		DQY544		DQY545		
Sampling Date		2025/08/12 08:45		2025/08/12 11:20		2025/08/12 10:20		
COC Number		761493-01-01		761493-01-01		761493-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	QC Batch	BRP-29A-3	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	58.6	C049875	59.9	C049875	58.2	0.50	C049875
Total Hardness (CaCO ₃)	mg/L	58.1	C049873	58.1	C049873	58.3	0.50	C049873
Dissolved Nitrate (N)	mg/L	1.9	C049970	1.9	C051551	1.9	0.20	C051551
Nitrate (NO ₃)	mg/L	8.3	C051244	8.3	C051550	8.4	0.89	C051550
Nitrite (NO ₂)	mg/L	0.013	C051244	0.015	C051550	0.014	0.0033	C051550
Sulphide (as H ₂ S)	mg/L	<0.0020	C051078	<0.0020	C051078	<0.0020	0.0020	C051078
Calculated Total Dissolved Solids	mg/L	83	C051247	84	C051247	83	10	C051247
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.44	C051354	0.58	C051354	0.54	0.20	C051354
Un-Ionized Ammonia	mg/L	<0.00050	C053039	<0.00050	C053039	<0.00050	0.00050	C053039
Field Parameters								
Field pH	pH	6.66	ONSITE	6.67	ONSITE	6.65	N/A	ONSITE
Field Temperature (Fd)	deg. C	11.37	ONSITE	11.65	ONSITE	11.44	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	150	C051897	150	C051897	150	2.0	C051897
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00114	C055259	0.00113 (1)	C055259	0.00115	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00110	C055261	0.00114	C055261	0.00113	0.00050	C055261
Fluoride (F)	mg/L	0.014	C051898	0.014	C051898	0.015	0.010	C051898
Free Free Cyanide	mg/L	0.00088	C055264	0.00094	C055264	0.00094	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	4.1	C060065	4.0	C060065	4.1	0.50	C060065
pH	pH	6.18	C051896	6.21	C051896	6.18	N/A	C051896
Reactive Silica	mg/L	0.85	C057454	0.86	C057458	0.83	0.050	C057454
Alkalinity (Total as CaCO ₃)	mg/L	4.04	C051893	4.29	C051893	3.81	0.50	C051893
Total Organic Carbon (C)	mg/L	3.7	C060072	3.8	C060072	3.7	0.50	C060072
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Bicarbonate (HCO ₃)	mg/L	4.93	C051893	5.24	C051893	4.65	0.50	C051893
Carbonate (CO ₃)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Hydroxide (OH)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Total Dissolved Solids	mg/L	80	C052326	88	C052326	80	10	C052326
RDL = Reportable Detection Limit N/A = Not Applicable (1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.								



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY543		DQY544		DQY545		
Sampling Date		2025/08/12 08:45		2025/08/12 11:20		2025/08/12 10:20		
COC Number		761493-01-01		761493-01-01		761493-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	QC Batch	BRP-29A-3	RDL	QC Batch
Total Suspended Solids	mg/L	<1.0	C053116	<1.0	C053116	<1.0	1.0	C053116
Anions								
Orthophosphate (P)	mg/L	<0.0010	C051607	<0.0010	C051607	<0.0010	0.0010	C051607
Total Sulphide	mg/L	<0.0018	C053456	<0.0018	C053456	<0.0018	0.0018	C053456
Chloride (Cl)	mg/L	18	C053805	18	C053805	18	0.50	C053805
Sulphate (SO ₄)	mg/L	30	C053805	30	C053805	30	0.50	C053805
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C055317	<0.0010	C055317	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	0.0010	C055305	0.0013	C057739	<0.0010	0.0010	C053809
Total Ammonia (N)	mg/L	0.29	C053685	0.29	C053685	0.29	0.0050	C053685
Dissolved Nitrite (N)	mg/L	0.0041	C051695	0.0046	C051695	0.0043	0.0010	C051695
Dissolved Nitrate plus Nitrite (N)	mg/L	1.9	C051695	1.9	C051695	1.9	0.20	C051695
Total Nitrogen (N)	mg/L	2.3	C057051	2.5	C055504	2.4	0.10	C054439
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C089977	<0.0050	C089977	<0.0050	0.0050	C089977
Physical Properties								
Turbidity	NTU	<0.10	C051707	<0.10	C051707	<0.10	0.10	C051707
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY546		DQY547			DQY548		
Sampling Date		2025/08/12 12:25		2025/08/12 13:40			2025/08/12 14:40		
COC Number		761493-01-01		761493-01-01			761493-01-01		
	UNITS	BRP-29A-4	QC Batch	BRP-29A-5	RDL	QC Batch	BRP-31-4	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	58.0	C049875	59.3	0.50	C049875	49.8	0.50	C049875
Total Hardness (CaCO ₃)	mg/L	57.2	C049873	58.1	0.50	C049873	49.1	0.50	C049873
Dissolved Nitrate (N)	mg/L	2.2	C051551	1.9	0.20	C051551	1.4	0.20	C051551
Nitrate (NO ₃)	mg/L	9.5	C051550	8.5	0.89	C051550	6.1	0.89	C051550
Nitrite (NO ₂)	mg/L	0.015	C051550	0.016	0.0033	C051550	0.014	0.0033	C051550
Sulphide (as H ₂ S)	mg/L	<0.0020	C051078	<0.0020	0.0020	C051078	<0.0020	0.0020	C051078
Calculated Total Dissolved Solids	mg/L	84	C051247	84	10	C051247	68	10	C051247
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.52	C051354	0.67	0.20	C051354	0.40	0.20	C051354
Un-Ionized Ammonia	mg/L	<0.00050	C053039	<0.00050	0.00050	C053039	0.00052	0.00050	C053039

Field Parameters									
Field pH	pH	6.73	ONSITE	6.73	N/A	ONSITE	7.16	N/A	ONSITE
Field Temperature (Fd)	deg. C	11.79	ONSITE	12.10	N/A	ONSITE	12.35	N/A	ONSITE

Misc. Inorganics									
Conductivity	uS/cm	150	C051897	150	2.0	C051897	120	2.0	C051897
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00108	C055259	0.00100 (1)	0.00050	C055259	0.00064	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00099	C055261	0.00103	0.00050	C055261	0.00064	0.00050	C055261
Fluoride (F)	mg/L	0.015	C051898	0.014	0.010	C051898	0.015	0.010	C051898
Free Free Cyanide	mg/L	0.00088	C055264	0.00086	0.00050	C055264	0.00055	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	3.6	C060065	4.8	0.50	C060065	4.7	0.50	C060065
pH	pH	6.18	C051896	6.22	N/A	C051896	6.21	N/A	C051896
Reactive Silica	mg/L	0.83	C057454	0.86	0.050	C057454	0.63	0.050	C057454
Alkalinity (Total as CaCO ₃)	mg/L	4.04	C051893	3.88	0.50	C051893	4.43	0.50	C051893
Total Organic Carbon (C)	mg/L	3.6	C060072	4.9	0.50	C060072	4.6	0.50	C060072
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893
Bicarbonate (HCO ₃)	mg/L	4.92	C051893	4.73	0.50	C051893	5.41	0.50	C051893
Carbonate (CO ₃)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893
Hydroxide (OH)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893
Total Dissolved Solids	mg/L	64	C052326	48	10	C052326	52	10	C052326
Total Suspended Solids	mg/L	<1.0	C053116	<1.0	1.0	C053116	<1.0	1.0	C053116

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY546		DQY547			DQY548		
Sampling Date		2025/08/12 12:25		2025/08/12 13:40			2025/08/12 14:40		
COC Number		761493-01-01		761493-01-01			761493-01-01		
	UNITS	BRP-29A-4	QC Batch	BRP-29A-5	RDL	QC Batch	BRP-31-4	RDL	QC Batch
Anions									
Orthophosphate (P)	mg/L	<0.0010	C051614	<0.0010	0.0010	C051607	<0.0010	0.0010	C051614
Total Sulphide	mg/L	<0.0018	C053456	<0.0018	0.0018	C053456	<0.0018	0.0018	C053456
Chloride (Cl)	mg/L	18	C053805	18	0.50	C053802	13	0.50	C053805
Sulphate (SO4)	mg/L	30	C053805	30	0.50	C053802	26	0.50	C053805
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C057635	<0.0010	0.0010	C055317	<0.0010	0.0010	C057635
Total Phosphorus (P)	mg/L	0.0022	C053809	0.0023	0.0010	C053809	0.0027	0.0010	C053809
Total Ammonia (N)	mg/L	0.31	C053685	0.28	0.0050	C053685	0.16	0.0050	C053685
Dissolved Nitrite (N)	mg/L	0.0047	C051695	0.0050	0.0010	C051695	0.0041	0.0010	C051695
Dissolved Nitrate plus Nitrite (N)	mg/L	2.2	C051695	1.9	0.20	C051695	1.4	0.20	C051695
Total Nitrogen (N)	mg/L	2.7	C054434	2.6	0.10	C054434	1.8	0.020	C054434
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	C089977	<0.0050	0.0050	C089977	<0.0050	0.0050	C089977
Physical Properties									
Turbidity	NTU	<0.10	C051707	0.10	0.10	C051707	<0.10	0.10	C051707
RDL = Reportable Detection Limit									



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY549		DQY550		DQY551		
Sampling Date		2025/08/13 12:30		2025/08/13 13:40		2025/08/13 08:30		
COC Number		761493-01-01		761493-01-01		761493-01-01		
	UNITS	BRP-32-1	QC Batch	BRP-32-2	QC Batch	BRP-32-3	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO ₃)	mg/L	30.5	C049875	30.7	C049875	30.2	0.50	C049875
Total Hardness (CaCO ₃)	mg/L	31.6	C049873	30.9	C049873	30.9	0.50	C051547
Dissolved Nitrate (N)	mg/L	0.50	C051551	0.50	C051551	0.51	0.040	C051551
Nitrate (NO ₃)	mg/L	2.2	C051550	2.2	C051550	2.2	0.18	C051550
Nitrite (NO ₂)	mg/L	0.0040	C051550	0.0040	C051550	<0.0033	0.0033	C051550
Sulphide (as H ₂ S)	mg/L	<0.0020	C051078	<0.0020	C051078	<0.0020	0.0020	C051078
Calculated Total Dissolved Solids	mg/L	40	C051563	41	C051563	41	10	C051563
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.31	C051354	0.30	C051354	0.29	0.040	C051354
Un-Ionized Ammonia	mg/L	<0.00050	C053039	<0.00050	C053039	<0.00050	0.00050	C053039
Field Parameters								
Field pH	pH	7.04	ONSITE	7.04	ONSITE	7.02	N/A	ONSITE
Field Temperature (Fd)	deg. C	16.60	ONSITE	12.62	ONSITE	12.45	N/A	ONSITE
Misc. Inorganics								
Conductivity	uS/cm	75	C051897	77	C051897	77	2.0	C051897
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C055259	<0.00050	C055259	<0.00050	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	C055261	<0.00050	C055261	<0.00050	0.00050	C055261
Fluoride (F)	mg/L	0.015	C051898	0.014	C051898	0.014	0.010	C051898
Free Free Cyanide	mg/L	<0.00050	C055264	<0.00050	C055264	<0.00050	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	4.4	C060065	4.3	C060065	4.0	0.50	C060065
pH	pH	6.27	C051896	6.28	C051896	6.28	N/A	C051896
Reactive Silica	mg/L	0.27	C057454	0.27	C057454	0.27	0.050	C057454
Alkalinity (Total as CaCO ₃)	mg/L	5.04	C051893	4.94	C051893	4.96	0.50	C051893
Total Organic Carbon (C)	mg/L	4.5	C060072	4.2	C060072	4.2	0.50	C060072
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Bicarbonate (HCO ₃)	mg/L	6.15	C051893	6.02	C051893	6.05	0.50	C051893
Carbonate (CO ₃)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Hydroxide (OH)	mg/L	<0.50	C051893	<0.50	C051893	<0.50	0.50	C051893
Total Dissolved Solids	mg/L	60	C053549	56	C053549	52	10	C053549
Total Suspended Solids	mg/L	1.1	C053904	<1.0	C053904	<1.0	1.0	C053904
RDL = Reportable Detection Limit								
N/A = Not Applicable								



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY549		DQY550		DQY551		
Sampling Date		2025/08/13 12:30		2025/08/13 13:40		2025/08/13 08:30		
COC Number		761493-01-01		761493-01-01		761493-01-01		
	UNITS	BRP-32-1	QC Batch	BRP-32-2	QC Batch	BRP-32-3	RDL	QC Batch
Anions								
Orthophosphate (P)	mg/L	<0.0010	C051614	<0.0010	C051607	<0.0010	0.0010	C051607
Total Sulphide	mg/L	<0.0018	C055470	<0.0018	C055470	<0.0018	0.0018	C055470
Chloride (Cl)	mg/L	5.4	C053805	5.4	C053805	5.4	0.50	C053805
Sulphate (SO ₄)	mg/L	18	C053805	18	C053805	18	0.50	C053805
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0010	C055317	<0.0010	C055317	<0.0010	0.0010	C055317
Total Phosphorus (P)	mg/L	0.0012	C053809	0.0027	C055305	0.0012	0.0010	C053809
Total Ammonia (N)	mg/L	0.014	C053685	0.014	C053685	0.030	0.0050	C053671
Dissolved Nitrite (N)	mg/L	0.0011	C051695	0.0012	C051695	<0.0010	0.0010	C051695
Dissolved Nitrate plus Nitrite (N)	mg/L	0.50	C051695	0.50	C051695	0.51	0.040	C051695
Total Nitrogen (N)	mg/L	0.81	C054434	0.80	C057051	0.80	0.020	C054434
RADIONUCLIDE								
Radium 226	Bq/l	<0.0050	C089977	<0.0050	C089977	<0.0050	0.0050	C089977
Physical Properties								
Turbidity	NTU	<0.10	C051733	0.11	C051733	<0.10	0.10	C051733
RDL = Reportable Detection Limit								



Bureau Veritas Job #: C570633

Report Date: 2025/11/03

WSP Canada Inc.

Client Project #: August AEMP program

Site Location: 176233659

Your P.O. #: 470000200

Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY552		DQY553			DQY554		
Sampling Date		2025/08/13 11:00		2025/08/13 09:50			2025/08/13 14:20		
COC Number		761493-01-01		761493-01-01			761493-01-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	FB	RDL	QC Batch

Calculated Parameters									
Dissolved Hardness (CaCO ₃)	mg/L	31.0	C049875	30.5	0.50	C049875	<0.50	0.50	C049875
Total Hardness (CaCO ₃)	mg/L	30.7	C051547	31.4	0.50	C051547	<0.50	0.50	C049873
Dissolved Nitrate (N)	mg/L	0.50	C051551	0.49	0.040	C051551	<0.0030	0.0030	C049970
Nitrate (NO ₃)	mg/L	2.2	C051550	2.2	0.18	C051550	<0.013	0.013	C051244
Nitrite (NO ₂)	mg/L	0.0050	C051550	<0.0033	0.0033	C051550	<0.0033	0.0033	C051244
Sulphide (as H ₂ S)	mg/L	<0.0020	C051078	<0.0020	0.0020	C051078	<0.0020	0.0020	C051078
Calculated Total Dissolved Solids	mg/L	41	C051563	40	10	C051563	<10	10	C051247
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.30	C051354	0.35	0.040	C051354	<0.020	0.020	C051354
Un-Ionized Ammonia	mg/L	<0.00050	C053039	<0.00050	0.00050	C053039			

Field Parameters									
Field pH	pH	7.01	ONSITE	6.97	N/A	ONSITE			
Field Temperature (Fd)	deg. C	12.54	ONSITE	12.49	N/A	ONSITE			

Misc. Inorganics									
Conductivity	uS/cm	76	C051897	77	2.0	C051897	<2.0	2.0	C051897
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055 (1)	C055259	<0.00050 (2)	0.00050	C055259	<0.00050	0.00050	C055259
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00058	C055261	0.00050 (3)	0.00050	C055261	<0.00050	0.00050	C055261
Fluoride (F)	mg/L	0.014	C051898	<0.010	0.010	C051898	<0.010	0.010	C051898
Free Free Cyanide	mg/L	<0.00050	C055264	0.00052	0.00050	C055264	<0.00050	0.00050	C055264
Dissolved Organic Carbon (C)	mg/L	4.2	C060065	4.3	0.50	C060065	<0.50	0.50	C060065
pH	pH	6.21	C051896	6.20	N/A	C051896	5.67	N/A	C051896
Reactive Silica	mg/L	0.29	C057458	0.27	0.050	C057454	<0.050	0.050	C057458
Alkalinity (Total as CaCO ₃)	mg/L	5.11	C051893	5.00	0.50	C051893	<0.50	0.50	C051893
Total Organic Carbon (C)	mg/L	4.5	C060072	4.2	0.50	C060072	<0.50	0.50	C060072
Alkalinity (PP as CaCO ₃)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893
Bicarbonate (HCO ₃)	mg/L	6.23	C051893	6.10	0.50	C051893	<0.50	0.50	C051893
Carbonate (CO ₃)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(2) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent. SAD Cyanide < WAD Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(3) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQY552		DQY553			DQY554		
Sampling Date		2025/08/13 11:00		2025/08/13 09:50			2025/08/13 14:20		
COC Number		761493-01-01		761493-01-01			761493-01-01		
	UNITS	BRP-32-4	QC Batch	BRP-32-5	RDL	QC Batch	FB	RDL	QC Batch
Hydroxide (OH)	mg/L	<0.50	C051893	<0.50	0.50	C051893	<0.50	0.50	C051893
Total Dissolved Solids	mg/L	56	C053549	52	10	C053549	<10	10	C051769
Total Suspended Solids	mg/L	1.6	C053904	<1.0	1.0	C053904	1.9 (1)	1.7	C051963
Anions									
Orthophosphate (P)	mg/L	<0.0010	C051614	<0.0010	0.0010	C051614	0.0013	0.0010	C051607
Total Sulphide	mg/L	<0.0018	C055470	<0.0018	0.0018	C055470	<0.0018	0.0018	C055470
Chloride (Cl)	mg/L	5.5	C053805	5.4	0.50	C053805	<0.50	0.50	C051592
Sulphate (SO4)	mg/L	18	C053805	18	0.50	C053805	<0.50	0.50	C051592
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0010	C055317	<0.0010	0.0010	C057635	<0.0010 (2)	0.0010	C057635
Total Phosphorus (P)	mg/L	0.0030	C053809	0.0025	0.0010	C055305	<0.0010 (3)	0.0010	C057739
Total Ammonia (N)	mg/L	0.015	C053685	0.014	0.0050	C053685	<0.0050	0.0050	C053685
Dissolved Nitrite (N)	mg/L	0.0014	C051695	<0.0010	0.0010	C051695	<0.0010	0.0010	C051553
Dissolved Nitrate plus Nitrite (N)	mg/L	0.50	C051695	0.49	0.040	C051695	<0.0030	0.0030	C051553
Total Nitrogen (N)	mg/L	0.80	C054439	0.83	0.020	C057051	<0.020	0.020	C061362
RADIONUCLIDE									
Radium 226	Bq/l	<0.0050	C089977	<0.0050	0.0050	C089977	<0.0050	0.0050	C089977
Physical Properties									
Turbidity	NTU	<0.10	C051733	<0.10	0.10	C051733	<0.10	0.10	C051737
RDL = Reportable Detection Limit (1) Detection limits raised due to insufficient sample volume. (2) Dissolved Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent. (3) Total Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.									



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DQY543		DQY544	DQY545	DQY546		
Sampling Date		2025/08/12 08:45		2025/08/12 11:20	2025/08/12 10:20	2025/08/12 12:25		
COC Number		761493-01-01		761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-1	QC Batch	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000156	C058751	0.00000143	0.00000207	0.00000149	0.00000010	C058751
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000195	C062401	0.00000167	0.00000134	0.00000152	0.00000010	C062403
RDL = Reportable Detection Limit								

Bureau Veritas ID		DQY547		DQY548	DQY549	DQY550		
Sampling Date		2025/08/12 13:40		2025/08/12 14:40	2025/08/13 12:30	2025/08/13 13:40		
COC Number		761493-01-01		761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-5	QC Batch	BRP-31-4	BRP-32-1	BRP-32-2	RDL	QC Batch

Elements								
Total Mercury (Hg)	mg/L	0.00000157	C058751	0.00000194	0.00000125	0.00000180	0.00000010	C058751
Lab Filtered Elements								
Dissolved Mercury (Hg)	mg/L	0.00000131	C062403	0.00000138	0.00000154	0.00000093	0.00000010	C062401
RDL = Reportable Detection Limit								

Bureau Veritas ID		DQY551	DQY552	DQY553	DQY554		
Sampling Date		2025/08/13 08:30	2025/08/13 11:00	2025/08/13 09:50	2025/08/13 14:20		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-32-3	BRP-32-4	BRP-32-5	FB	RDL	QC Batch

Elements							
Total Mercury (Hg)	mg/L	0.00000133	0.00000135	0.00000126	<0.0000001	0.00000010	C058751
Lab Filtered Elements							
Dissolved Mercury (Hg)	mg/L	0.00000133	0.00000156	0.00000129	<0.0000001	0.00000010	C062401
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY543	DQY544	DQY545	DQY546		
Sampling Date		2025/08/12 08:45	2025/08/12 11:20	2025/08/12 10:20	2025/08/12 12:25		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0228	0.0219	0.0225	0.0221	0.00010	C053643
Dissolved Antimony (Sb)	mg/L	0.0000205	0.0000144	0.0000215	0.0000144	0.0000030	C053643
Dissolved Arsenic (As)	mg/L	0.000329	0.000331	0.000323	0.000330	0.0000050	C053643
Dissolved Barium (Ba)	mg/L	0.0191	0.0192	0.0194	0.0192	0.0000080	C053643
Dissolved Beryllium (Be)	mg/L	0.0000046	0.0000057	0.0000090	0.0000094	0.0000015	C053643
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053643
Dissolved Boron (B)	mg/L	0.00348	0.00350	0.00368	0.00353	0.00010	C053643
Dissolved Cadmium (Cd)	mg/L	0.0000268	0.0000281	0.0000324	0.0000306	0.0000030	C053643
Dissolved Calcium (Ca)	mg/L	13.3	13.6	13.1	13.2	0.0020	C053643
Dissolved Chromium (Cr)	mg/L	0.000097	0.000105	0.000091	0.000073	0.000020	C053643
Dissolved Cobalt (Co)	mg/L	0.00162	0.00156	0.00157	0.00152	0.0000040	C053643
Dissolved Copper (Cu)	mg/L	0.00261	0.00258	0.00280	0.00250	0.000020	C053643
Dissolved Iron (Fe)	mg/L	0.0074	0.0074	0.0074	0.0077	0.0010	C053643
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	0.0000048	<0.0000030	0.0000030	C053643
Dissolved Lithium (Li)	mg/L	0.00136	0.00136	0.00137	0.00136	0.000050	C053643
Dissolved Magnesium (Mg)	mg/L	6.18	6.31	6.23	6.07	0.00050	C053643
Dissolved Manganese (Mn)	mg/L	0.0251	0.0241	0.0245	0.0235	0.0000040	C053643
Dissolved Molybdenum (Mo)	mg/L	0.0000256	0.0000272	0.0000252	0.0000212	0.0000050	C053643
Dissolved Nickel (Ni)	mg/L	0.0104	0.0103	0.0105	0.0102	0.000015	C053643
Dissolved Potassium (K)	mg/L	1.39	1.39	1.41	1.37	0.0050	C053643
Dissolved Selenium (Se)	mg/L	0.000075	0.000043	0.000040	0.000091	0.000010	C053643
Dissolved Silicon (Si)	mg/L	0.329	0.333	0.325	0.329	0.0012	C053643
Dissolved Silver (Ag)	mg/L	<0.0000020	0.0000022	<0.0000020	<0.0000020	0.0000020	C053643
Dissolved Sodium (Na)	mg/L	2.22	2.20	2.22	2.24	0.00050	C053643
Dissolved Strontium (Sr)	mg/L	0.0715	0.0726	0.0741	0.0720	0.0000080	C053643
Dissolved Sulphur (S)	mg/L	9.18	8.67	9.51	8.86	0.0010	C053643
Dissolved Thallium (Tl)	mg/L	0.0000067	0.0000069	0.0000072	0.0000061	0.0000020	C053643
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C053643
Dissolved Titanium (Ti)	mg/L	0.000077	0.000132	0.000090	0.000051	0.000030	C053643
Dissolved Uranium (U)	mg/L	0.00000918	0.00000991	0.0000102	0.00000964	0.00000050	C053643
Dissolved Vanadium (V)	mg/L	0.0000137	0.0000119	0.0000144	0.0000113	0.0000050	C053643
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY543	DQY544	DQY545	DQY546		
Sampling Date		2025/08/12 08:45	2025/08/12 11:20	2025/08/12 10:20	2025/08/12 12:25		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00296	0.00286	0.00305	0.00279	0.000060	C053643
Dissolved Zirconium (Zr)	mg/L	0.0000619	0.0000622	0.0000606	0.0000609	0.0000080	C053643
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0344	0.0332	0.0328	0.0324	0.00010	C053653
Total Antimony (Sb)	mg/L	0.0000188	0.0000215	0.0000239	0.0000215	0.0000030	C053653
Total Arsenic (As)	mg/L	0.000341	0.000334	0.000332	0.000333	0.0000050	C053653
Total Barium (Ba)	mg/L	0.0196	0.0197	0.0197	0.0194	0.0000080	C053653
Total Beryllium (Be)	mg/L	0.0000107	0.0000102	0.0000079	0.0000080	0.0000015	C053653
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053653
Total Boron (B)	mg/L	0.00462	0.00500	0.00530	0.00440	0.00010	C053653
Total Cadmium (Cd)	mg/L	0.0000297	0.0000328	0.0000347	0.0000307	0.0000030	C053653
Total Calcium (Ca)	mg/L	13.2	13.4	13.4	13.1	0.0020	C053653
Total Chromium (Cr)	mg/L	0.000124	0.000134	0.000138	0.000118	0.000020	C053653
Total Cobalt (Co)	mg/L	0.00168	0.00158	0.00159	0.00156	0.0000040	C053653
Total Copper (Cu)	mg/L	0.00282	0.00278	0.00278	0.00279	0.000020	C053653
Total Iron (Fe)	mg/L	0.0261	0.0271	0.0249	0.0255	0.0010	C053653
Total Lead (Pb)	mg/L	0.0000101	0.0000088	0.0000086	0.0000091	0.0000030	C053653
Total Lithium (Li)	mg/L	0.00132	0.00135	0.00135	0.00126	0.000050	C053653
Total Magnesium (Mg)	mg/L	6.10	6.02	6.03	5.95	0.00050	C053653
Total Manganese (Mn)	mg/L	0.0256	0.0244	0.0249	0.0239	0.0000040	C053653
Total Molybdenum (Mo)	mg/L	0.0000242	0.0000206	0.0000276	0.0000300	0.0000050	C053653
Total Nickel (Ni)	mg/L	0.0106	0.0105	0.0105	0.0104	0.000015	C053653
Total Potassium (K)	mg/L	1.40	1.40	1.40	1.38	0.0050	C053653
Total Selenium (Se)	mg/L	0.000077	0.000083	0.000090	0.000084	0.000010	C053653
Total Silicon (Si)	mg/L	0.336	0.339	0.339	0.330	0.0012	C053653
Total Silver (Ag)	mg/L	0.0000038	0.0000030	0.0000041	0.0000033	0.0000020	C053653
Total Sodium (Na)	mg/L	2.34	2.39	2.40	2.33	0.00050	C053653
Total Strontium (Sr)	mg/L	0.0738	0.0740	0.0740	0.0730	0.0000080	C053653
Total Sulphur (S)	mg/L	9.12	9.11	9.09	8.82	0.0010	C053653
Total Thallium (Tl)	mg/L	0.0000066	0.0000062	0.0000057	0.0000064	0.0000020	C053653
Total Tin (Sn)	mg/L	<0.0000050	0.0000067	<0.0000050	<0.0000050	0.0000050	C053653
Total Titanium (Ti)	mg/L	0.000071	0.000159	0.000037	0.000220	0.000030	C053653
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
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Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY543	DQY544	DQY545	DQY546		
Sampling Date		2025/08/12 08:45	2025/08/12 11:20	2025/08/12 10:20	2025/08/12 12:25		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-1	BRP-29A-2	BRP-29A-3	BRP-29A-4	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000120	0.0000120	0.0000120	0.0000127	0.00000050	C053653
Total Vanadium (V)	mg/L	0.0000162	0.0000201	0.0000180	0.0000190	0.00000050	C053653
Total Zinc (Zn)	mg/L	0.00297	0.00299	0.00291	0.00291	0.000060	C053653
Total Zirconium (Zr)	mg/L	0.0000691	0.0000649	0.0000690	0.0000635	0.0000080	C053653
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY547	DQY548	DQY549	DQY550		
Sampling Date		2025/08/12 13:40	2025/08/12 14:40	2025/08/13 12:30	2025/08/13 13:40		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-5	BRP-31-4	BRP-32-1	BRP-32-2	RDL	QC Batch

Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0226	0.0173	0.0114	0.0114	0.00010	C053643
Dissolved Antimony (Sb)	mg/L	0.0000173	0.0000205	0.0000123	0.0000112	0.0000030	C053643
Dissolved Arsenic (As)	mg/L	0.000315	0.000333	0.000254	0.000268	0.0000050	C053643
Dissolved Barium (Ba)	mg/L	0.0194	0.0166	0.00983	0.00984	0.0000080	C053643
Dissolved Beryllium (Be)	mg/L	0.0000062	0.0000060	0.0000027	0.0000024	0.0000015	C053643
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053643
Dissolved Boron (B)	mg/L	0.00352	0.00339	0.00266	0.00260	0.00010	C053643
Dissolved Cadmium (Cd)	mg/L	0.0000336	0.0000192	0.0000048	0.0000045	0.0000030	C053643
Dissolved Calcium (Ca)	mg/L	13.3	11.0	6.22	6.17	0.0020	C053643
Dissolved Chromium (Cr)	mg/L	0.000115	0.000110	0.000081	0.000105	0.000020	C053643
Dissolved Cobalt (Co)	mg/L	0.00155	0.000920	0.000108	0.000121	0.0000040	C053643
Dissolved Copper (Cu)	mg/L	0.00258	0.00228	0.00179	0.00180	0.000020	C053643
Dissolved Iron (Fe)	mg/L	0.0072	0.0105	0.0073	0.0071	0.0010	C053643
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	<0.0000030	0.0000030	C053643
Dissolved Lithium (Li)	mg/L	0.00135	0.00125	0.000919	0.000983	0.000050	C053643
Dissolved Magnesium (Mg)	mg/L	6.33	5.41	3.64	3.71	0.00050	C053643
Dissolved Manganese (Mn)	mg/L	0.0238	0.0132	0.00128	0.00140	0.0000040	C053643
Dissolved Molybdenum (Mo)	mg/L	0.0000193	0.0000260	0.0000132	0.0000129	0.0000050	C053643
Dissolved Nickel (Ni)	mg/L	0.0104	0.00814	0.00542	0.00545	0.000015	C053643
Dissolved Potassium (K)	mg/L	1.40	1.17	0.663	0.669	0.0050	C053643
Dissolved Selenium (Se)	mg/L	0.000081	0.000062	0.000030	0.000018	0.000010	C053643
Dissolved Silicon (Si)	mg/L	0.325	0.241	0.109	0.103	0.0012	C053643
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	C053643
Dissolved Sodium (Na)	mg/L	2.21	1.92	1.13	1.17	0.00050	C053643
Dissolved Strontium (Sr)	mg/L	0.0729	0.0572	0.0272	0.0268	0.0000080	C053643
Dissolved Sulphur (S)	mg/L	9.35	7.69	5.55	5.56	0.0010	C053643
Dissolved Thallium (Tl)	mg/L	0.0000057	0.0000047	0.0000030	<0.0000020	0.0000020	C053643
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	C053643
Dissolved Titanium (Ti)	mg/L	<0.000030	<0.000030	0.000089	<0.000030	0.000030	C053643
Dissolved Uranium (U)	mg/L	0.00000969	0.00000838	0.00000860	0.00000904	0.00000050	C053643
Dissolved Vanadium (V)	mg/L	0.0000180	0.0000130	0.0000126	0.0000193	0.0000050	C053643
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
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Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY547	DQY548	DQY549	DQY550		
Sampling Date		2025/08/12 13:40	2025/08/12 14:40	2025/08/13 12:30	2025/08/13 13:40		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-5	BRP-31-4	BRP-32-1	BRP-32-2	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00285	0.00199	0.000484	0.000507	0.000060	C053643
Dissolved Zirconium (Zr)	mg/L	0.0000647	0.0000638	0.0000545	0.0000574	0.0000080	C053643
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0327	0.0252	0.0168	0.0162	0.00010	C053653
Total Antimony (Sb)	mg/L	0.0000208	0.0000210	0.0000220	0.0000157	0.0000030	C053653
Total Arsenic (As)	mg/L	0.000332	0.000332	0.000278	0.000266	0.0000050	C053653
Total Barium (Ba)	mg/L	0.0197	0.0169	0.0104	0.0100	0.0000080	C053653
Total Beryllium (Be)	mg/L	0.0000056	0.0000049	0.0000017	0.0000023	0.0000015	C053653
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053653
Total Boron (B)	mg/L	0.00501	0.00444	0.00454	0.00368	0.00010	C053653
Total Cadmium (Cd)	mg/L	0.0000360	0.0000213	0.0000060	0.0000071	0.0000030	C053653
Total Calcium (Ca)	mg/L	13.2	10.9	6.37	6.20	0.0020	C053653
Total Chromium (Cr)	mg/L	0.000134	0.000125	0.000120	0.000145	0.000020	C053653
Total Cobalt (Co)	mg/L	0.00157	0.000976	0.000210	0.000214	0.0000040	C053653
Total Copper (Cu)	mg/L	0.00275	0.00246	0.00197	0.00198	0.000020	C053653
Total Iron (Fe)	mg/L	0.0254	0.0323	0.0252	0.0247	0.0010	C053653
Total Lead (Pb)	mg/L	0.0000079	0.0000057	<0.0000030	<0.0000030	0.0000030	C053653
Total Lithium (Li)	mg/L	0.00131	0.00114	0.000956	0.000914	0.000050	C053653
Total Magnesium (Mg)	mg/L	6.09	5.34	3.80	3.74	0.00050	C053653
Total Manganese (Mn)	mg/L	0.0241	0.0140	0.00332	0.00328	0.0000040	C053653
Total Molybdenum (Mo)	mg/L	0.0000233	0.0000235	0.0000193	0.0000187	0.0000050	C053653
Total Nickel (Ni)	mg/L	0.0105	0.00842	0.00589	0.00573	0.000015	C053653
Total Potassium (K)	mg/L	1.41	1.19	0.698	0.682	0.0050	C053653
Total Selenium (Se)	mg/L	0.000089	0.000081	0.000037	0.000016	0.000010	C053653
Total Silicon (Si)	mg/L	0.331	0.241	0.114	0.110	0.0012	C053653
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000023	0.0000020	C053653
Total Sodium (Na)	mg/L	2.39	2.03	1.25	1.21	0.00050	C053653
Total Strontium (Sr)	mg/L	0.0746	0.0590	0.0289	0.0277	0.0000080	C053653
Total Sulphur (S)	mg/L	9.15	8.12	5.98	5.59	0.0010	C053653
Total Thallium (Tl)	mg/L	0.0000061	0.0000046	0.0000024	0.0000028	0.0000020	C053653
Total Tin (Sn)	mg/L	<0.0000050	0.0000067	0.0000068	<0.0000050	0.0000050	C053653
Total Titanium (Ti)	mg/L	<0.000030	0.000071	0.000113	0.000052	0.000030	C053653
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY547	DQY548	DQY549	DQY550		
Sampling Date		2025/08/12 13:40	2025/08/12 14:40	2025/08/13 12:30	2025/08/13 13:40		
COC Number		761493-01-01	761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-29A-5	BRP-31-4	BRP-32-1	BRP-32-2	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000121	0.0000103	0.0000112	0.0000103	0.00000050	C053653
Total Vanadium (V)	mg/L	0.0000191	0.0000187	0.0000245	0.0000186	0.00000050	C053653
Total Zinc (Zn)	mg/L	0.00289	0.00210	0.000596	0.000582	0.000060	C053653
Total Zirconium (Zr)	mg/L	0.0000683	0.0000631	0.0000559	0.0000580	0.0000080	C053653
RDL = Reportable Detection Limit							



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY551	DQY552	DQY553		
Sampling Date		2025/08/13 08:30	2025/08/13 11:00	2025/08/13 09:50		
COC Number		761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-32-3	BRP-32-4	BRP-32-5	RDL	QC Batch
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.0122	0.0112	0.0112	0.00010	C053643
Dissolved Antimony (Sb)	mg/L	0.0000090	0.0000106	0.0000109	0.0000030	C053643
Dissolved Arsenic (As)	mg/L	0.000243	0.000238	0.000241	0.0000050	C053643
Dissolved Barium (Ba)	mg/L	0.00977	0.00967	0.00981	0.0000080	C053643
Dissolved Beryllium (Be)	mg/L	0.0000030	0.0000020	<0.0000015	0.0000015	C053643
Dissolved Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053643
Dissolved Boron (B)	mg/L	0.00256	0.00249	0.00257	0.00010	C053643
Dissolved Cadmium (Cd)	mg/L	0.0000062	0.0000058	0.0000037	0.0000030	C053643
Dissolved Calcium (Ca)	mg/L	6.14	6.21	6.26	0.0020	C053643
Dissolved Chromium (Cr)	mg/L	0.000087	0.000083	0.000083	0.000020	C053643
Dissolved Cobalt (Co)	mg/L	0.000110	0.000111	0.000110	0.0000040	C053643
Dissolved Copper (Cu)	mg/L	0.00175	0.00179	0.00176	0.000020	C053643
Dissolved Iron (Fe)	mg/L	0.0070	0.0071	0.0070	0.0010	C053643
Dissolved Lead (Pb)	mg/L	<0.0000030	<0.0000030	<0.0000030	0.0000030	C053643
Dissolved Lithium (Li)	mg/L	0.000944	0.000940	0.000975	0.000050	C053643
Dissolved Magnesium (Mg)	mg/L	3.61	3.75	3.60	0.00050	C053643
Dissolved Manganese (Mn)	mg/L	0.00132	0.00143	0.00131	0.0000040	C053643
Dissolved Molybdenum (Mo)	mg/L	0.0000141	0.0000223	0.0000176	0.0000050	C053643
Dissolved Nickel (Ni)	mg/L	0.00540	0.00548	0.00540	0.000015	C053643
Dissolved Potassium (K)	mg/L	0.658	0.667	0.662	0.0050	C053643
Dissolved Selenium (Se)	mg/L	0.000030	0.000048	0.000029	0.000010	C053643
Dissolved Silicon (Si)	mg/L	0.108	0.109	0.110	0.0012	C053643
Dissolved Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	C053643
Dissolved Sodium (Na)	mg/L	1.17	1.17	1.15	0.00050	C053643
Dissolved Strontium (Sr)	mg/L	0.0271	0.0270	0.0270	0.0000080	C053643
Dissolved Sulphur (S)	mg/L	5.54	5.40	5.47	0.0010	C053643
Dissolved Thallium (Tl)	mg/L	0.0000025	0.0000025	0.0000029	0.0000020	C053643
Dissolved Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	C053643
Dissolved Titanium (Ti)	mg/L	<0.000030	0.000053	<0.000030	0.000030	C053643
Dissolved Uranium (U)	mg/L	0.00000804	0.00000778	0.00000779	0.00000050	C053643
Dissolved Vanadium (V)	mg/L	0.0000164	0.0000156	0.0000121	0.0000050	C053643
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY551	DQY552	DQY553		
Sampling Date		2025/08/13 08:30	2025/08/13 11:00	2025/08/13 09:50		
COC Number		761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-32-3	BRP-32-4	BRP-32-5	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.000478	0.000490	0.000474	0.000060	C053643
Dissolved Zirconium (Zr)	mg/L	0.0000539	0.0000526	0.0000559	0.0000080	C053643
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0167	0.0166	0.0165	0.00010	C053653
Total Antimony (Sb)	mg/L	0.0000138	0.0000151	0.0000157	0.0000030	C053653
Total Arsenic (As)	mg/L	0.000258	0.000279	0.000272	0.0000050	C053653
Total Barium (Ba)	mg/L	0.0103	0.0101	0.00995	0.0000080	C053653
Total Beryllium (Be)	mg/L	0.0000023	0.0000029	<0.0000015	0.0000015	C053653
Total Bismuth (Bi)	mg/L	<0.0000010	<0.0000010	<0.0000010	0.0000010	C053653
Total Boron (B)	mg/L	0.00386	0.00384	0.00359	0.00010	C053653
Total Cadmium (Cd)	mg/L	0.0000052	0.0000068	0.0000058	0.0000030	C053653
Total Calcium (Ca)	mg/L	6.26	6.19	6.32	0.0020	C053653
Total Chromium (Cr)	mg/L	0.000120	0.000103	0.000141	0.000020	C053653
Total Cobalt (Co)	mg/L	0.000203	0.000205	0.000199	0.0000040	C053653
Total Copper (Cu)	mg/L	0.00198	0.00196	0.00195	0.000020	C053653
Total Iron (Fe)	mg/L	0.0250	0.0248	0.0250	0.0010	C053653
Total Lead (Pb)	mg/L	0.0000041	<0.0000030	0.0000033	0.0000030	C053653
Total Lithium (Li)	mg/L	0.000913	0.000899	0.000941	0.000050	C053653
Total Magnesium (Mg)	mg/L	3.70	3.71	3.79	0.00050	C053653
Total Manganese (Mn)	mg/L	0.00323	0.00328	0.00327	0.0000040	C053653
Total Molybdenum (Mo)	mg/L	0.0000205	0.0000117	0.0000173	0.0000050	C053653
Total Nickel (Ni)	mg/L	0.00578	0.00572	0.00569	0.000015	C053653
Total Potassium (K)	mg/L	0.684	0.682	0.671	0.0050	C053653
Total Selenium (Se)	mg/L	0.000029	0.000038	0.000040	0.000010	C053653
Total Silicon (Si)	mg/L	0.111	0.111	0.113	0.0012	C053653
Total Silver (Ag)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	C053653
Total Sodium (Na)	mg/L	1.25	1.22	1.22	0.00050	C053653
Total Strontium (Sr)	mg/L	0.0284	0.0281	0.0278	0.0000080	C053653
Total Sulphur (S)	mg/L	5.55	5.63	5.49	0.0010	C053653
Total Thallium (Tl)	mg/L	0.0000033	0.0000028	0.0000028	0.0000020	C053653
Total Tin (Sn)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	C053653
Total Titanium (Ti)	mg/L	<0.000030	0.000081	0.000064	0.000030	C053653
RDL = Reportable Detection Limit						



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY551	DQY552	DQY553		
Sampling Date		2025/08/13 08:30	2025/08/13 11:00	2025/08/13 09:50		
COC Number		761493-01-01	761493-01-01	761493-01-01		
	UNITS	BRP-32-3	BRP-32-4	BRP-32-5	RDL	QC Batch
Total Uranium (U)	mg/L	0.0000103	0.0000101	0.0000110	0.00000050	C053653
Total Vanadium (V)	mg/L	0.0000192	0.0000204	0.0000220	0.0000050	C053653
Total Zinc (Zn)	mg/L	0.000628	0.000599	0.000590	0.000060	C053653
Total Zirconium (Zr)	mg/L	0.0000611	0.0000616	0.0000616	0.0000080	C053653
RDL = Reportable Detection Limit						



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY554		
Sampling Date		2025/08/13 14:20		
COC Number		761493-01-01		
	UNITS	FB	RDL	QC Batch
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00010	0.00010	C053643
Dissolved Antimony (Sb)	mg/L	<0.0000030	0.0000030	C053643
Dissolved Arsenic (As)	mg/L	<0.0000050	0.0000050	C053643
Dissolved Barium (Ba)	mg/L	<0.0000080	0.0000080	C053643
Dissolved Beryllium (Be)	mg/L	<0.0000015	0.0000015	C053643
Dissolved Bismuth (Bi)	mg/L	<0.0000010	0.0000010	C053643
Dissolved Boron (B)	mg/L	<0.00010	0.00010	C053643
Dissolved Cadmium (Cd)	mg/L	<0.0000030	0.0000030	C053643
Dissolved Calcium (Ca)	mg/L	0.0027	0.0020	C053643
Dissolved Chromium (Cr)	mg/L	<0.000020	0.000020	C053643
Dissolved Cobalt (Co)	mg/L	<0.0000040	0.0000040	C053643
Dissolved Copper (Cu)	mg/L	0.000048	0.000020	C053643
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	C053643
Dissolved Lead (Pb)	mg/L	<0.0000030	0.0000030	C053643
Dissolved Lithium (Li)	mg/L	<0.000050	0.000050	C053643
Dissolved Magnesium (Mg)	mg/L	<0.00050	0.00050	C053643
Dissolved Manganese (Mn)	mg/L	<0.0000040	0.0000040	C053643
Dissolved Molybdenum (Mo)	mg/L	<0.0000050	0.0000050	C053643
Dissolved Nickel (Ni)	mg/L	<0.000015	0.000015	C053643
Dissolved Potassium (K)	mg/L	<0.0050	0.0050	C053643
Dissolved Selenium (Se)	mg/L	<0.000010	0.000010	C053643
Dissolved Silicon (Si)	mg/L	<0.0012	0.0012	C053643
Dissolved Silver (Ag)	mg/L	<0.0000020	0.0000020	C053643
Dissolved Sodium (Na)	mg/L	0.00131	0.00050	C053643
Dissolved Strontium (Sr)	mg/L	<0.0000080	0.0000080	C053643
Dissolved Sulphur (S)	mg/L	<0.0010	0.0010	C053643
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	C053643
Dissolved Tin (Sn)	mg/L	<0.0000050	0.0000050	C053643
Dissolved Titanium (Ti)	mg/L	<0.000030	0.000030	C053643
Dissolved Uranium (U)	mg/L	<0.0000005	0.00000050	C053643
Dissolved Vanadium (V)	mg/L	<0.0000050	0.0000050	C053643
RDL = Reportable Detection Limit				



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY554		
Sampling Date		2025/08/13 14:20		
COC Number		761493-01-01		
	UNITS	FB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.000060	0.000060	C053643
Dissolved Zirconium (Zr)	mg/L	<0.0000080	0.0000080	C053643
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00016	0.00010	C053653
Total Antimony (Sb)	mg/L	<0.0000030	0.0000030	C053653
Total Arsenic (As)	mg/L	<0.0000050	0.0000050	C053653
Total Barium (Ba)	mg/L	<0.0000080	0.0000080	C053653
Total Beryllium (Be)	mg/L	<0.0000015	0.0000015	C053653
Total Bismuth (Bi)	mg/L	<0.0000010	0.0000010	C053653
Total Cadmium (Cd)	mg/L	<0.0000030	0.0000030	C053653
Total Calcium (Ca)	mg/L	<0.0020	0.0020	C053653
Total Chromium (Cr)	mg/L	<0.000020	0.000020	C053653
Total Cobalt (Co)	mg/L	<0.0000040	0.0000040	C053653
Total Copper (Cu)	mg/L	<0.000020	0.000020	C053653
Total Iron (Fe)	mg/L	<0.0010	0.0010	C053653
Total Lead (Pb)	mg/L	<0.0000030	0.0000030	C053653
Total Lithium (Li)	mg/L	<0.000050	0.000050	C053653
Total Magnesium (Mg)	mg/L	<0.00050	0.00050	C053653
Total Manganese (Mn)	mg/L	0.0000058	0.0000040	C053653
Total Molybdenum (Mo)	mg/L	<0.0000050	0.0000050	C053653
Total Nickel (Ni)	mg/L	<0.000015	0.000015	C053653
Total Potassium (K)	mg/L	<0.0050	0.0050	C053653
Total Selenium (Se)	mg/L	<0.000010	0.000010	C053653
Total Silicon (Si)	mg/L	<0.0012	0.0012	C053653
Total Silver (Ag)	mg/L	<0.0000020	0.0000020	C053653
Total Sodium (Na)	mg/L	<0.00050	0.00050	C053653
Total Strontium (Sr)	mg/L	<0.0000080	0.0000080	C053653
Total Sulphur (S)	mg/L	<0.0010	0.0010	C053653
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	C053653
Total Tin (Sn)	mg/L	<0.0000050	0.0000050	C053653
Total Titanium (Ti)	mg/L	<0.000030	0.000030	C053653
Total Uranium (U)	mg/L	<0.0000005	0.00000050	C053653
RDL = Reportable Detection Limit				



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQY554		
Sampling Date		2025/08/13 14:20		
COC Number		761493-01-01		
	UNITS	FB	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.0000050	0.0000050	C053653
Total Zinc (Zn)	mg/L	0.000776	0.000060	C053653
Total Zirconium (Zr)	mg/L	<0.0000080	0.0000080	C053653
RDL = Reportable Detection Limit				



GENERAL COMMENTS

Sample DQY543 [BRP-29A-1] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DQY544 [BRP-29A-2] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DQY545 [BRP-29A-3] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DQY546 [BRP-29A-4] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DQY547 [BRP-29A-5] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Sample DQY548 [BRP-31-4] : Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Turbidity. Sample was analyzed past method specified hold time for NO₂ (N); NO₂ (N) + NO₃ (N) in Water (LL).

Results relate only to the items tested.



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

QUALITY ASSURANCE REPORT

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C051553	Dissolved Nitrate plus Nitrite (N)	2025/08/16	114	80 - 120	107	80 - 120	<0.0030	mg/L	NC	20		
C051553	Dissolved Nitrite (N)	2025/08/16	107	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20		
C051592	Chloride (Cl)	2025/08/16	100	80 - 120	104	80 - 120	<0.50	mg/L	7.1	20		
C051592	Sulphate (SO4)	2025/08/16	106	80 - 120	102	80 - 120	<0.50	mg/L	9.5	20		
C051607	Orthophosphate (P)	2025/08/16	100	80 - 120	101	80 - 120	<0.0010	mg/L	11	20		
C051614	Orthophosphate (P)	2025/08/16	91	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
C051695	Dissolved Nitrate plus Nitrite (N)	2025/08/16	127 (1)	80 - 120	96	80 - 120	<0.0030	mg/L	2.1	20		
C051695	Dissolved Nitrite (N)	2025/08/16	106	80 - 120	104	80 - 120	<0.0010	mg/L	3.0	20		
C051707	Turbidity	2025/08/16			99	80 - 120	<0.10	NTU	2.4	20		
C051733	Turbidity	2025/08/16			99	80 - 120	<0.10	NTU	8.1	20		
C051737	Turbidity	2025/08/16			99	80 - 120	<0.10	NTU	5.2	20		
C051769	Total Dissolved Solids	2025/08/17	97	80 - 120	98	80 - 120	<10	mg/L	1.7	20		
C051893	Alkalinity (PP as CaCO3)	2025/08/17					<0.50	mg/L	NC	20		
C051893	Alkalinity (Total as CaCO3)	2025/08/17			97	80 - 120	<0.50	mg/L	3.1	20		
C051893	Bicarbonate (HCO3)	2025/08/17					<0.50	mg/L	3.1	20		
C051893	Carbonate (CO3)	2025/08/17					<0.50	mg/L	NC	20		
C051893	Hydroxide (OH)	2025/08/17					<0.50	mg/L	NC	20		
C051896	pH	2025/08/17			101	97 - 103			0.59	N/A		
C051897	Conductivity	2025/08/17			100	90 - 110	<2.0	uS/cm	2.1	10		
C051898	Fluoride (F)	2025/08/17	98	80 - 120	103	80 - 120	<0.010	mg/L	NC	20		
C051963	Total Suspended Solids	2025/08/18	91	80 - 120	95	80 - 120	<0.99	mg/L	1.9	20		
C052326	Total Dissolved Solids	2025/08/19	100	80 - 120	96	80 - 120	<10	mg/L	11	20		
C053116	Total Suspended Solids	2025/08/19	98	80 - 120	94	80 - 120	<1.0	mg/L	10	20		
C053456	Total Sulphide	2025/08/20	96	80 - 120	98	80 - 120	<0.0018	mg/L	NC	20		
C053549	Total Dissolved Solids	2025/08/20	96	80 - 120	100	80 - 120	<10	mg/L	14	20		
C053643	Dissolved Aluminum (Al)	2025/08/20	98	80 - 120	101	80 - 120	<0.00010	mg/L	4.3	40		
C053643	Dissolved Antimony (Sb)	2025/08/20	105	80 - 120	104	80 - 120	<0.0000030	mg/L	11	40		
C053643	Dissolved Arsenic (As)	2025/08/20	99	80 - 120	99	80 - 120	<0.0000050	mg/L	5.6	40		
C053643	Dissolved Barium (Ba)	2025/08/20	104	80 - 120	102	80 - 120	<0.0000080	mg/L	0.33	40		
C053643	Dissolved Beryllium (Be)	2025/08/20	91	80 - 120	94	80 - 120	<0.0000015	mg/L	23	40		
C053643	Dissolved Bismuth (Bi)	2025/08/20	97	80 - 120	98	80 - 120	<0.0000010	mg/L	NC	40		



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C053643	Dissolved Boron (B)	2025/08/20	90	80 - 120	91	80 - 120	<0.00010	mg/L	0.94	40		
C053643	Dissolved Cadmium (Cd)	2025/08/20	101	80 - 120	100	80 - 120	<0.0000030	mg/L	23	40		
C053643	Dissolved Calcium (Ca)	2025/08/20	NC	80 - 120	101	80 - 120	<0.0020	mg/L	0.60	40		
C053643	Dissolved Chromium (Cr)	2025/08/20	105	80 - 120	107	80 - 120	<0.000020	mg/L	4.5	40		
C053643	Dissolved Cobalt (Co)	2025/08/20	105	80 - 120	106	80 - 120	<0.0000040	mg/L	2.1	40		
C053643	Dissolved Copper (Cu)	2025/08/20	105	80 - 120	105	80 - 120	<0.000020	mg/L	2.4	40		
C053643	Dissolved Iron (Fe)	2025/08/20	95	80 - 120	97	80 - 120	<0.0010	mg/L	3.8	40		
C053643	Dissolved Lead (Pb)	2025/08/20	98	80 - 120	97	80 - 120	<0.0000030	mg/L	NC	40		
C053643	Dissolved Lithium (Li)	2025/08/20	93	80 - 120	95	80 - 120	<0.000050	mg/L	6.5	40		
C053643	Dissolved Magnesium (Mg)	2025/08/20	104	80 - 120	106	80 - 120	<0.00050	mg/L	1.5	40		
C053643	Dissolved Manganese (Mn)	2025/08/20	103	80 - 120	105	80 - 120	<0.0000040	mg/L	2.4	40		
C053643	Dissolved Molybdenum (Mo)	2025/08/20	106	80 - 120	104	80 - 120	<0.0000050	mg/L	21	40		
C053643	Dissolved Nickel (Ni)	2025/08/20	105	80 - 120	106	80 - 120	<0.000015	mg/L	0.95	40		
C053643	Dissolved Potassium (K)	2025/08/20	103	80 - 120	103	80 - 120	<0.0050	mg/L	0.33	40		
C053643	Dissolved Selenium (Se)	2025/08/20	99	80 - 120	102	80 - 120	<0.000010	mg/L	13	40		
C053643	Dissolved Silicon (Si)	2025/08/20	90	80 - 120	92	80 - 120	<0.0012	mg/L	3.0	40		
C053643	Dissolved Silver (Ag)	2025/08/20	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	40		
C053643	Dissolved Sodium (Na)	2025/08/20	106	80 - 120	108	80 - 120	0.00095, RDL=0.00050 (2)	mg/L	1.3	40		
C053643	Dissolved Strontium (Sr)	2025/08/20	99	80 - 120	98	80 - 120	<0.0000080	mg/L	0.18	40		
C053643	Dissolved Sulphur (S)	2025/08/20	96	80 - 120	97	80 - 120	<0.0010	mg/L	0.14	40		
C053643	Dissolved Thallium (Tl)	2025/08/20	100	80 - 120	100	80 - 120	<0.0000008	mg/L	16	40		
C053643	Dissolved Tin (Sn)	2025/08/20	101	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	40		
C053643	Dissolved Titanium (Ti)	2025/08/20	99	80 - 120	101	80 - 120	<0.000030	mg/L	NC	40		
C053643	Dissolved Uranium (U)	2025/08/20	105	80 - 120	104	80 - 120	<0.0000005	mg/L	2.6	40		
C053643	Dissolved Vanadium (V)	2025/08/20	96	80 - 120	98	80 - 120	<0.0000050	mg/L	32	40		
C053643	Dissolved Zinc (Zn)	2025/08/20	99	80 - 120	98	80 - 120	<0.000060	mg/L	9.2	40		
C053643	Dissolved Zirconium (Zr)	2025/08/20	96	80 - 120	94	80 - 120	<0.0000080	mg/L	4.2	40		
C053653	Total Aluminum (Al)	2025/08/21	95	80 - 120	98	80 - 120	<0.00010	mg/L	1.2	40		
C053653	Total Antimony (Sb)	2025/08/21	102	80 - 120	105	80 - 120	<0.0000030	mg/L	14	40		
C053653	Total Arsenic (As)	2025/08/21	99	80 - 120	98	80 - 120	<0.0000050	mg/L	2.2	40		



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C053653	Total Barium (Ba)	2025/08/21	102	80 - 120	103	80 - 120	<0.0000080	mg/L	1.5	40		
C053653	Total Beryllium (Be)	2025/08/21	86	80 - 120	89	80 - 120	<0.0000015	mg/L	NC	40		
C053653	Total Bismuth (Bi)	2025/08/21	96	80 - 120	97	80 - 120	<0.0000010	mg/L	NC	40		
C053653	Total Boron (B)	2025/08/21	83	80 - 120	85	80 - 120	<0.00010	mg/L	4.3	40		
C053653	Total Cadmium (Cd)	2025/08/21	101	80 - 120	101	80 - 120	<0.0000030	mg/L	9.0	40		
C053653	Total Calcium (Ca)	2025/08/21	NC	80 - 120	99	80 - 120	<0.0020	mg/L	1.0	40		
C053653	Total Chromium (Cr)	2025/08/21	104	80 - 120	106	80 - 120	<0.000020	mg/L	28	40		
C053653	Total Cobalt (Co)	2025/08/21	104	80 - 120	106	80 - 120	<0.0000040	mg/L	3.8	40		
C053653	Total Copper (Cu)	2025/08/21	103	80 - 120	106	80 - 120	<0.000020	mg/L	0.87	40		
C053653	Total Iron (Fe)	2025/08/21	90	80 - 120	93	80 - 120	<0.0010	mg/L	0.12	40		
C053653	Total Lead (Pb)	2025/08/21	96	80 - 120	97	80 - 120	<0.0000030	mg/L	8.3	40		
C053653	Total Lithium (Li)	2025/08/21	90	80 - 120	93	80 - 120	<0.000050	mg/L	2.9	40		
C053653	Total Magnesium (Mg)	2025/08/21	99	80 - 120	106	80 - 120	<0.00050	mg/L	3.2	40		
C053653	Total Manganese (Mn)	2025/08/21	101	80 - 120	103	80 - 120	<0.0000040	mg/L	3.2	40		
C053653	Total Molybdenum (Mo)	2025/08/21	105	80 - 120	105	80 - 120	<0.0000050	mg/L	0.81	40		
C053653	Total Nickel (Ni)	2025/08/21	103	80 - 120	105	80 - 120	<0.000015	mg/L	2.0	40		
C053653	Total Potassium (K)	2025/08/21	102	80 - 120	103	80 - 120	<0.0050	mg/L	1.9	40		
C053653	Total Selenium (Se)	2025/08/21	97	80 - 120	99	80 - 120	<0.000010	mg/L	NC	40		
C053653	Total Silicon (Si)	2025/08/21	86	80 - 120	90	80 - 120	<0.0012	mg/L	0.44	40		
C053653	Total Silver (Ag)	2025/08/21	102	80 - 120	102	80 - 120	<0.0000020	mg/L	29	40		
C053653	Total Sodium (Na)	2025/08/21	103	80 - 120	107	80 - 120	<0.00050	mg/L	1.6	40		
C053653	Total Strontium (Sr)	2025/08/21	96	80 - 120	97	80 - 120	<0.0000080	mg/L	0.54	40		
C053653	Total Sulphur (S)	2025/08/21	95	80 - 120	95	80 - 120	<0.0010	mg/L	3.0	40		
C053653	Total Thallium (Tl)	2025/08/21	99	80 - 120	100	80 - 120	<0.0000008	mg/L	3.2	40		
C053653	Total Tin (Sn)	2025/08/21	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	40		
C053653	Total Titanium (Ti)	2025/08/21	99	80 - 120	96	80 - 120	<0.000030	mg/L	NC	40		
C053653	Total Uranium (U)	2025/08/21	102	80 - 120	103	80 - 120	<0.0000005	mg/L	1.4	40		
C053653	Total Vanadium (V)	2025/08/21	95	80 - 120	96	80 - 120	<0.0000050	mg/L	4.9	40		
C053653	Total Zinc (Zn)	2025/08/21	97	80 - 120	97	80 - 120	<0.000060	mg/L	0.34	40		
C053653	Total Zirconium (Zr)	2025/08/21	93	80 - 120	96	80 - 120	<0.0000080	mg/L	9.1	40		
C053671	Total Ammonia (N)	2025/08/19	100	80 - 120	106	80 - 120	<0.0050	mg/L	0.053	20		



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C053685	Total Ammonia (N)	2025/08/19	108	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20		
C053802	Chloride (Cl)	2025/08/19	101	80 - 120	103	80 - 120	<0.50	mg/L	0.56	20		
C053802	Sulphate (SO4)	2025/08/19	98	80 - 120	102	80 - 120	<0.50	mg/L	0.94	20		
C053805	Chloride (Cl)	2025/08/19	101	80 - 120	101	80 - 120	<0.50	mg/L	0.30	20		
C053805	Sulphate (SO4)	2025/08/19	99	80 - 120	102	80 - 120	<0.50	mg/L	0.086	20		
C053809	Total Phosphorus (P)	2025/08/20	NC	80 - 120	97	80 - 120	<0.0010	mg/L	2.7	20	91	80 - 120
C053904	Total Suspended Solids	2025/08/19	104	80 - 120	96	80 - 120	<1.0	mg/L	NC	20		
C054434	Total Nitrogen (N)	2025/08/20	NC	80 - 120	102	80 - 120	<0.020	mg/L	0.12	20	104	80 - 120
C054439	Total Nitrogen (N)	2025/08/20	NC	80 - 120	102	80 - 120	<0.020	mg/L	1.6	20	108	80 - 120
C055259	Strong Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	0.74	20		
C055261	Weak Acid Dissoc. Cyanide (CN)	2025/08/20	NC	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20		
C055264	Free Free Cyanide	2025/08/20	NC	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
C055305	Total Phosphorus (P)	2025/08/20	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C055317	Dissolved Phosphorus (P)	2025/08/20	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C055470	Total Sulphide	2025/08/21	101	80 - 120	98	80 - 120	<0.0018	mg/L	NC	20		
C055504	Total Nitrogen (N)	2025/08/21	NC	80 - 120	105	80 - 120	<0.020	mg/L	12	20	112	80 - 120
C057051	Total Nitrogen (N)	2025/08/21	111	80 - 120	105	80 - 120	<0.020	mg/L	2.1	20	107	80 - 120
C057454	Reactive Silica	2025/08/21	85	80 - 120	105	80 - 120	<0.050	mg/L	NC	20		
C057458	Reactive Silica	2025/08/21	91	80 - 120	108	80 - 120	<0.050	mg/L	1.3	20		
C057635	Dissolved Phosphorus (P)	2025/08/21	100	80 - 120	94	80 - 120	<0.0010	mg/L	4.3	20	88	80 - 120
C057739	Total Phosphorus (P)	2025/08/21	97	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20	89	80 - 120
C058751	Total Mercury (Hg)	2025/08/22	106	80 - 120	96	80 - 120	<0.0000001	mg/L	6.3	25		
C060065	Dissolved Organic Carbon (C)	2025/08/23	NC	75 - 125	104	80 - 120	<0.50	mg/L	3.1	20		
C060072	Total Organic Carbon (C)	2025/08/23	106	75 - 125	102	80 - 120	<0.50	mg/L	7.8	20		
C061362	Total Nitrogen (N)	2025/08/26	66 (3)	80 - 120	99	80 - 120	<0.020	mg/L	NC	20	104	N/A
C062401	Dissolved Mercury (Hg)	2025/08/26	92	80 - 120	102	80 - 120	<0.0000001	mg/L				
C062403	Dissolved Mercury (Hg)	2025/08/26	91	80 - 120	96	80 - 120	<0.0000001	mg/L	19	25		



Bureau Veritas Job #: C570633
Report Date: 2025/11/03

QUALITY ASSURANCE REPORT(CONT'D)

WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
C089977	Radium 226	2025/09/16			87	85 - 115	<0.0050	Bq/l				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Method blank exceeds acceptance limits, $2 \times \text{RDL}$ acceptable for low level analysis

(3) Matrix Spike exceeds acceptance limits due to matrix interference. Reanalysis yields similar results.

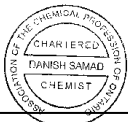


Bureau Veritas Job #: C570633
Report Date: 2025/11/03

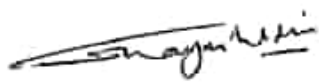
WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

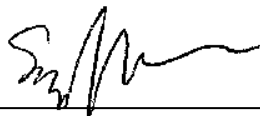
Danish Samad, Laboratory Supervisor



Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Mauro Oselin, P.Chem., QP, Scientific Specialist



Sandy Yuan, M.Sc., QP, Scientific Specialist



Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

C570633
2025/08/14 14:00

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:		
Company Name: #10600 B2Gold Back River Corp.	Company Name: #50378 WSP Canada Inc.	Quotation #: C41460	Bureau Veritas Job #:			Bottle Order #:		
Attention: Accounts Payable	Attention: Beatriz Cupe-Flores	P.O. #:					751493	
Address: Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address: Saskatoon SK S7H 0T4	Project: August AEMP program			COC #:		Project Manager:	
Tel: (604) 681-8371 Fax: (604) 681-6209	Tel: Fax:	Site #:			C570633-01-01		Melissa Morison	
Email: BR.accounts payable@b2gold.com	Email: beatriz.cupe.flores@wsp.com	Sampled By:						

Regulatory Criteria		Special Instructions		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:	
☐ ATC				AEEMP-Routine Parameters	AEEMP - Nutrients	AEEMP - Other Conventional	Chlorophyll-a-Water	Radium-226 Low Level	Low Level Total Metals with CV Hg	Low Level D Metals w/ CV Hg				Please provide advance notice for rush projects.	
☐ CCME														Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT ~ 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.	
☐ Other														Job Specific Rush TAT (if applies to entire submission) Date Required: Rush Confirmation Number: (call 1-800-861-8611)	

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS					
Sample Barcode Label	Sample Location Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)
51063955085	BRP-29A-1	Aug 12, 2025	8:45	Water	✓
51063955087	BRP-29A-2		11:20		✓
51063955088	BRP-29A-3		10:20		✓
51063955089	BRP-29A-4		12:25		✓
51063955090	BRP-29A-5		13:40		✓
51063955091	BRP-31-3				
51063955092	BRP-31-4	Aug 13, 2025	14:40		✓
51063955093	BRP-32-1		12:38		✓
51063955094	BRP-32-2		13:40		✓
51063955095	BRP-32-3		8:30		✓

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only
Adam Feldberg	25/08/14	7:30	TENZING CHOLAK	25/08/15	15:15		Time Sensitive: ☐ SEE ACTR Temperature (°C) on Receipt: Custody Seal intact on Receipt? ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COOC-TERMS-AND-CONDITIONS.

** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

*** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

Received in Yellowknife

By: J. Macdonald

AUG 14 2025

Temp: See ACTR

CS: No Ice: yes



EYK-2025-08-045

Bureau Veritas Canada (2019) Inc.

C570633
2025/08/14 14:00

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#10600 B2Gold Back River Corp.	Company Name:	#50378 WSP Canada Inc.	Question #:	C41460	Bureau Veritas Job #:	Buttle Order #:
Attention:	Accounts Payable	Attention:	Beatriz Cupe-Flores	P.O. #:			
Address:	Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8	Address:	Saskatoon SK S7H 0T4	Project:	August AEMP program		
Tel:	(604) 681-8371 Fax: (604) 681-8209	Tel:		Project Name:		COC #:	Project Manager:
Email:	BR.accounts@b2gold.com	Email:	beatriz.cupe.flores@wsp.com	Site #:			
				Samples By:			

Regulatory Criteria		Special Instructions		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)								Turnaround Time (TAT) Required:	
☐ AT1												Please provide advance notice for rush projects.	
☐ CCME												Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details.	
☐ Other												Job Specific Rush TAT (if applies to entire submission) Date Required: ☐ Rush Confirmation Number: ☐	

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS					
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered? (Y/N)
1	BRP-32-4	Aug 13, 2025	11:00	Water	✓
2	BRP-32-5	↓	9:50		✓
3	BRP-32-1				✓
4	BRP-32-2				✓
5	BRP-32-3				✓
6	BRP-32-4				✓
7	BRP-32-5				✓
8	FB				✓
9	FB				✓
10	FB	Aug 13, 2025	14:20	↓	✓

RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensation	Temperature (°C) on Receipt	Custody Seal intact on Receipt?
Adam Feldberg		25/08/14	7:30	TENZING CHOLAK		25/08/15	15:15			See ACTK	☐ Yes ☐ No

* UNLESS OTHERWISE ADVISED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRON/75-TAI-LABORATORY-RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT. FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER.

Received in Yellowknife

By: J. [Signature]

AUG 14 2025

Temp: 5°C
CS: NO Ice: YES



ADDITIONAL COOLER TEMPERATURE RECORD

Page 1 of 1

BV RECEIPT#:

EYK-2025-08-045

1	CUSTOMER SEAL	PRESENT	YES	COOLER ID		11	CUSTOMER SEAL	PRESENT	YES	NO	COOLER ID		21	CUSTOMER SEAL	PRESENT	YES	NO	COOLER ID		31	CUSTOMER SEAL	PRESENT	YES	NO	COOLER ID	
	INTACT			TEMP	9		INTACT				TEMP	1		INTACT				TEMP	1		INTACT			TEMP	1	
ICE PRESENT					7		ICE PRESENT					2		ICE PRESENT					2		ICE PRESENT				2	
CUSTOMER SEAL	YES	NO	COOLER ID		6		CUSTOMER SEAL	YES	NO	COOLER ID		3		CUSTOMER SEAL	YES	NO	COOLER ID		3		CUSTOMER SEAL	YES	NO	COOLER ID		
2	PRESENT			TEMP	0	12	PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					0		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					1		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
3	CUSTOMER SEAL	YES	NO	COOLER ID		13	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	0		PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					0		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					0		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
4	CUSTOMER SEAL	YES	NO	COOLER ID		14	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	0		PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					0		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					0		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
5	CUSTOMER SEAL	YES	NO	COOLER ID		15	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					2		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
6	CUSTOMER SEAL	YES	NO	COOLER ID		16	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					2		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
7	CUSTOMER SEAL	YES	NO	COOLER ID		17	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT				TEMP	1		PRESENT			TEMP	1	
INTACT					2		INTACT					2		INTACT					2		INTACT				2	
ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT					3		ICE PRESENT				3	
8	CUSTOMER SEAL	YES	NO	COOLER ID		18	CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID				CUSTOMER SEAL	YES	NO	COOLER ID		
PRESENT				TEMP	1		PRESENT																			

TIME (HH:MM)

10	TENZING CHOLAH	TENZING CHOLAH	95/08/15	15:15

If Custody seal condition and presence of Ice is the same for all, use these boxes:

	YES	NO
CUSTODY SEAL		
PRESERVE		
INTACT		
ICE PRESENT		



STATE OF CALIFORNIA
DEPARTMENT OF CORRECTIONS
RECEIPTS

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

COOLER OBSERVATIONS:

WSP - 02 6000

BY RECEIPT#:

EYK - 2025-08-04

1	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	10	7	10	11	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	21	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
2	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	8	9	10	12	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	22	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
3	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	8	8	6	13	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	23	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
4	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	5	5	3	14	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	24	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
5	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	15	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	25	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
6	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	16	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	26	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
7	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	17	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	27	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
8	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	18	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	28	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
9	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	19	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	29	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3
10	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	20	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3	30	PRESENT ICE PRESENT	YES	NO	COOLER ID	TEMP	1	2	3

RECEIVED BY (SIGN & PRINT)

DATE (YYYY/MM/DD)

TIME (HH:MM)

Joe Mearn

2025/08/04

14:00

If Custody seal condition and presence of ice is the same for all, use these boxes:

CUSTODY SEAL	PRESENT	YES	NO
ICE PRESENT	INTACT	X	X

CHAIN OF CUSTODY RECORD



C579084
EYK-2025-09-042

Received in Yellowknife

By: J. A. [Signature]

SEP 16 2025

Temp:
CS:

2025/09/16 10:30

Derecha Veritas Caliente (2019) Inc.

By: J. P. [Signature]

Temp: _____
CS: _____ Ice: _____

CERTIFICATE OF ANALYSIS

Work Order	: YL2500981	Laboratory	: ALS Environmental - Yellowknife
Client	: B2Gold Back River Corp.	Account Manager	: Oliver Gregg
Contact	: Back River Environment	Address	: 102-487 Range Lake Road
Address	: 375 - 555 Burrard St. Box 220, Bentall 2		: Yellowknife NT Canada X1A 3R9
	: Vancouver British Columbia Canada V7X 1M7	E-mail	: oliver.gregg@ALSGlobal.com
Telephone	: ----	Telephone	: 1 867 445 7143
Project	: September AEMP Program	Date Samples Received	: 16-Sep-2025 11:45
PO	: 10402	Date Analysis Commenced	: 30-Sep-2025
C-O-C number	: ----	Issue Date	: 02-Oct-2025 12:09
Sampler	: ----		
Site	: Goose		
Quote number	: YL24-SABI100-001		
No. of samples received	: 78		
No. of samples analysed	: 78		

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

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>
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Oliver Gregg	Client Services Supervisor	Administration, 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
L	litres
µg/L	micrograms per litre
µg/sample	micrograms per sample

<: 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.



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-29A-1A ----	BRP-29A-1B ----	BRP-29A-1C ----	BRP-29A-2A ----	BRP-29A-2B ----
					Client sampling date / time	10-Sep-2025 11:50	10-Sep-2025 11:50	10-Sep-2025 11:50	10-Sep-2025 13:20	10-Sep-2025 13:20
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-001	YL2500981-002	YL2500981-003	YL2500981-004	YL2500981-005
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	0.500	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		0.990	1.09	1.19	1.02	1.07
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		0.990	1.09	1.19	0.512	1.07

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-29A-2C ----	BRP-29A-3A ----	BRP-29A-3B ----	BRP-29A-3C ----	BRP-29A-4A ----
					Client sampling date / time	10-Sep-2025 13:20	10-Sep-2025 14:40	10-Sep-2025 14:40	10-Sep-2025 14:40	13-Sep-2025 08:50
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-006	YL2500981-007	YL2500981-008	YL2500981-009	YL2500981-010
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.08	1.10	1.16	1.05	1.40
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.08	1.10	1.16	1.05	1.40

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-29A-4B	BRP-29A-4C	BRP-29A-5A	BRP-29A-5B	BRP-29A-5C
					Client sampling date / time	13-Sep-2025 08:50	13-Sep-2025 08:50	13-Sep-2025 09:42	13-Sep-2025 09:42	13-Sep-2025 09:42
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-011	YL2500981-012	YL2500981-013	YL2500981-014	YL2500981-015
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.31	1.22	1.40	1.45	1.17
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.31	1.22	1.40	1.45	1.17

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-31-3A	BRP-31-3B	BRP-31-3C	BRP-31-4A	BRP-31-4B
					Client sampling date / time	13-Sep-2025 11:50	13-Sep-2025 11:50	13-Sep-2025 11:50	13-Sep-2025 11:14	13-Sep-2025 11:14
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-016	YL2500981-017	YL2500981-018	YL2500981-019	YL2500981-020
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.25	1.15	1.00	1.26	1.38
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.25	1.15	1.00	1.26	1.38

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-31-4C	BRP-32-1A	BRP-32-1B	BRP-32-1C	BRP-32-2A
					Client sampling date / time	13-Sep-2025 11:14	13-Sep-2025 13:10	13-Sep-2025 13:10	13-Sep-2025 13:10	14-Sep-2025 10:00
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-021	YL2500981-022	YL2500981-023	YL2500981-024	YL2500981-025
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.16	2.13	1.68	1.73	2.09
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.16	2.13	1.68	1.73	2.09

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-32-2B	BRP-32-2C	BRP-32-3A	BRP-32-3B	BRP-32-3C
					Client sampling date / time	14-Sep-2025 10:00	14-Sep-2025 10:00	14-Sep-2025 10:45	14-Sep-2025 10:45	14-Sep-2025 10:45
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-026	YL2500981-027	YL2500981-028	YL2500981-029	YL2500981-030
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.04	1.91	2.21	2.26	2.54
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.04	1.91	2.21	2.26	2.54

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-32-4A	BRP-32-4B	BRP-32-4C	BRP-32-5A	BRP-32-5B
					Client sampling date / time	14-Sep-2025 12:45	14-Sep-2025 12:45	14-Sep-2025 12:45	14-Sep-2025 13:25	14-Sep-2025 13:25
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-031	YL2500981-032	YL2500981-033	YL2500981-034	YL2500981-035
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.57	2.19	2.13	2.28	2.00
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.57	2.19	2.13	2.28	2.00

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-32-5C	BRP-38-1A	BRP-38-1B	BRP-38-1C	BRP-38-2A
					Client sampling date / time	14-Sep-2025 13:25	11-Sep-2025 09:35	11-Sep-2025 09:35	11-Sep-2025 09:35	11-Sep-2025 10:25
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-036	YL2500981-037	YL2500981-038	YL2500981-039	YL2500981-040
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.18	1.97	1.64	1.68	1.93
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.18	1.97	1.64	1.68	1.93

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-38-2B	BRP-38-2C	BRP-38-3A	BRP-38-3B	BRP-38-3C
					Client sampling date / time	11-Sep-2025 10:25	11-Sep-2025 11:22	11-Sep-2025 00:00	11-Sep-2025 11:22	11-Sep-2025 11:22
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-041	YL2500981-042	YL2500981-043	YL2500981-044	YL2500981-045
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	0.500	0.500
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.59	2.01	1.76	1.43	1.68
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.59	2.01	1.76	0.713	0.838

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-38-4A	BRP-38-4B	BRP-38-4C	BRP-38-5A	BRP-38-5B
					Client sampling date / time	11-Sep-2025 12:40	11-Sep-2025 12:40	11-Sep-2025 12:40	11-Sep-2025 13:20	11-Sep-2025 13:20
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-046	YL2500981-047	YL2500981-048	YL2500981-049	YL2500981-050
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		0.500	0.500	0.500	0.500	0.500
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.61	1.50	1.79	1.45	1.41
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		0.807	0.749	0.895	0.724	0.706

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	BRP-38-5C ----	1.2um-BRP-29A-1A ----	1.2um-BRP-29A-1B ----	1.2um-BRP-29A-1C ----	1.2um-BRP-29A-2A ----
					Client sampling date / time	11-Sep-2025 13:20	10-Sep-2025 11:50	10-Sep-2025 11:50	10-Sep-2025 11:50	10-Sep-2025 13:20
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-051	YL2500981-052	YL2500981-053	YL2500981-054	YL2500981-055
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		0.500	1.00	1.00	1.00	0.500
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.77	1.74	1.18	0.836	1.68
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		0.886	1.74	1.18	0.836	0.842

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	1.2um-BRP-29A-2B ----	1.2um-BRP-29A-2C ----	1.2um-BRP-29A-3A ----	1.2um-BRP-29A-3B ----	1.2um-BRP-29A-3C ----
					Client sampling date / time	10-Sep-2025 13:20	10-Sep-2025 13:20	10-Sep-2025 14:40	10-Sep-2025 14:40	10-Sep-2025 14:40
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-056	YL2500981-057	YL2500981-058	YL2500981-059	YL2500981-060
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		1.53	1.75	1.56	1.74	1.59
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		1.53	1.75	1.56	1.74	1.59

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



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	1.2um-BRP-32-1A	1.2um-BRP-32-1B	1.2um-BRP-32-1C	1.2um-BRP-32-2A	1.2um-BRP-32-2B
					Client sampling date / time	13-Sep-2025 13:10	13-Sep-2025 13:10	13-Sep-2025 13:10	14-Sep-2025 10:00	14-Sep-2025 10:00
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-061	YL2500981-062	YL2500981-063	YL2500981-064	YL2500981-065
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.64	2.75	2.56	2.96	2.80
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.64	2.75	2.56	2.96	2.80

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

Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	1.2um-BRP-32-2C	1.2um-BRP-32-3A	1.2um-BRP-32-3B	1.2um-BRP-32-3C	1.2um-BRP-38-1A
					Client sampling date / time	14-Sep-2025 10:00	14-Sep-2025 10:45	14-Sep-2025 10:45	14-Sep-2025 10:45	11-Sep-2025 09:35
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-066	YL2500981-067	YL2500981-068	YL2500981-069	YL2500981-070
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	1.00	1.00
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.28	2.72	2.71	3.22	1.82
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.28	2.72	2.71	3.22	1.82

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



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1.2um-BRP-38-1B	1.2um-BRP-38-1C	1.2um-BRP-38-2A	1.2um-BRP-38-2B	1.2um-BRP-38-2C
					Client sampling date / time	11-Sep-2025 09:35	11-Sep-2025 09:35	11-Sep-2025 10:25	11-Sep-2025 10:25	11-Sep-2025 10:25
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-071	YL2500981-072	YL2500981-073	YL2500981-074	YL2500981-075
						Result	Result	Result	Result	Result
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	1.00	1.00	0.500	0.500
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.18	2.30	2.22	4.66	4.72
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.18	2.30	2.22	2.33	2.36

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

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1.2um-BRP-38-3A	1.2um-BRP-38-3B	1.2um-BRP-38-3C	----	----
					Client sampling date / time	11-Sep-2025 11:22	11-Sep-2025 11:22	11-Sep-2025 11:22	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500981-076	YL2500981-077	YL2500981-078	----	----
						Result	Result	Result	----	----
Field Tests										
Sampling volume, field	----	EF003/VA	0.010	L		1.00	0.500	0.500	----	----
Plant Pigments										
Chlorophyll a	479-61-8	EC870A/VA	0.010	µg/L		2.07	2.36	2.22	----	----
Chlorophyll a	479-61-8	E870A/VA	0.0020	µg/sample		2.07	1.18	1.11	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: YL2500981	Page	: 1 of 22
Client	: B2Gold Back River Corp.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Back River Environment	Account Manager	: Oliver Gregg
Address	: 375 - 555 Burrard St. Box 220, Bentall 2 Vancouver BC Canada V7X 1M7	Address	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
Telephone	: ----	Telephone	: 1 867 445 7143
Project	: September AEMP Program	Date Samples Received	: 16-Sep-2025 11:45
PO	: 10402	Issue Date	: 02-Oct-2025 12:07
C-O-C number	: ----		
Sampler	: ----		
Site	: Goose		
Quote number	: YL24-SABI100-001		
No. of samples received	: 78		
No. of samples analysed	: 78		

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 Laboratory Control Sample (LCS) 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)

- No Analysis Holding Time Outliers exist.

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 : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-3C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-1A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-1B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-1C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-2A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-2B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-2C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-3A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-3B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-29A-3C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-1A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-1B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-1C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-2A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-2B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-2C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	



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

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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-3A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-3B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-32-3C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-1A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-1B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-1C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-2A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-2B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-2C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-3A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube 1.2um-BRP-38-3B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-1A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-1B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-1C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-2A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-2B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-2C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-3A	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-3B	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-3C	EF003	10-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-4A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-4B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-4C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-5A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-5B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-29A-5C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-3A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	

Page : 8 of 22
 Work Order : YL2500981
 Client : B2Gold Back River Corp.
 Project : September AEMP Program



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-3B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-3C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-4A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-4B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-31-4C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-1A	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-1B	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-1C	EF003	13-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-2A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	



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

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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-2B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-2C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-3A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-3B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-3C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-4A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-4B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-4C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-5A	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	



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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
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Opaque HDPE tube BRP-32-5B	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-32-5C	EF003	14-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-1A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-1B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
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Field Tests : Field Volume (L)										
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Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-2B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-2C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-3A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	



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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-3B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-3C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-4A	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-4B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-4C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
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Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-5B	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Field Tests : Field Volume (L)										
Opaque HDPE tube BRP-38-5C	EF003	11-Sep-2025	----	----	----		02-Oct-2025	----	----	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-2A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-2B	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-2C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-3A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
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Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-3C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-4A	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-4B	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-4C	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-5A	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓



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				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-5B	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-5C	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-31-3A	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-31-3B	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-31-3C	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-31-4A	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
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Opaque HDPE tube BRP-31-4B	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-31-4C	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-1A	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓



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

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Container / Client Sample ID(s)			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-32-1B	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-1C	E870A	13-Sep-2025	30-Sep-2025	28 days	17 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-2A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-2B	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-2C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-3A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-3B	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-3C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-4A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-4B	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-4C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-5A	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-5B	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-32-5C	E870A	14-Sep-2025	01-Oct-2025	28 days	17 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-1A	E870A	13-Sep-2025	01-Oct-2025	28 days	18 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-1B	E870A	13-Sep-2025	01-Oct-2025	28 days	18 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-32-1C	E870A	13-Sep-2025	01-Oct-2025	28 days	18 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-3C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method	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	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-1A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-1B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-1C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-2A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-2B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-2C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-3A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-38-3B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-1A	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-1B	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-1C	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-2A	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-2B	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-2C	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-3A	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-3B	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-29A-3C	E870A	10-Sep-2025	30-Sep-2025	28 days	20 days	✓	30-Sep-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-1A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-1B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-1C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-2A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
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Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
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Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-3A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-3B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-3C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-4A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-4B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-4C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-5A	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-5B	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube BRP-38-5C	E870A	11-Sep-2025	01-Oct-2025	28 days	20 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-1A	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-1B	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-1C	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-2A	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-2B	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-2C	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-3A	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-3B	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓
Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)										
Opaque HDPE tube 1.2um-BRP-29A-3C	E870A	10-Sep-2025	01-Oct-2025	28 days	21 days	✓	01-Oct-2025	28 days	0 days	✓

Legend & Qualifier Definitions

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			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A	2250367	5	78	6.4	5.0	✔
Method Blanks (MB)							
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A	2250367	5	78	6.4	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
Chlorophyll-a by Fluorometry (Field Filtered µg)	E870A ALS Environmental - Vancouver	Water	EPA 445.0 (mod)	Chlorophyll-a is determined by solvent extraction followed with analysis by fluorometry using the non-acidification procedure. Sampling volume not provided by client.
Chlorophyll-a by Fluorometry (Field Filtered µg/L)	EC870A ALS Environmental - Vancouver	Water	CALC	Convert results to sample concentration based on field information.
Field Volume (L)	EF003 ALS Environmental - Vancouver	Water		Field measurement of sampling volume provided by client and recorded on ALS report may affect the validity of results.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Chlorophyll-a Extraction (Field Filtered)	EP870A ALS Environmental - Vancouver	Water	EPA 445.0 (mod)	Chlorophyll-a solvent extraction.

QUALITY CONTROL REPORT

Work Order	: YL2500981	Page	: 1 of 3
Client	: B2Gold Back River Corp.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Back River Environment	Account Manager	: Oliver Gregg
Address	: 375 - 555 Burrard St. Box 220, Bentall 2 Vancouver BC Canada V7X 1M7	Address	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
Telephone	: ----	Telephone	: 1 867 445 7143
Project	: September AEMP Program	Date Samples Received	: 16-Sep-2025 11:45
PO	: 10402	Date Analysis Commenced	: 30-Sep-2025
C-O-C number	: ----	Issue Date	: 02-Oct-2025 12:07
Sampler	: ----		
Site	: Goose		
Quote number	: YL24-SABI100-001		
No. of samples received	: 78		
No. of samples analysed	: 78		

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:

- 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.

Signatories	Position	Laboratory Department
Miles Gropen	Department Manager - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
Oliver Gregg	Client Services Supervisor	Vancouver Administration, 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.

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
Plant Pigments (QCLot: 2250367)						
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	<0.0020	----
Plant Pigments (QCLot: 2250368)						
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	<0.0020	----
Plant Pigments (QCLot: 2251373)						
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	<0.0020	----
Plant Pigments (QCLot: 2251377)						
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	<0.0020	----
Plant Pigments (QCLot: 2251379)						
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 (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Plant Pigments (QCLot: 2250367)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	99.2	80.0	120	----
Plant Pigments (QCLot: 2250368)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	99.6	80.0	120	----
Plant Pigments (QCLot: 2251373)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	101	80.0	120	----
Plant Pigments (QCLot: 2251377)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	99.6	80.0	120	----
Plant Pigments (QCLot: 2251379)									
Chlorophyll a	479-61-8	E870A	0.002	µg/sample	1 µg/sample	98.8	80.0	120	----



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Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

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Canada Toll Free: 1 800 666 9878

Report To		Contact and company names below will appear on the final report	
Company:		WSP Canada Inc.	
Contact:		Bessie Cope-Flures	
Phone:		(306) 914-3922	
Street:		1721 8 St E	
City/Province:		Saskatoon, SK	
Postal Code:		S7H 0T4	
Invoice To		Same as Report To ☐ YES ☐ NO	
Company:		Copy of Invoice with Report ☐ YES ☐ NO	
Contact:		B2Gold Back River Corp.	
Project Information		Email 1 or Fax B2Gold Back River Corp. Email 2 BR.accounts@b2gold.com	
ALS Client Code / QUOTE #:		Y123-SAB100-001	
Job / Project #:		September AEMP program	
PO / AFE:		AFE Cost Center: Major/Minor Code: Requisitioner: Location:	
LSD:		ALS Contact: Oliver Gregg	
ALS Lab Work Order # (ALS use only):		ALS Contact: Oliver Gregg	
Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mm-yy) Time (hh:mm) Sample Type	
BRP-29A-1A		10-Sep-25 11:50	
BRP-29A-1B		13-Sep-25 13:20	
BRP-29A-1C		13-Sep-25 14:40	
BRP-29A-2A		13-Sep-25 13:50	
BRP-29A-2B		13-Sep-25 13:50	
BRP-29A-2C		13-Sep-25 13:50	
BRP-29A-3A		13-Sep-25 13:50	
BRP-29A-3B		13-Sep-25 13:50	
BRP-29A-3C		13-Sep-25 13:50	
BRP-29A-4A		13-Sep-25 13:50	
BRP-29A-4B		13-Sep-25 13:50	
BRP-29A-4C		13-Sep-25 13:50	
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)	
Are samples taken from a Regulated DW System?		☐ YES ☐ NO	
Are samples for human consumption use?		☐ YES ☐ NO	
Report to: gld.GAL.EQUIS@wsp.com ; rtation@hathfieldgroup.com ; thewis@hathfieldgroup.com ; lbystron@hathfieldgroup.com ; zlu@hathfieldgroup.com ; dkoc@hathfieldgroup.com		Report to: gld.GAL.EQUIS@wsp.com ; rtation@hathfieldgroup.com ; thewis@hathfieldgroup.com ; lbystron@hathfieldgroup.com ; zlu@hathfieldgroup.com ; dkoc@hathfieldgroup.com	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)	
Released by: Adam Feldberg		Date: Sept 15, 2025	
Time: 16:00		Received by: [Signature]	
Date: Sept 16, 2025		Time: 11:05	
WHITE - LABORATORY COPY		YELLOW - CLIENT COPY	
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHITE - LABORATORY COPY	
Failure to complete all portions of the 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.		Failure to complete all portions of the 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.		1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.	

Turnaround Time (TAT) Requested		AFRAX ALS BARCODE LABEL HERE (ALS use only)	
Routine (R) if received by 3pm M-F - no surcharges apply		☐ 4 day (T4) if received by 3pm M-F - 20% rush surcharge minimum	
3 day (T3) if received by 3pm M-F - 25% rush surcharge minimum		☐ 2 day (T2) if received by 3pm M-F - 50% rush surcharge minimum	
1 day (T1) if received by 3pm M-F - 100% rush surcharge minimum		☐ Same day (E2) if received by 10am M-F - 200% rush surcharge.	
Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.		Date and Time Required for all EAP TATs: [Signature]	
For all tests with rush TATs requested, please contact your Ad to confirm availability.		TURNAROUND TIME (TAT) REQUESTED	
Analysis Request		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below	
Chlorophyll a in Water		Total Volume Filtered (L)	
Total Filters Used (0.45 um)		SAMPLER ON HOLD	
EXTENDED STORAGE REQUIRED		SUSPECTED HAZARD (see notes)	

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Cooler Quality/Seals Intact: ☐ YES ☐ N/A	
INITIAL COOLER TEMPERATURES °C	
FINAL COOLER TEMPERATURES °C	
SHIPMENT RELEASE (ALS use only)	
Released by: Adam Feldberg	
Date: Sept 15, 2025	
Time: 16:00	
Received by: [Signature]	
Date: Sept 16, 2025	
Time: 11:05	
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YELLOW - CLIENT COPY	

Environmental Division
Yellowknife
Work Order Reference
YL2500981



Tel: 867 873 5693

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Report To		Contact and company name below will appear on the final report	
Company:	WSP Canada Inc.	Select Report Format: ☐ PDF ☒ EXCEL ☐ EDD (DIGITAL)	
Contact:	Beatriz Cupe-Flores	Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A	
Phone:	(306) 914-3922	☐ Compare Results to Criteria on Report - provide details below if box checked	
Street:	Company address below will appear on the final report	Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX	
City/Province:	1721 8 St E	Email 1 or Fax beatriz.cupe-flores@wsp.com	
Postal Code:	Saskatoon, SK	Email 2 henrik.beatriz@wsp.com	
Invoice To	Same as Report To ☐ YES ☒ NO	Email 3 hr.environ@h2gall.com	
Company:	Copy of Invoice with Report ☐ YES ☒ NO	Invoice Recipients	
Contact:	B2Gold Back River Corp.	Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	
Project Information		Email 1 or Fax (804) 681-8209	
ALS Client Code / QUOTE #:	YL23-SABI/00-001	Email 2 BR.accounts payable@b2gold.com	
Job / Project #:	September AEMP program	Oil and Gas Required Fields (client use)	
PO / AFE:		AFE/Coat Center: PO#	
LSD:		Major/Minor Code: Rolling Code:	
ALS Lab Work Order # (ALS use only):		Location:	
ALS Sample # (ALS use only)		ALS Contact: Oliver Gregg	
Sample Identification and/or Coordinates (This description will appear on the report)		Sampler:	
BRP-29A-5A		Date (dd-mm-yy) 13-Sep-25	
BRP-29A-5B		Time (hh:mm) 9:48	
BRP-29A-5C		Sample Type Chlorophylls	
BRP-31-3A		11:50	
BRP-31-3B		11:19	
BRP-31-3C		13:10	
BRP-31-4A			
BRP-31-4B			
BRP-31-4C			
BRP-32-1A			
BRP-32-1B			
BRP-32-1C			
Drinking Water (DW) Samples (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)	
Are samples taken from a Regulated DW System?		Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ INSULIN ☐ COOLING INITIATED	
Are samples for human consumption/ use?		Cooler Quantity Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)	
Released by: Adam Feldberg		Received by: 16:20	
Date: 13-Sep-2025		Time: 16:20	
Time: 16:20		WHITE - LABORATORY COPY YELLOW - CLIENT COPY	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)	
Released by: Adam Feldberg		Received by: 16:20	
Date: 13-Sep-2025		Time: 16:20	
Time: 16:20		WHITE - LABORATORY COPY YELLOW - CLIENT COPY	

Turnaround Time (TAT) Requested

☐ Routine (R) if received by 3pm M-F - no surcharges apply

☐ 4 day (P4) if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day (P3) if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day (E) if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day (E) if received by 10am M-F - 200% rush surcharge.

Additional fees may apply to such requests on weekends, statutory holidays and for non-routine tests.

Date and Time Required for all EAP TATs

For all tests with rush TATs requested, please contact your ALS to confirm availability.

Analysis Request

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

NUMBER OF CONTAINERS

Chlorophyll a in Water

Total Volume Filtered (L)

Total Filters Used (0.45 um)

SAMPLES ON HOLD

EXTENDED STORAGE REQUIRED

SUSPECTED HAZARD (see notes)

Continued on Back



Report To Contact and company name below will appear on the final report		Reports / Recipients Select Report Format: ☐ PDF ☐ EXCEL ☐ ESD (DIGITAL) Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax beatriz.floures@wsp.com Email 2 joanfor.alvares@wsp.com Email 3 br.accountspayable@b2gold.com		Turnaround Time (TAT) Requested ☐ Routine [P] if received by 3pm M-F - no surcharges apply ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.	
Company: WSP Canada Inc. Contact: Beatriz Cuper-Flores Phone: (306) 914-3922 Company address below will appear on the final report Street: 1721 8 St E City/Province: Saskatoon, SK Postal Code: S7H 0T4		Invoice Recipients Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax (604) 681-8209 Email 2 br.accountspayable@b2gold.com Oil and Gas Required Fields (client use) AFECost Center: Major/Misc Code: Requisition: Location: ALS Contact: Oliver Gregg Sampler:		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below Chlorophyll in Water Total Volume Filtered (L) Total Filters Used (0-45 um)	
ALS Client Code / QUOTE #: YL23-SAB1100-001 Job / Project #: September AEIMP program PO / AFE: LSO:		ALS Lab Work Order # (ALS use only):		NUMBER OF CONTAINERS	
Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mm-yy)		Time (hh-mm)	
BRP-32-2A		14 Sep 25		10:00	
BRP-32-2B		↓		↓	
BRP-32-2C		↓		↓	
BRP-32-3A		↓		↓	
BRP-32-3B		↓		↓	
BRP-32-3C		↓		↓	
BRP-32-4A		↓		↓	
BRP-32-4B		↓		↓	
BRP-32-4C		↓		↓	
BRP-32-5A		↓		↓	
BRP-32-5B		↓		↓	
BRP-32-5C		↓		↓	
Drinking Water (DW) Samples * (client use) Are samples taken from a Regulated DW System? ☐ YES ☐ NO Are samples for human consumption/ use? ☐ YES ☐ NO		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A INITIAL COOLER TEMPERATURES °C: FINAL COOLER TEMPERATURES °C:	
SHIPMENT RELEASE (client use) Released by: Adam Feldberg Date: Sept 15, 2025 Time: 16:00		INITIAL SHIPMENT RECEPTION (ALS use only) Received by: _____ Date: _____ Time: _____		FINAL SHIPMENT RECEPTION (ALS use only) Received by: _____ Date: _____ Time: _____	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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



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Report To		Contract and company name below will appear on the final report		
Company:	WSP Canada Inc.		Select Report Format: ☐ PDF ☒ EXCEL ☐ ECD (DIGITAL)	
Contact:	Beatriz Cupe-Flores		Merge QC/QC Reports with COA ☐ YES ☐ NO ☐ N/A	
Phone:	(306) 914-3922		☐ Compare Results to Criteria on Report - provide details below if box checked	
Company address below will appear on the final report		Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	Additional fees may apply to meet requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all EAP TATs: For all tests with rush TATs requested, please contact your AM to confirm availability.	
Street:	1721 8 St E			☐ 4 day (P1) if received by 3pm M-F - no surcharges apply
City/Province:	Saskatoon, SK			☐ 3 day (P2) if received by 3pm M-F - 25% rush surcharge minimum
Postal Code:	S7H 0T4			☐ 2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum
Invoice To	Same as Report To ☐ YES ☒ NO			☐ 1 day (E) if received by 3pm M-F - 100% rush surcharge minimum
Copy of Invoice with Report	☐ YES ☐ NO		☐ Same day (E2) if received by 10am M-S - 200% rush surcharge.	
Company:	B2Gold Back River Corp.		Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	
Contact:	BR.accounts payable@b2gold.com		Email 1 or Fax (804) 681-6209	
Project Information		Email 2: BR.accounts payable@b2gold.com	Email 3: br.accounts payable@b2gold.com	
ALS Client Code / QUOTE #:		YL23-SAB100-001	Oil and Gas Required Fields (client use)	
Job / Project #:		September AEMP program	AET/Coast Center:	
PO / AFE:			Major/Minor Code:	
LSD:			Requestioner:	
ALS Lab Work Order # (ALS use only):		ALS Contact: Oliver Gregg	Sampler:	
Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mm-yy)	Time (hh:mm)	Sample Type
ALS Sample # (ALS use only)				
	BRP-38-1A	11-Sep-25	9:35	Chlorophyll a
	BRP-38-1B			
	BRP-38-1C			
	BRP-38-2A		10:25	
	BRP-38-2B			
	BRP-38-2C			
	BRP-38-3A		11:22	
	BRP-38-3B			
	BRP-38-3C			
	BRP-38-4A		12:40	
	BRP-38-4B			
	BRP-38-4C			
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		
Are samples taken from a Regulated DW System?				
☐ YES ☐ NO				
Are samples for human consumption/ use?				
☐ YES ☐ NO				
Report to: gld.GAL.EQUIS@wsp.com ; nrlan@haffieldgroup.com ; lhwis@haffieldgroup.com ; lbystron@haffieldgroup.com ; zlu@haffieldgroup.com ; dlcc@haffieldgroup.com				
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		SAMPLE RECEIPT DETAILS (ALS use only)
Released by: Adam Feldbees	Date: 15 Sep. 2025	Time: 16:00	Received by:	
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHITE - LABORATORY COPY		YELLOW - CLIENT COPY
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 this 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.		

continued on
Back



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Report To		Contact and company name below will appear on the final report	
Company:	WSP Canada Inc.		
Contact:	Beatriz Cupe-Flores		
Phone:	(306) 914-3922		
Company address below will appear on the final report			
Street:	1721 8 St E		
City/Province:	Saskatoon, SK		
Postal Code:	S7H 0T4		
Invoice To	Same as Report To	☐ YES ☒ NO	
Copy of Invoice with Report	☐ YES ☒ NO		
Company:	B2Gold Back River Corp.		
Contact:	BR.accounts@b2gold.com		
Project Information			
ALS Client Code / QUOTE #:	YL23-SAB1100-001		
Job / Project #:	September AEMP program		
PO / AFE:			
LSD:			
ALS Lab Work Order # (ALS use only):		ALS Contact:	Oliver Gregg
Sample Identification and/or Coordinates (This description will appear on the report)		Date	(dd-mm-yy)
ALS Sample # (ALS use only)		Time	(hh:mm)
	BRP-38-5A	11-Sep-25	13:20
	BRP-38-5B	↓	↓
	BRP-38-5C	↓	↓
Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		Sample Type	
Drinking Water (DW) Samples* (client use)		Chlorophyll a in Water	
Are samples taken from a Regulated DW System? ☐ YES ☒ NO		Total Volume Filtered (L)	
Are samples for human consumption/ use? ☐ YES ☒ NO		Total Filtrate Used (0.45 um)	
SHIPMENT RELEASE (client use)		NUMBER OF CONTAINERS	
Released by:	Date:	Analysis Request	
Robert Feldberg	15 Sep 2025	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below	
SHIPMENT RELEASE (client use)		SUSPECTED HAZARD (see notes)	
Date:		EXTENDED STORAGE REQUIRED	
15 Sep 2025		SAMPLES ON HOLD	
Time:			
16:00			
Received by:		FINAL SHIPMENT RECEPTION (ALS use only)	
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Chain of Custody (COC) / Analytical Request Form

COC Number: **22 -**

Costs: \$115,000 to \$1,000,000

Page 6 of 8

Report To							Company Name Below will appear on the final report					
Company:							WSP Canada Inc.					
Contact:							Beatrix Cuipe-Flores					
Phone:							(306) 914-3822					
Street:							1721 8 St E					
City/Province:							Saskatoon, SK					
Postal Code:							S7H 0T4					
Invoice To							Same as Report To ☐ YES ☒ NO					
Copy of Invoice with Report							☐ YES ☐ NO					
Company:							B2Gold Back River Corp.					
Contact:							BR.accounts@b2gold.com					
Project Information												
ALS Client Code / QUOTE #:							YL23-SAB100-001					
Job / Project #:							September AEMP program					
PO / AFE:												
LSD:												
ALS Lab Work Order # (ALS use only):							ALS Contact: Oliver Gregg					
Sample Identification and/or Coordinates (This description will appear on the report)							Date (dd-mm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS		
1.2um-BRP-29A-1A							10 Sep 25	11:50	Whisker	Chlorophyll a in Water		
1.2um-BRP-29A-1B										Total Volume Filtered (L)		
1.2um-BRP-29A-1C										Total Filters Used (1.2 um)		
1.2um-BRP-29A-2A												
1.2um-BRP-29A-2B												
1.2um-BRP-29A-2C												
1.2um-BRP-29A-3A												
1.2um-BRP-29A-3B												
1.2um-BRP-29A-3C												
1.2um-BRP-32-1A												
1.2um-BRP-32-1B												
1.2um-BRP-32-1C												
Drinking Water (DW) Samples ¹ (client use)							Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)					
Are samples taken from a Regulated DW System?												
☐ YES ☐ NO												
Are samples for Human consumption/use?												
☐ YES ☐ NO												
SHIPMENT RELEASE (client use)							INITIAL SHIPMENT RECEPTION (ALS use only)					
Requested by: Adam Feldberg							Date: 15 Sep 2025	Time: 16:00	Received by:	Date:	Time:	
Revised by:							Date:					
SHIPMENT TO BACK PAGE FOR ALS LOCATIONS AND STATUS INFORMATION												

continued on
Back →

Failure to complete all portions of this form may delay analysis. Please fill in the 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. If your water samples are taken from a Regulated Drinking Water (RDW) System, please submit using an Authorized DW CDC form.

WAVE 2002 ONLY



DATE RECEIVED	DATE RECEIVED

NAME	DATE	TIME	WHITE - LABORATORY COPY	YELLOW - CLIENT COPY
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION				

• If your water samples are taken from a Remanufactured Drinking Water (RDW) System, please submit using an Authorized DW-COC form.

COC Number: **22 -**

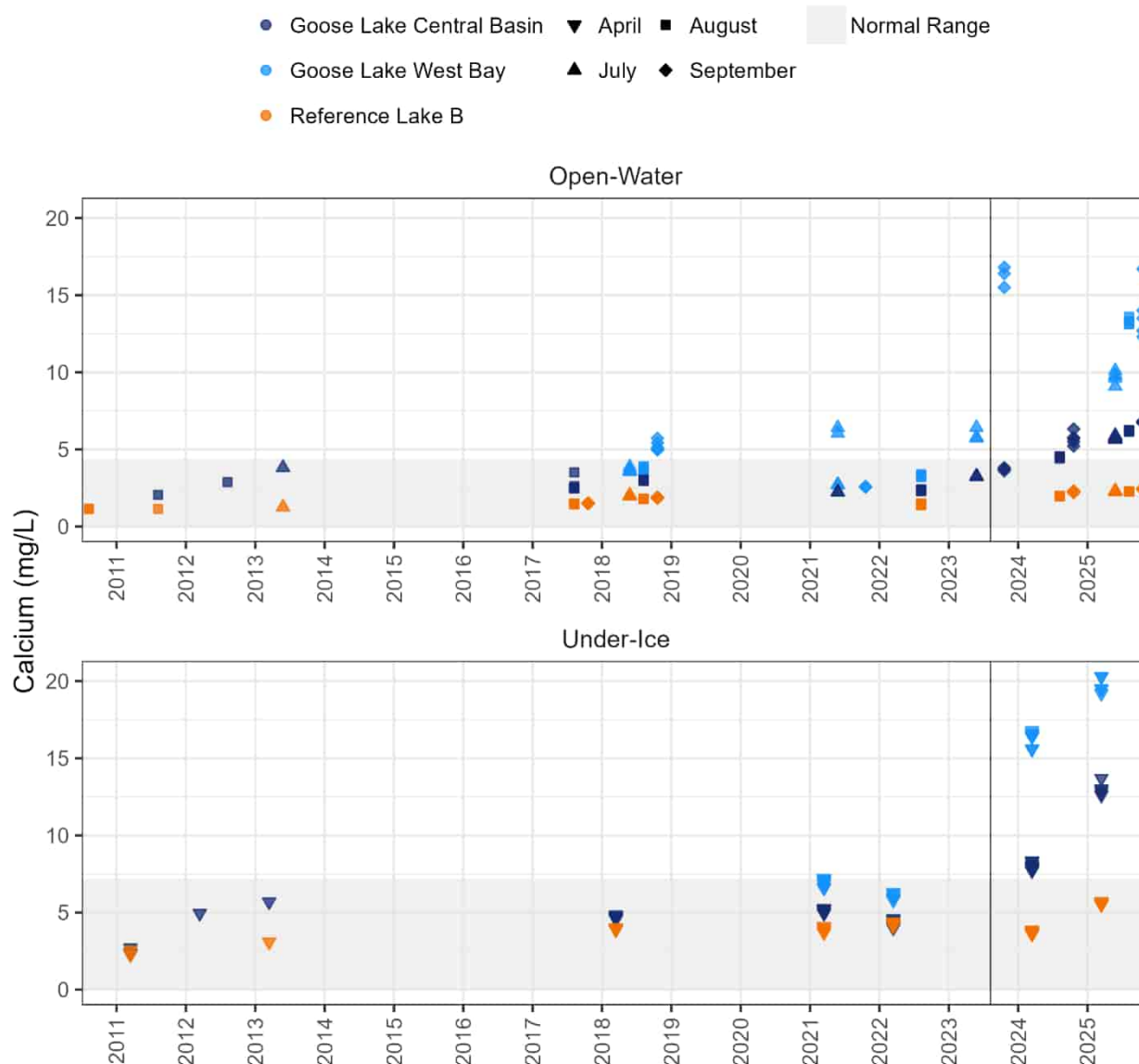
Canada Toll Free: 1 800 668 9878

MAY 2000

APPENDIX E

**2025 Water Quality – Time
Series Plots**

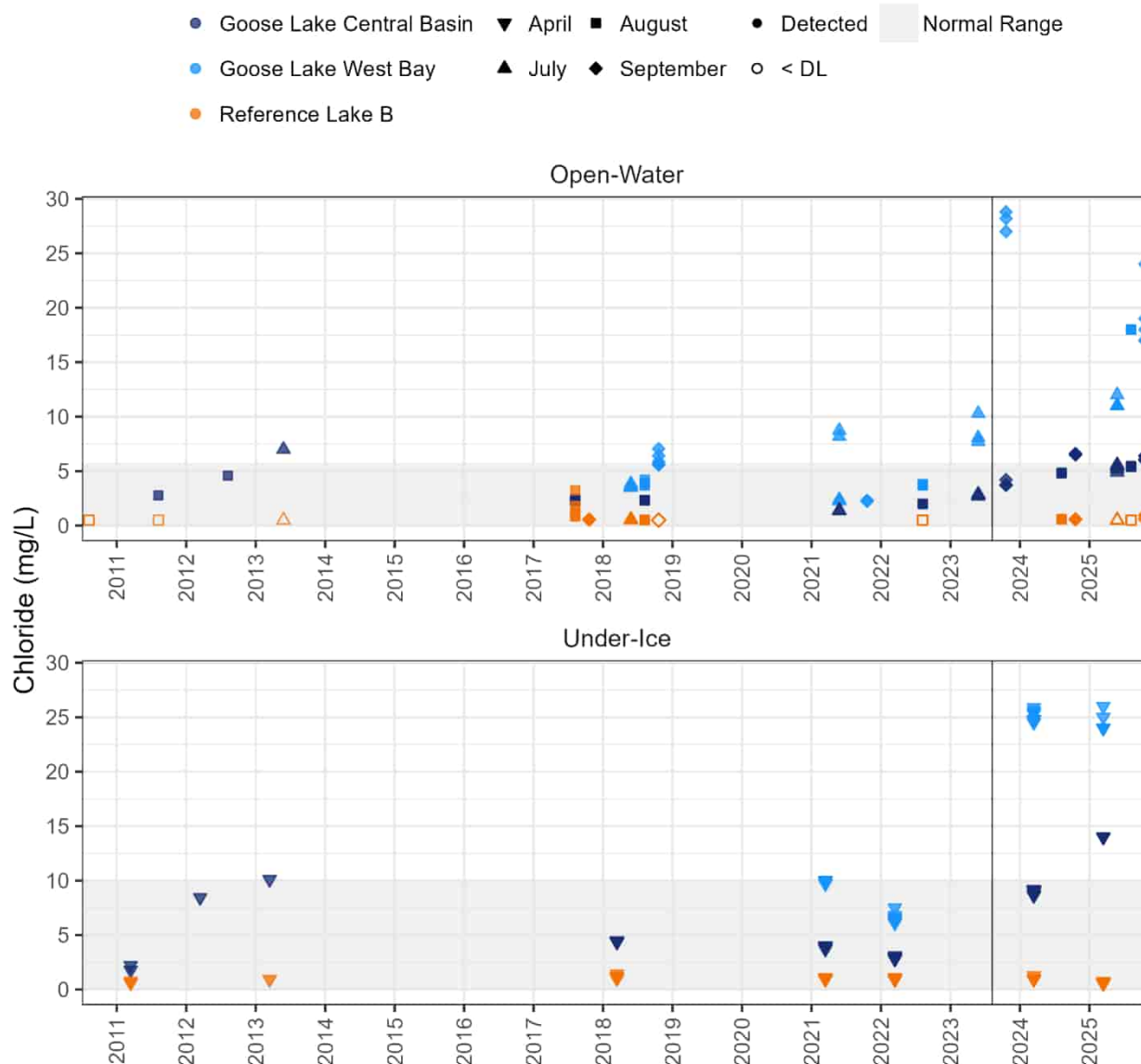
1 CALCIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

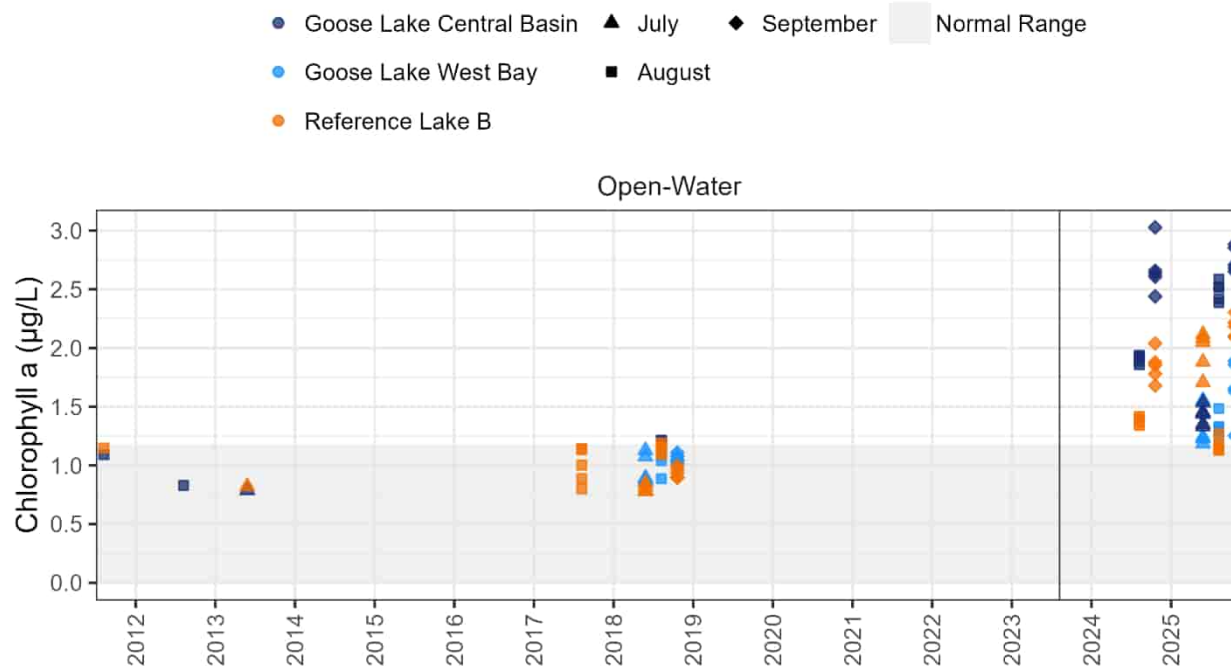
2 CHLORIDE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

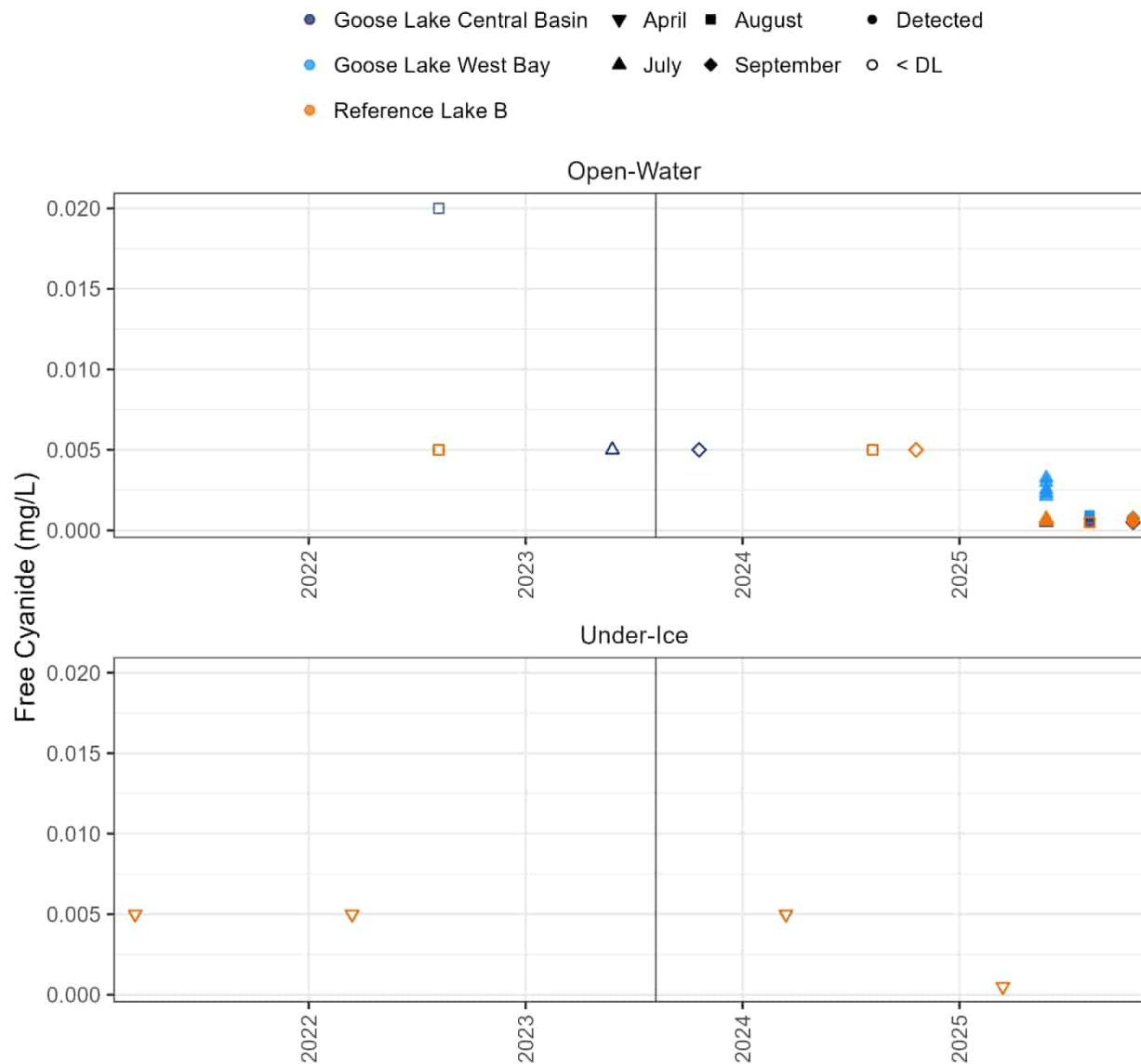
3 CHLOROPHYLL A



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

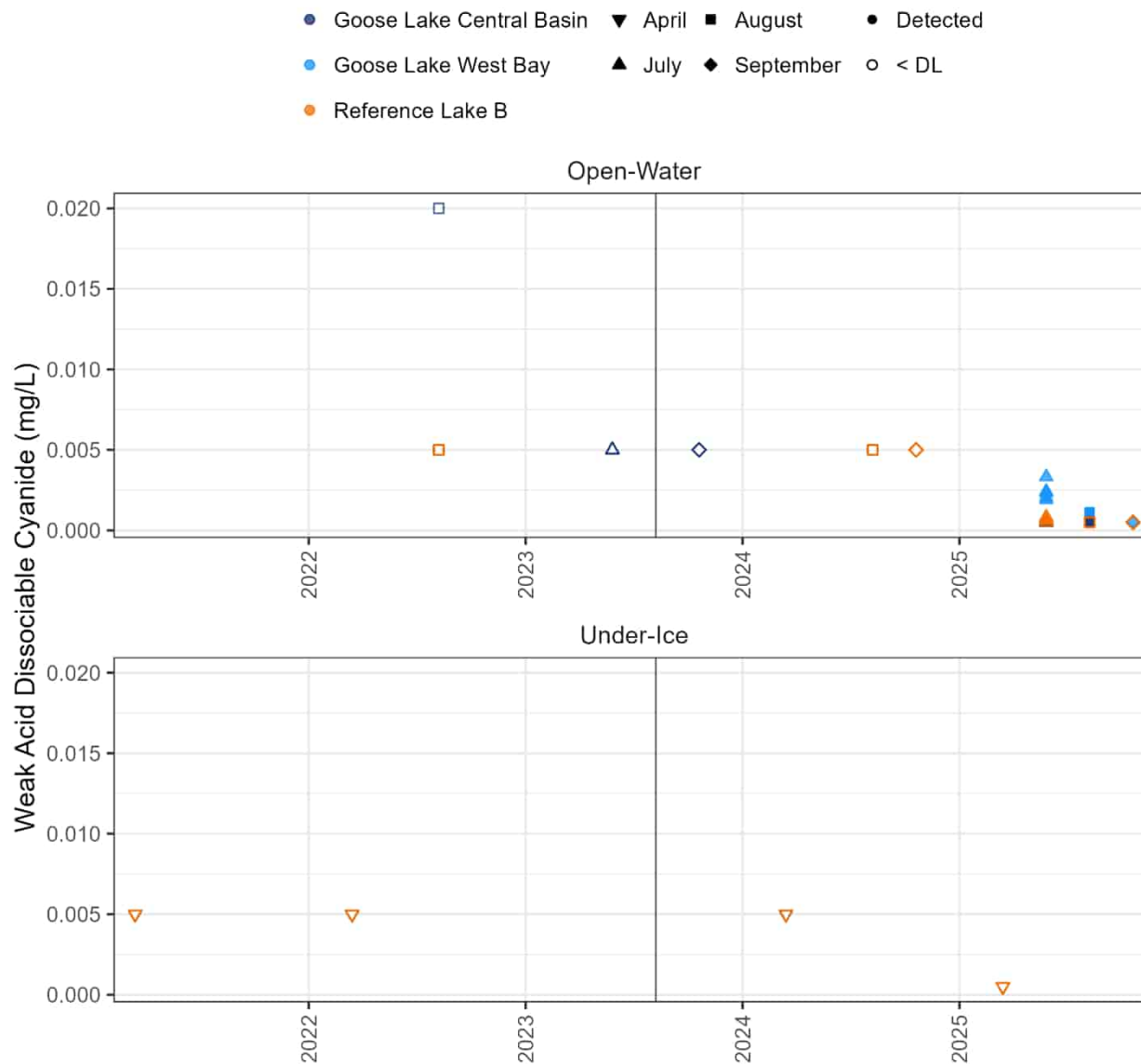
4 FREE CYANIDE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

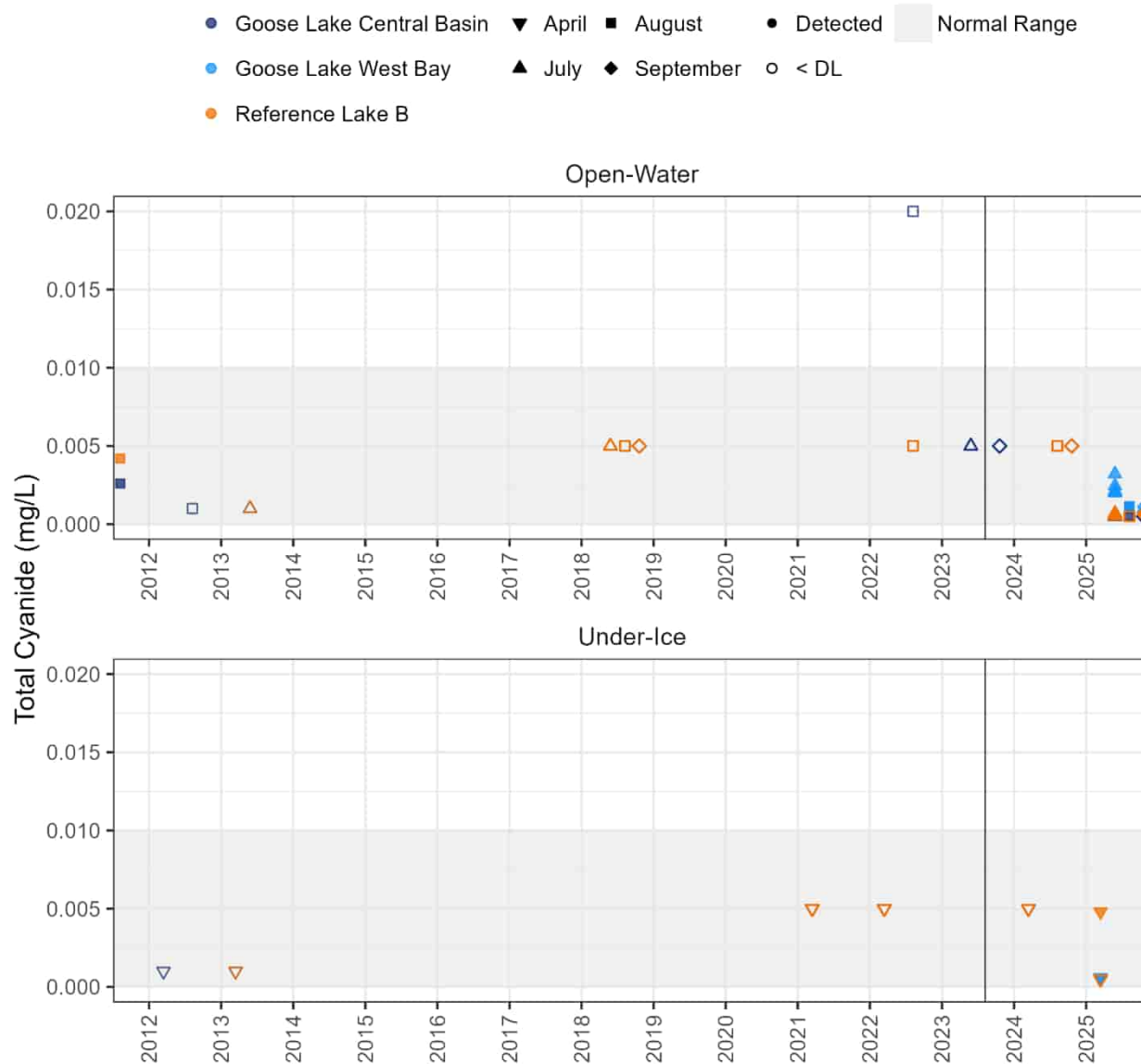
5 WEAK ACID DISSOCIABLE CYANIDE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

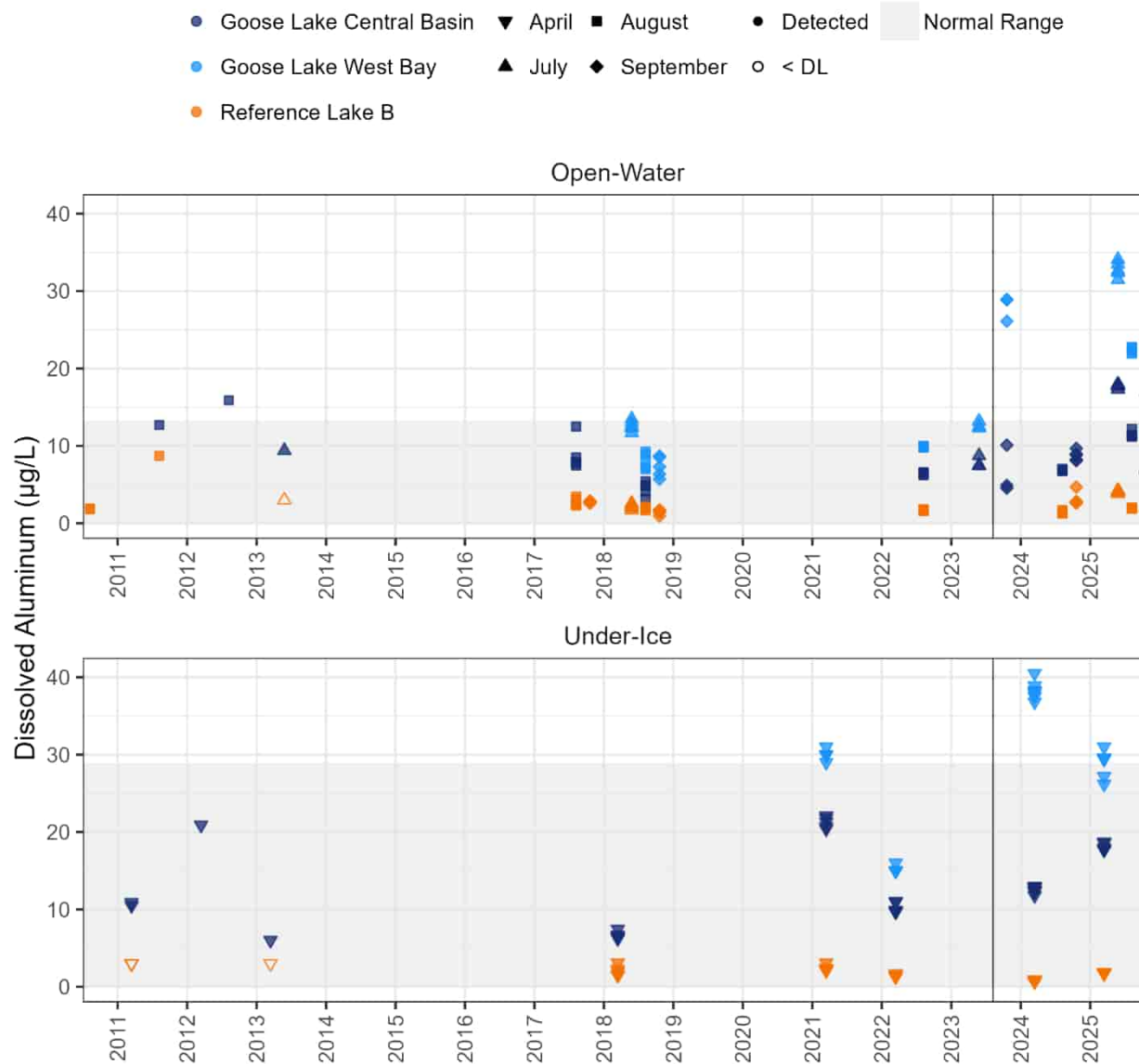
6 TOTAL CYANIDE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

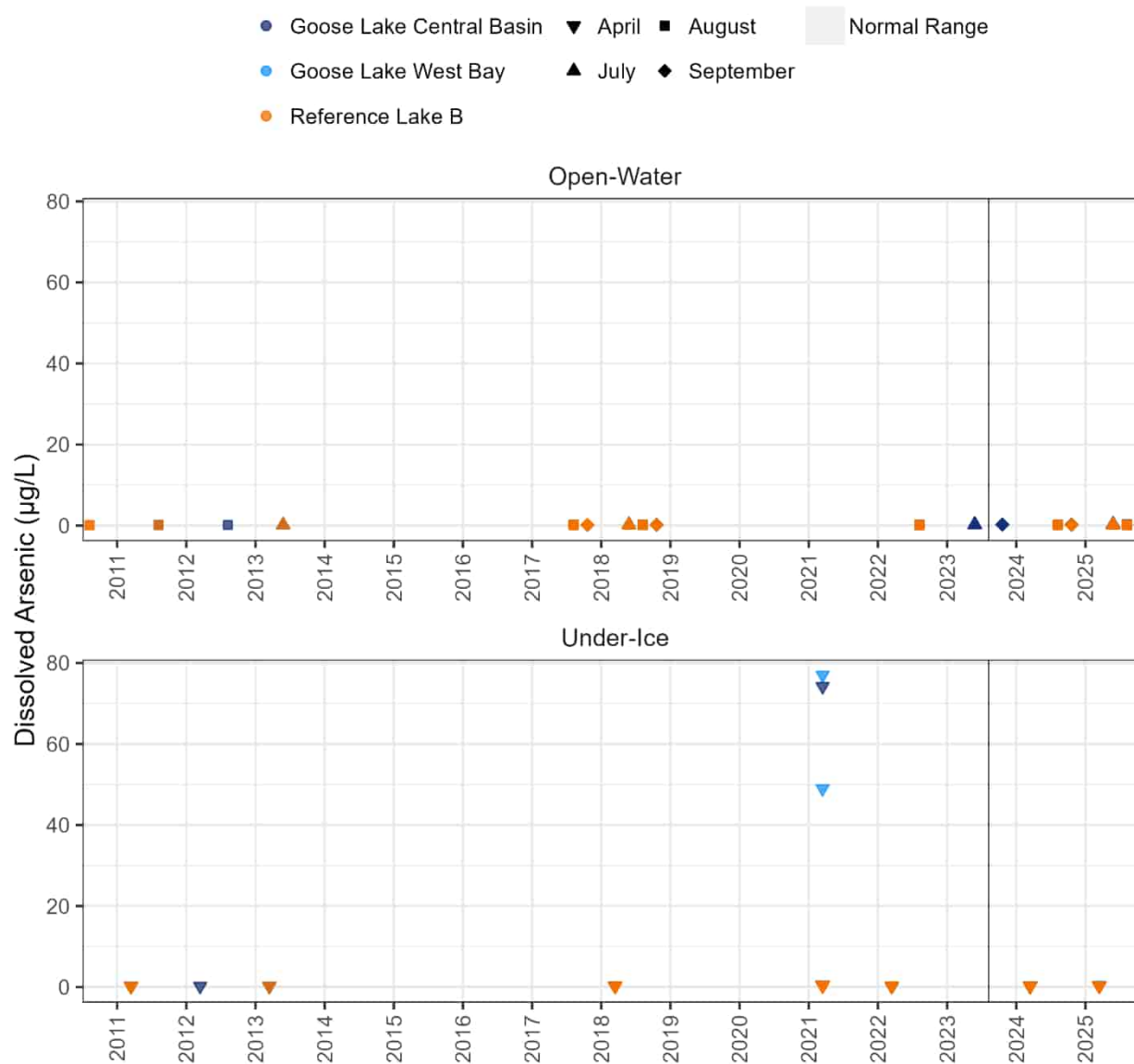
7 DISSOLVED ALUMINUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

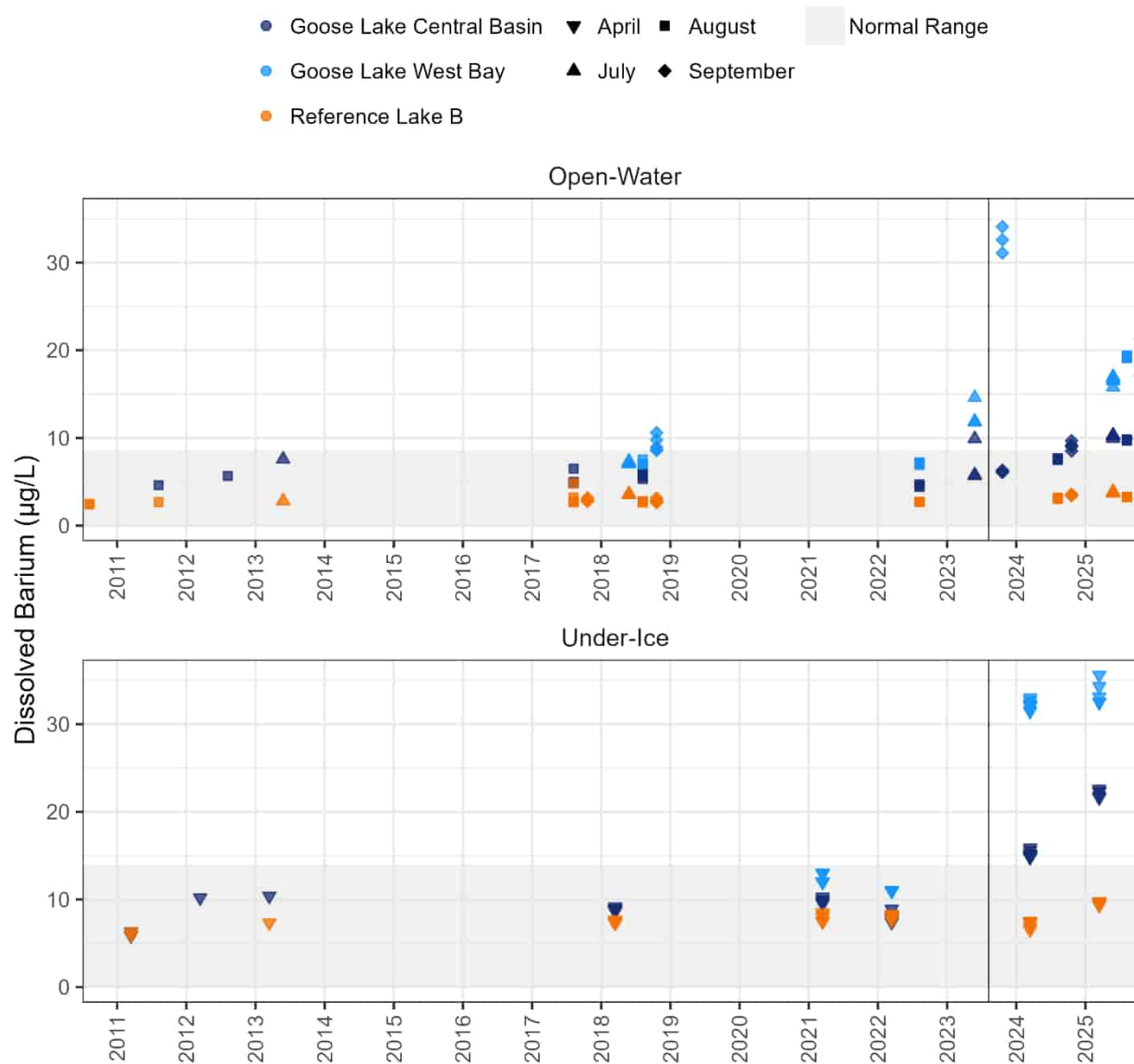
8 DISSOLVED ARSENIC



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

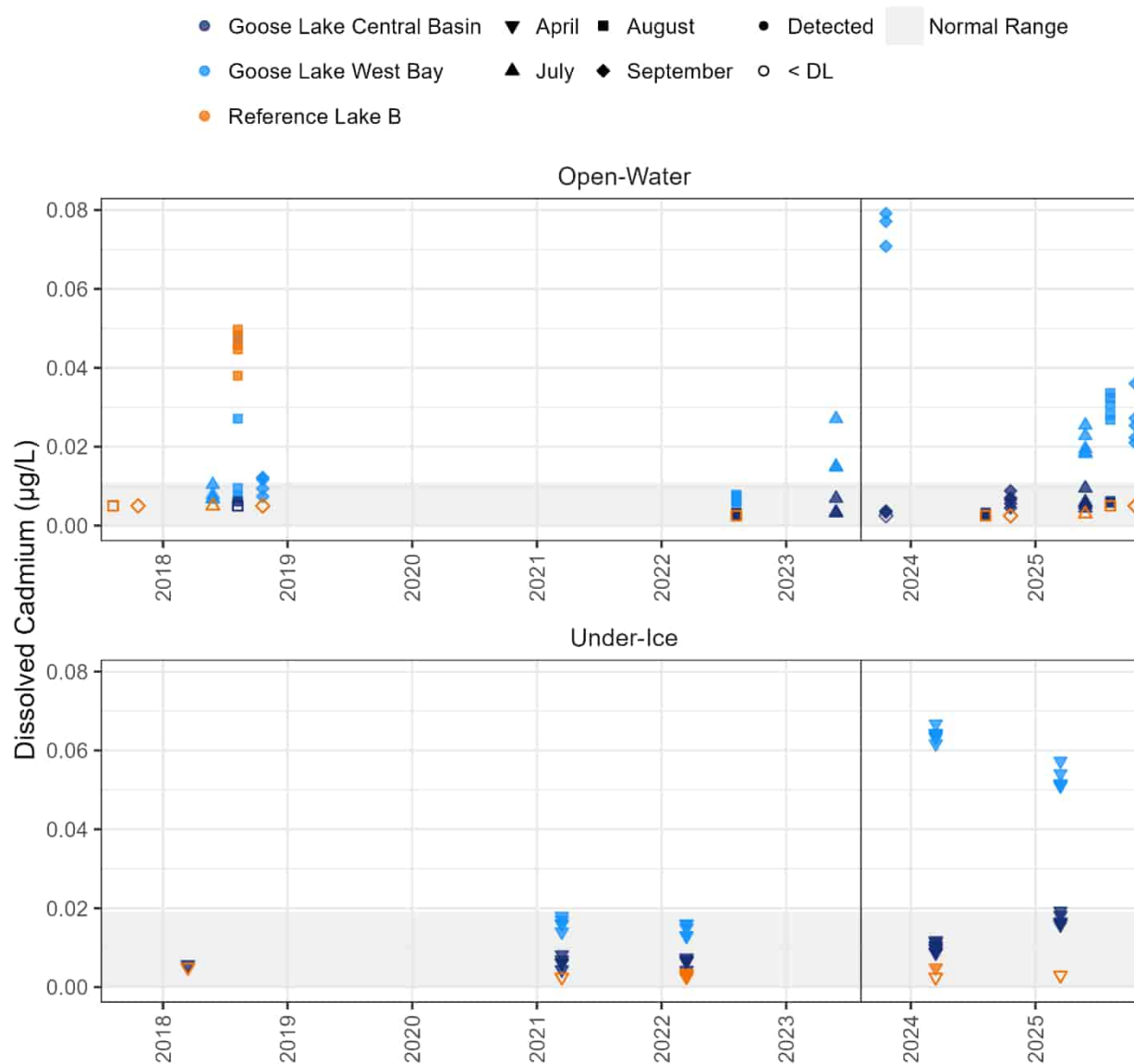
9 DISSOLVED BARIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

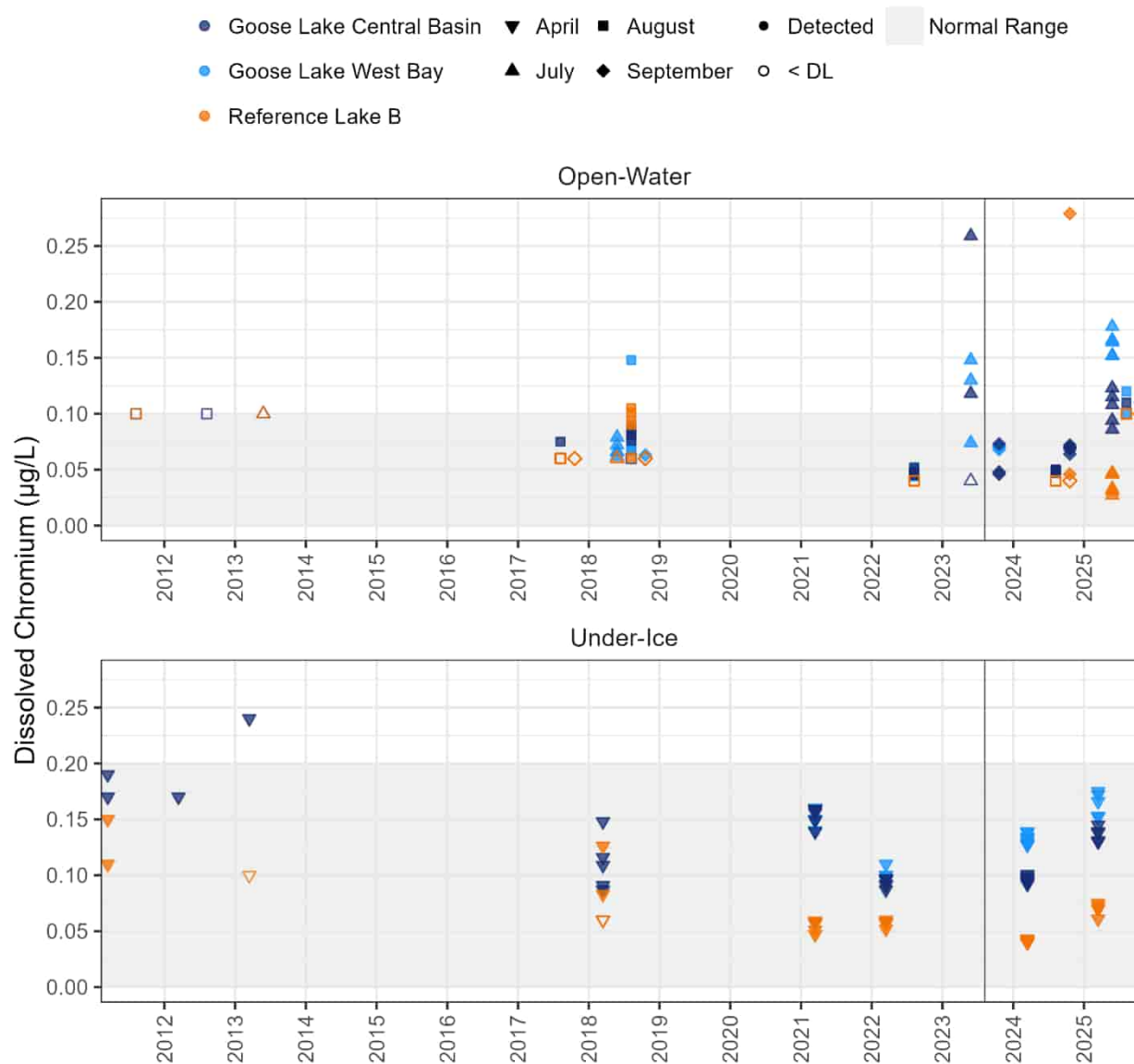
10 DISSOLVED CADMIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

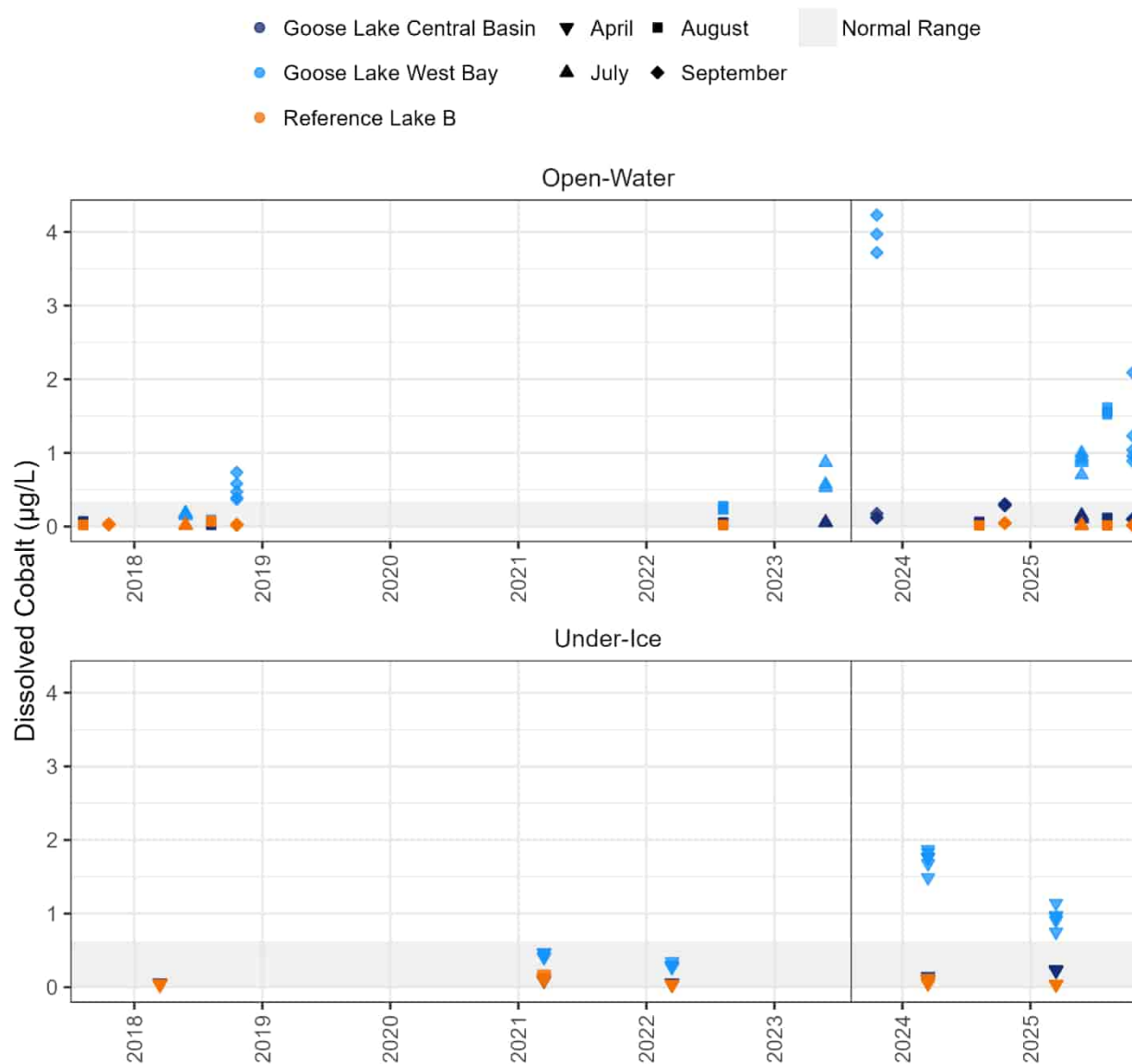
11 DISSOLVED CHROMIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

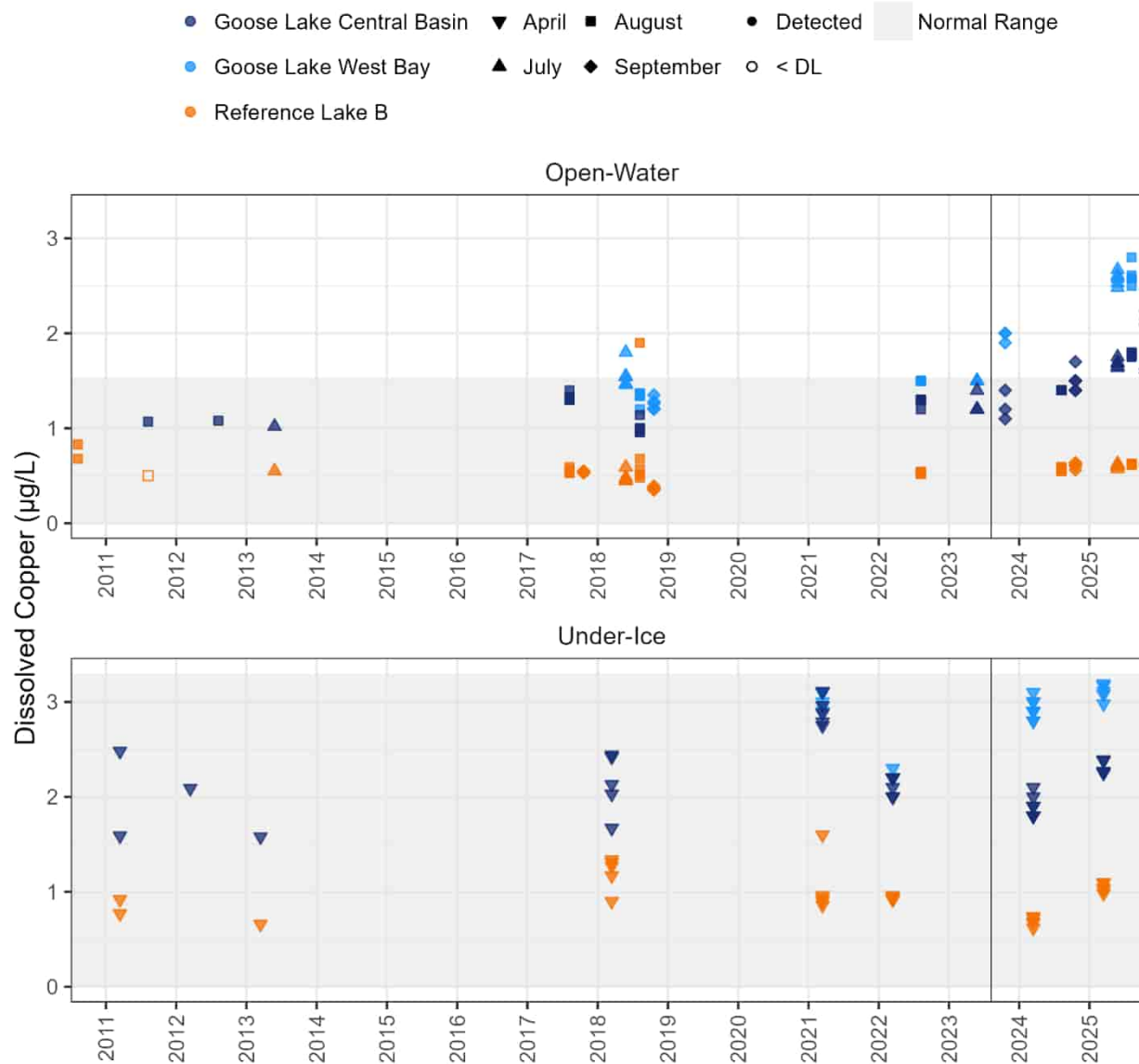
12 DISSOLVED COBALT



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

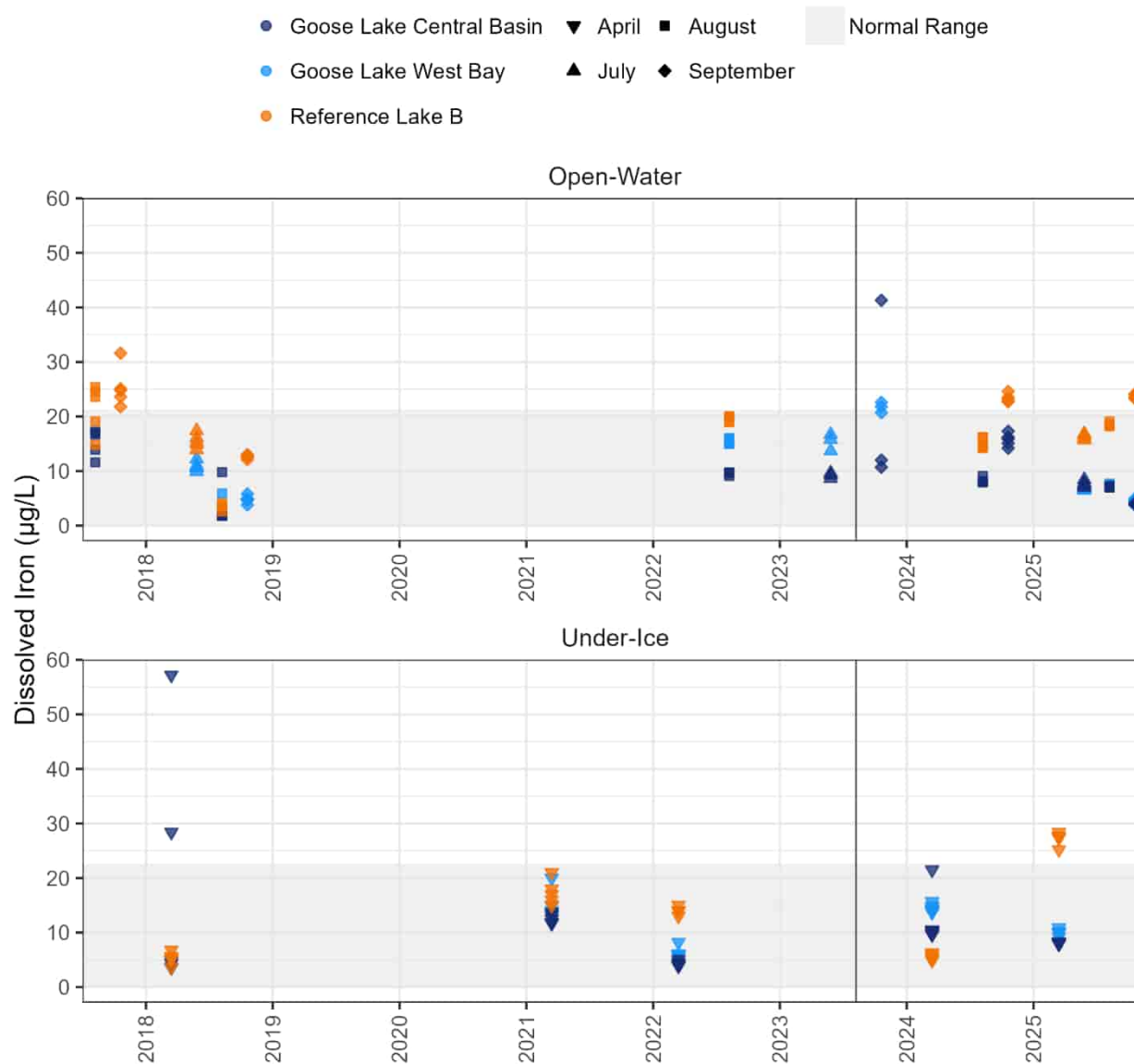
13 DISSOLVED COPPER



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

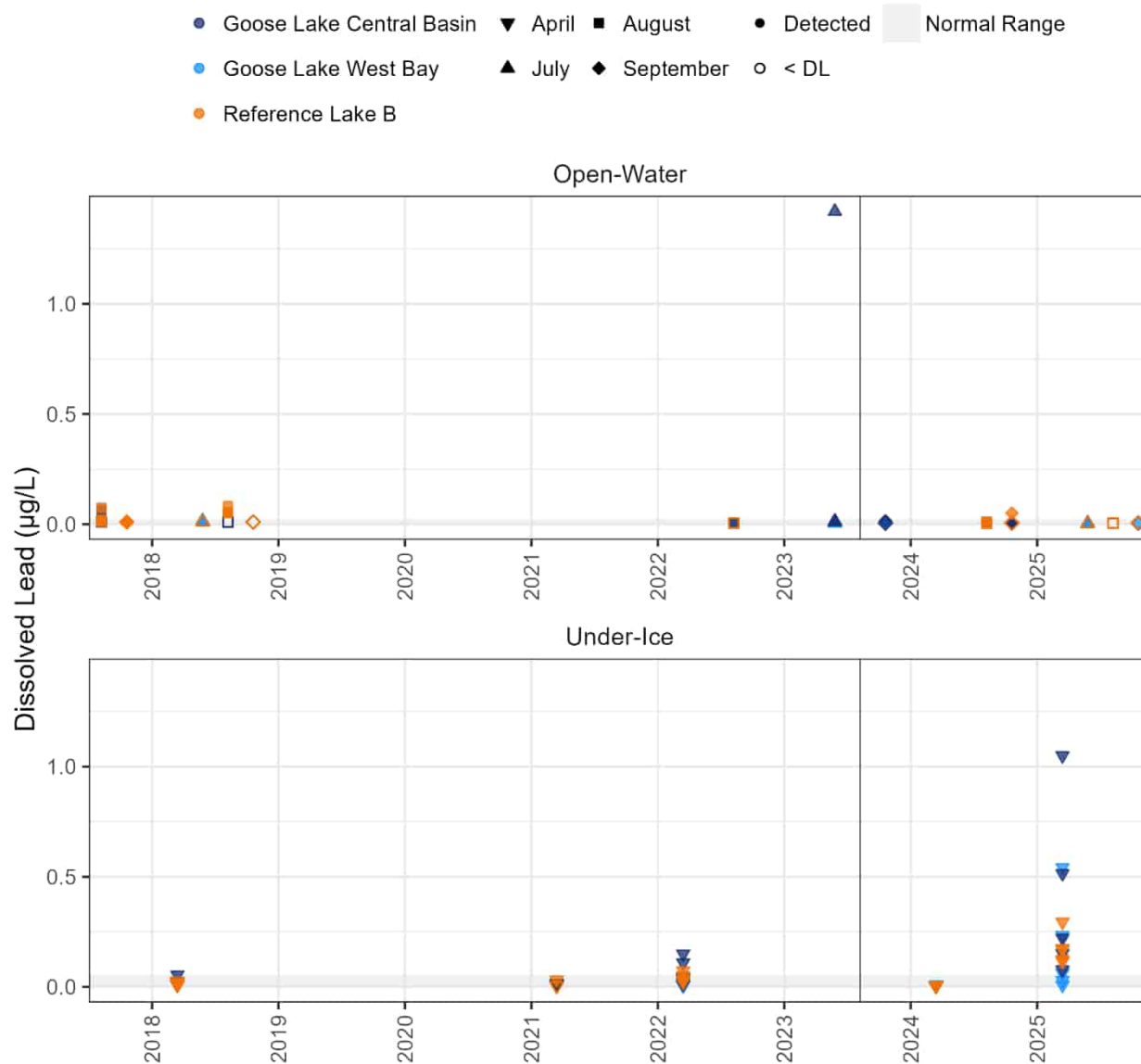
14 DISSOLVED IRON



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

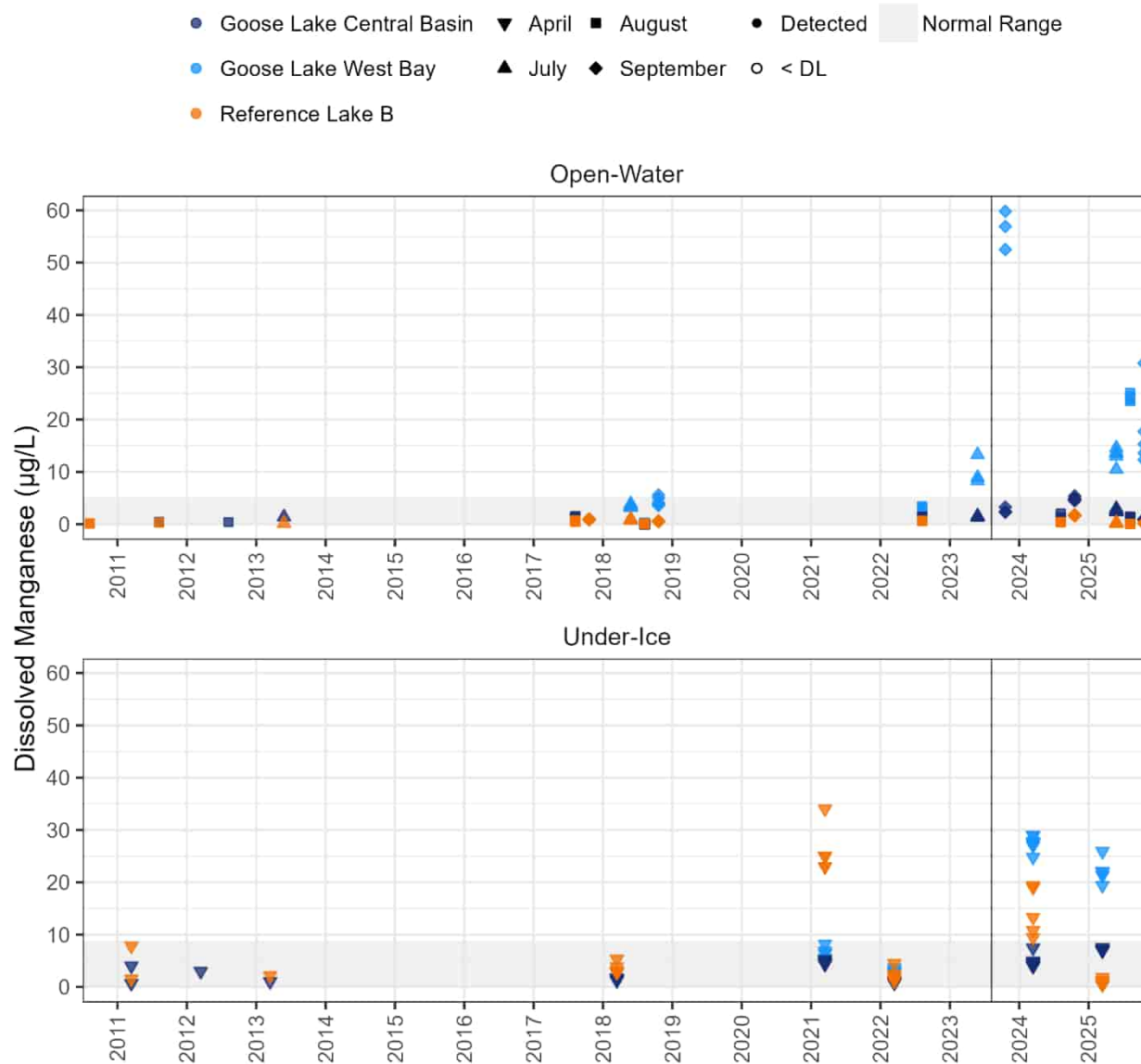
15 DISSOLVED LEAD



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

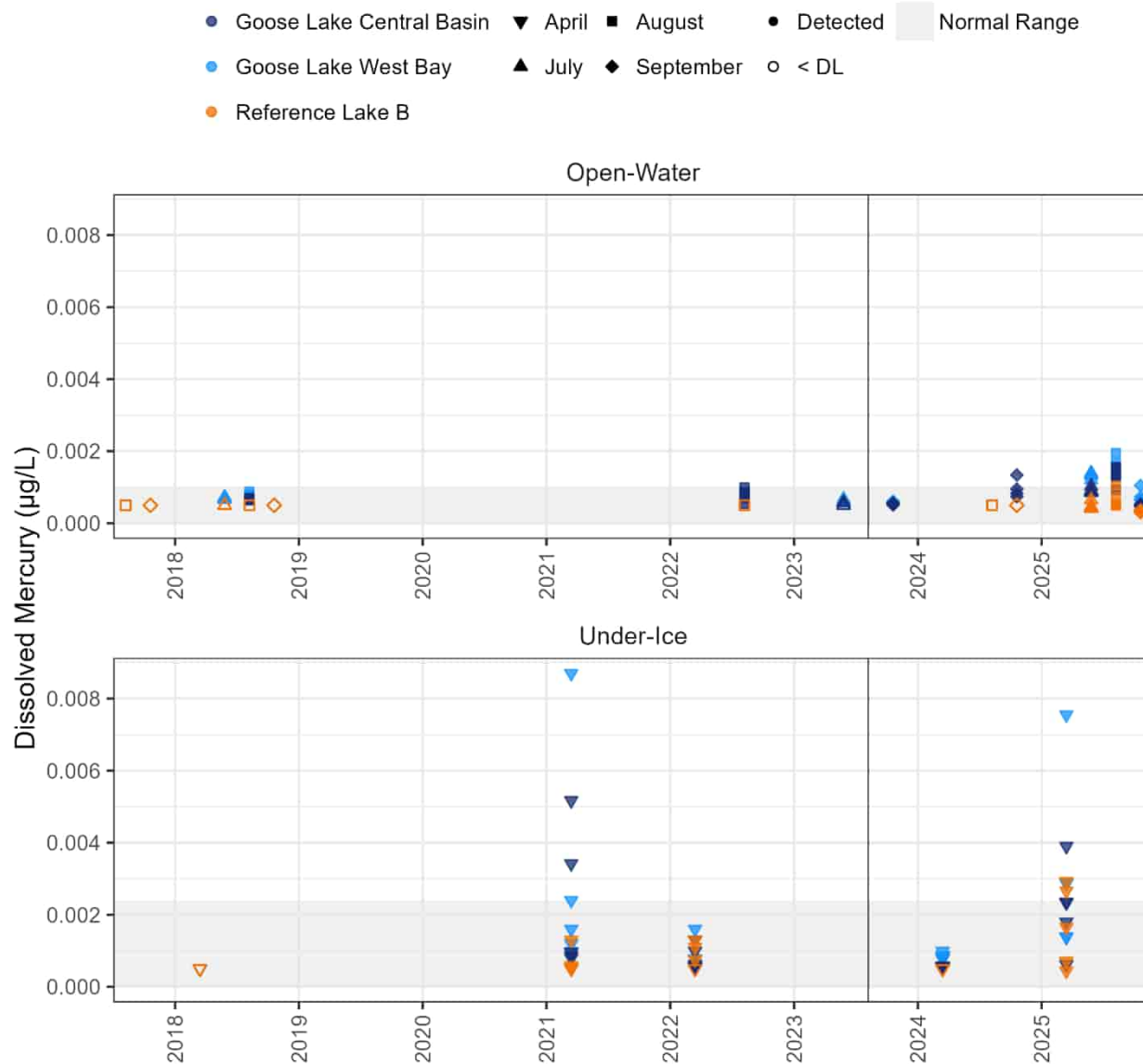
16 DISSOLVED MANGANESE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

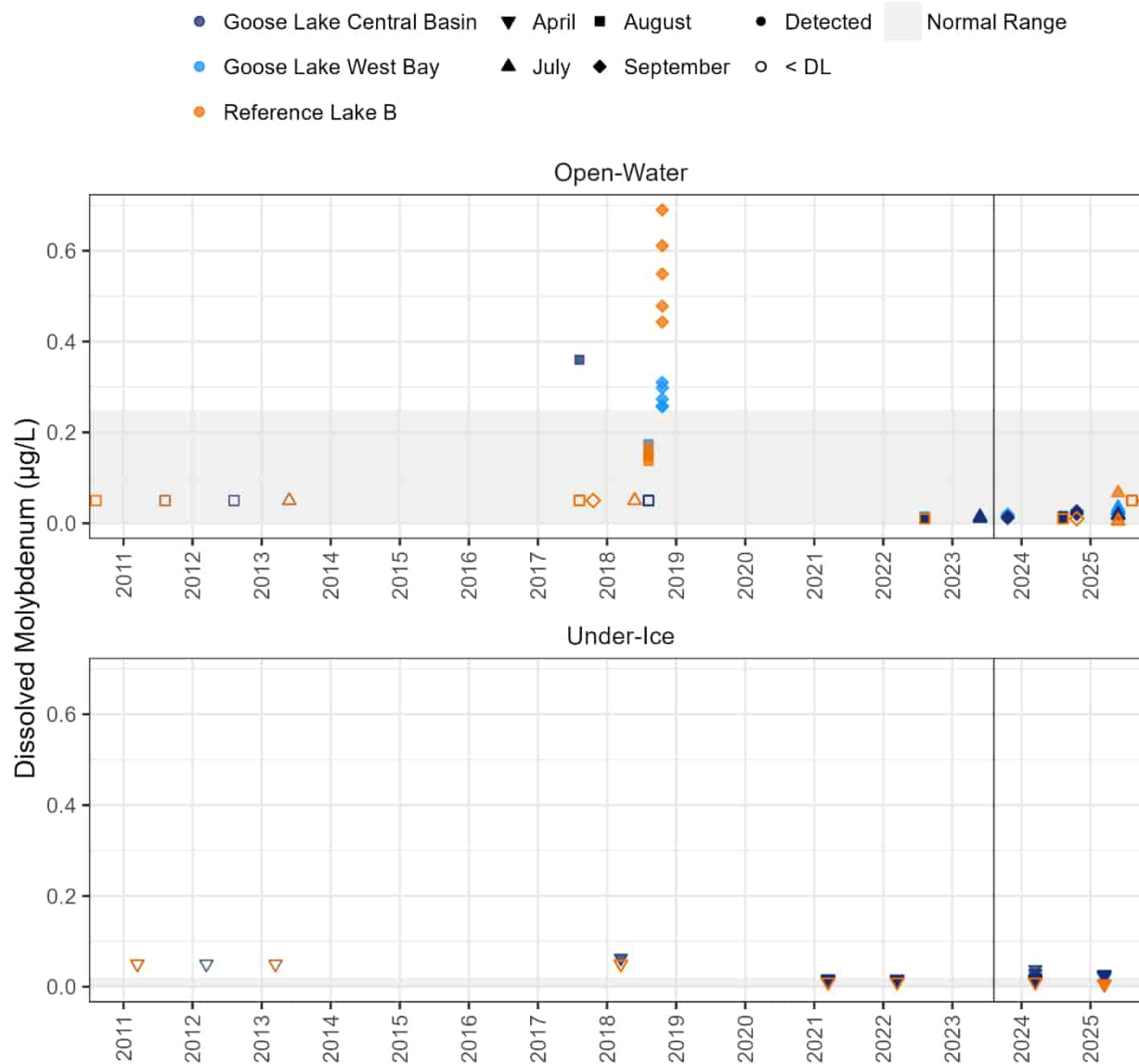
17 DISSOLVED MERCURY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

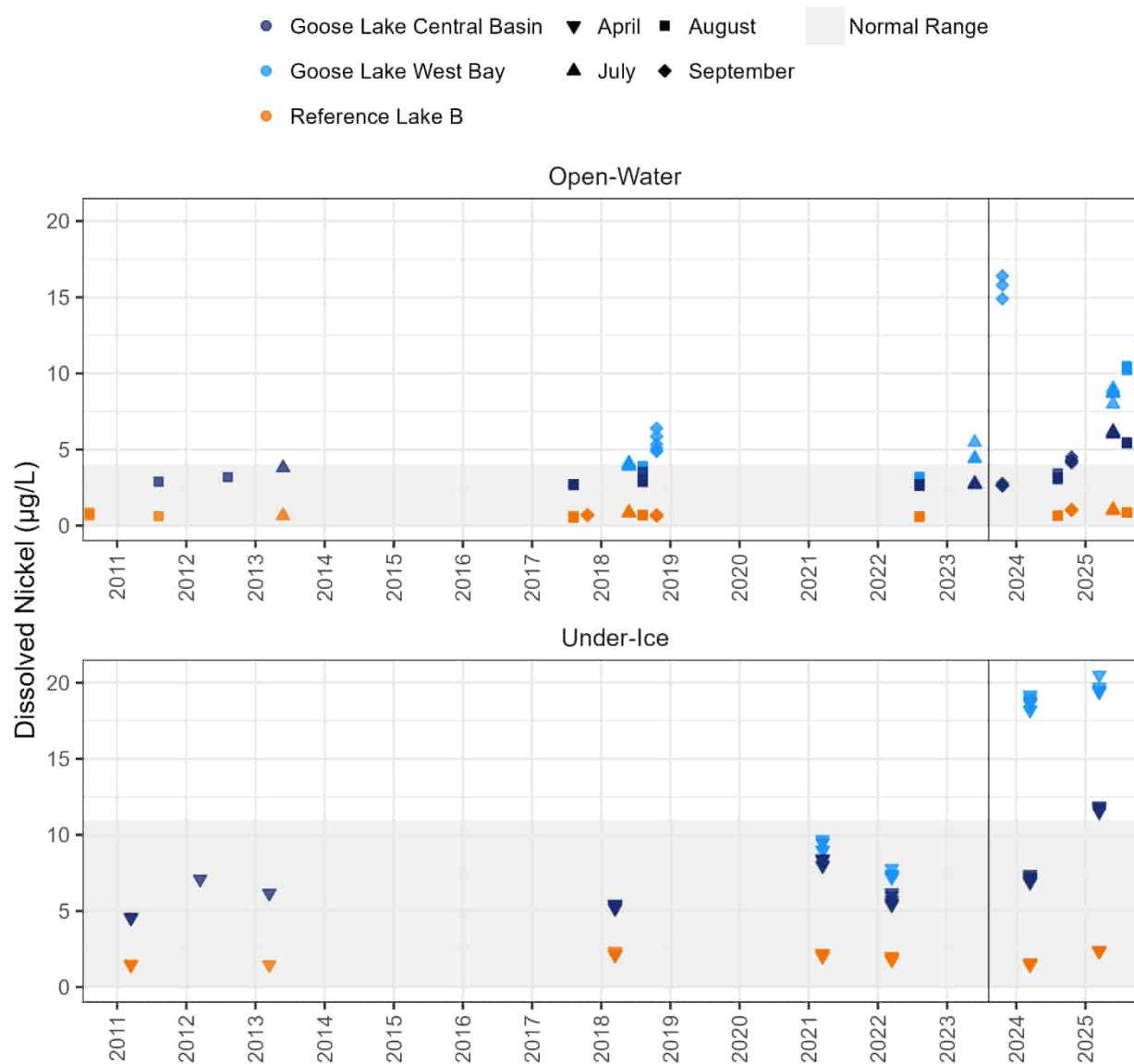
18 DISSOLVED MOLYBDENUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

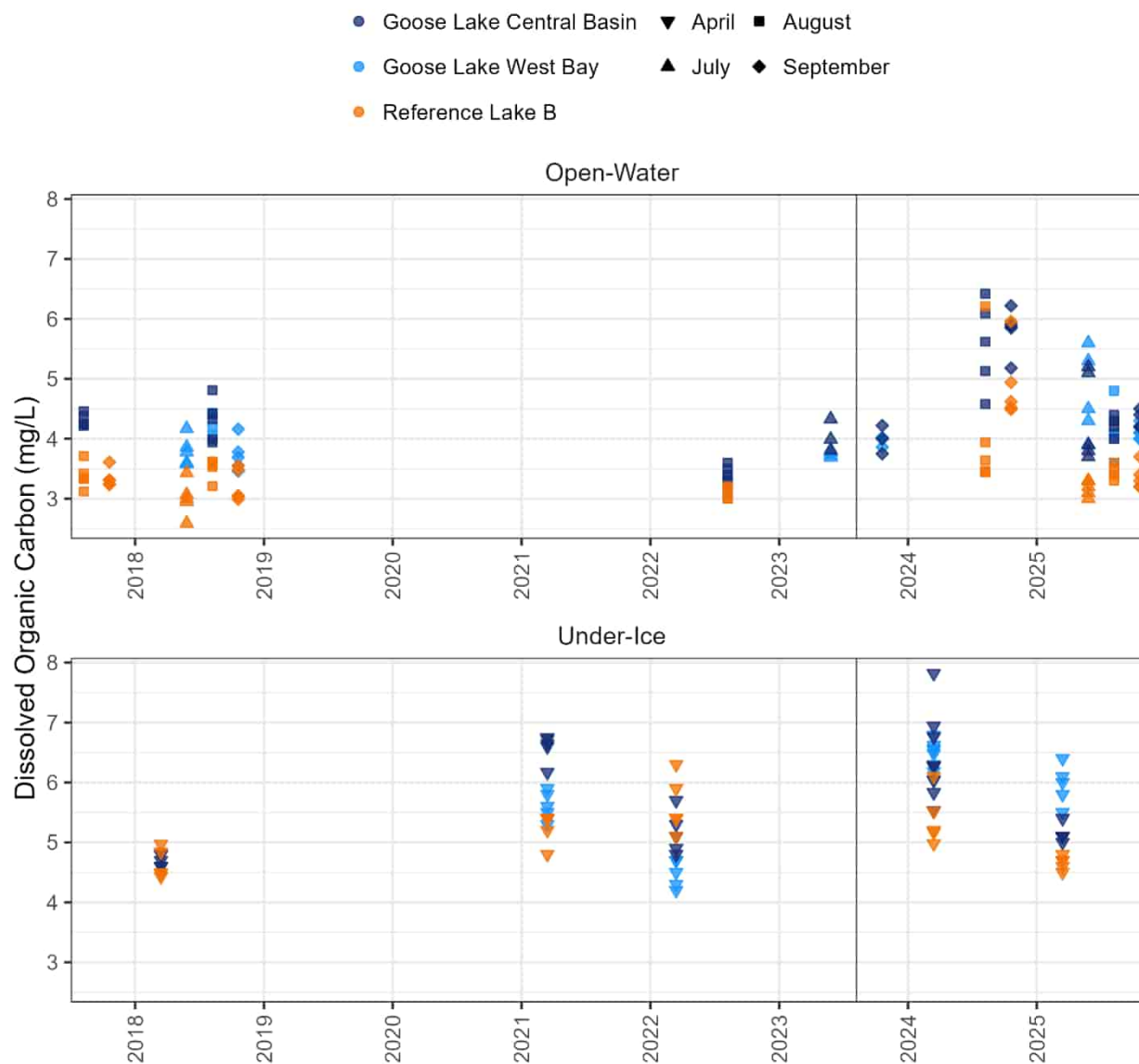
19 DISSOLVED NICKEL



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

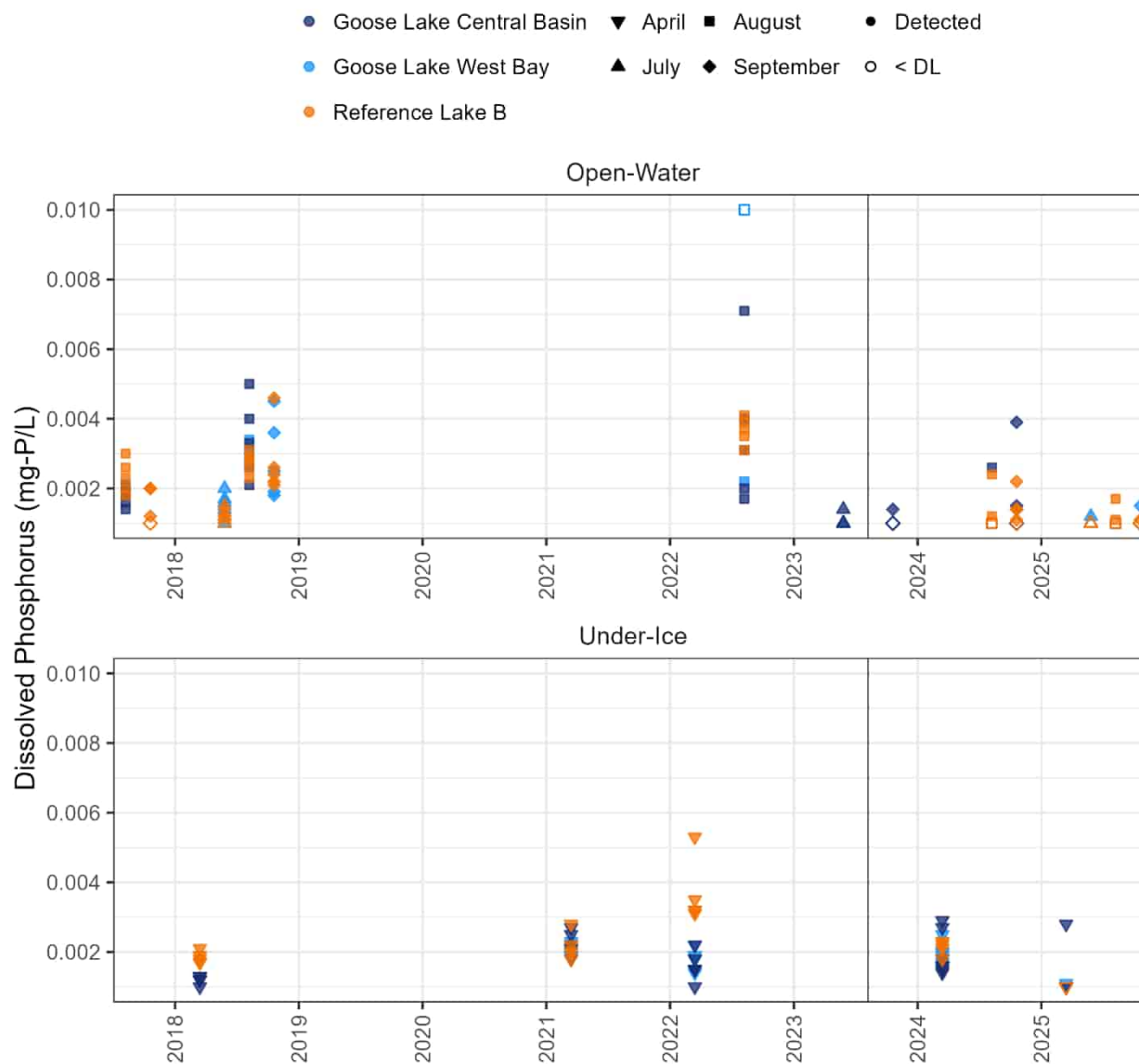
20 DISSOLVED ORGANIC CARBON



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

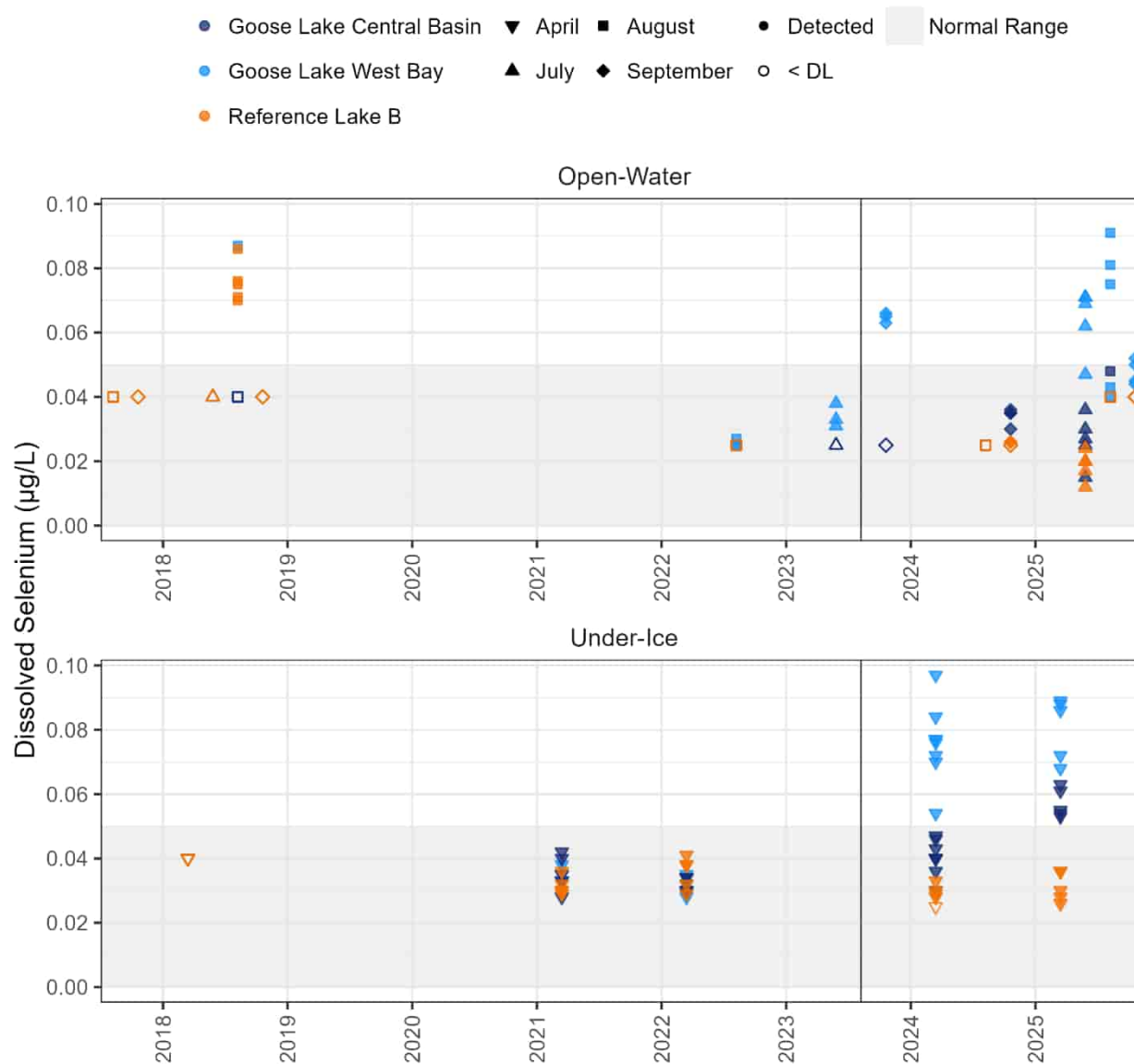
21 DISSOLVED PHOSPHORUS



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

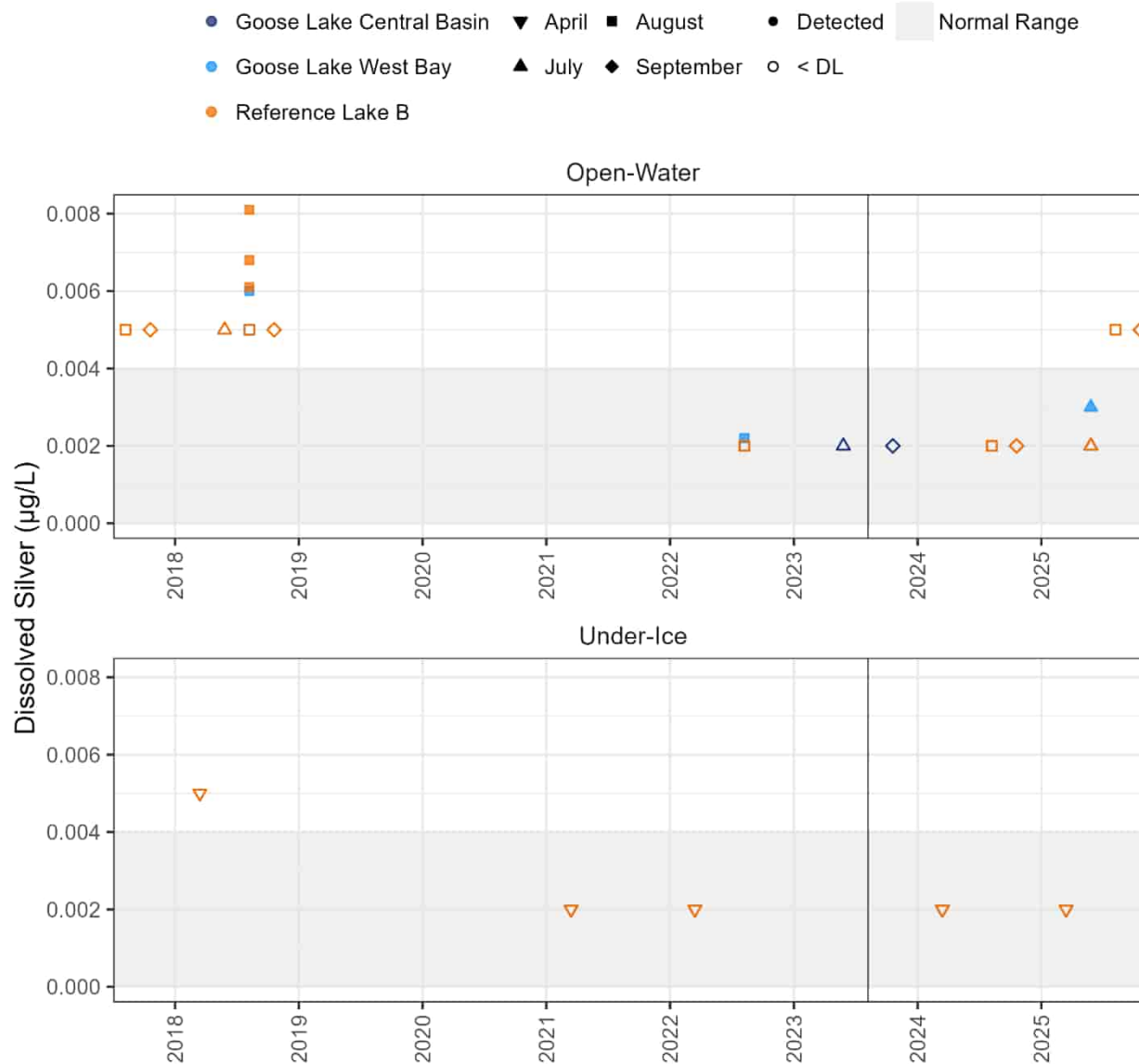
22 DISSOLVED SELENIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

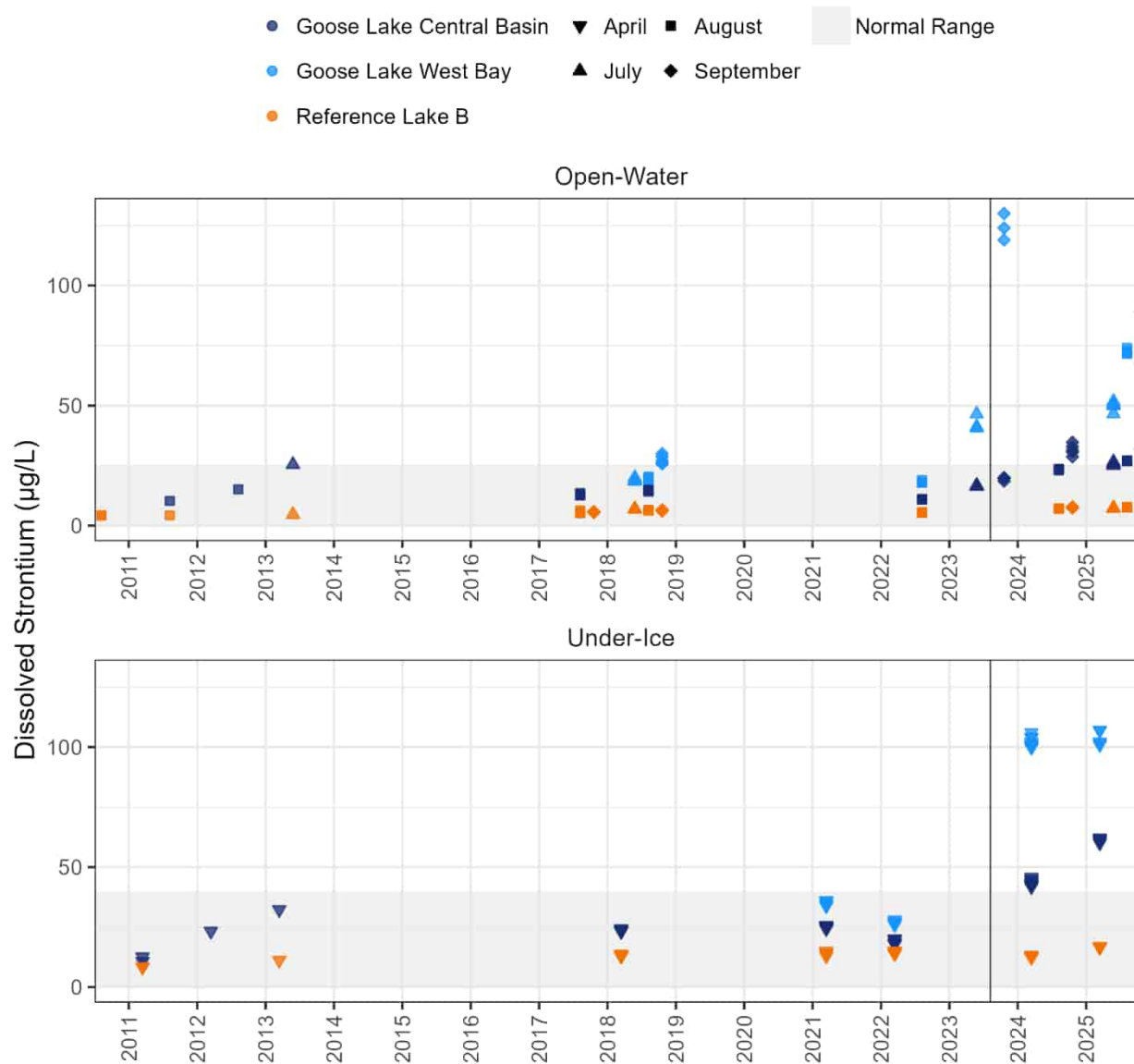
23 DISSOLVED SILVER



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

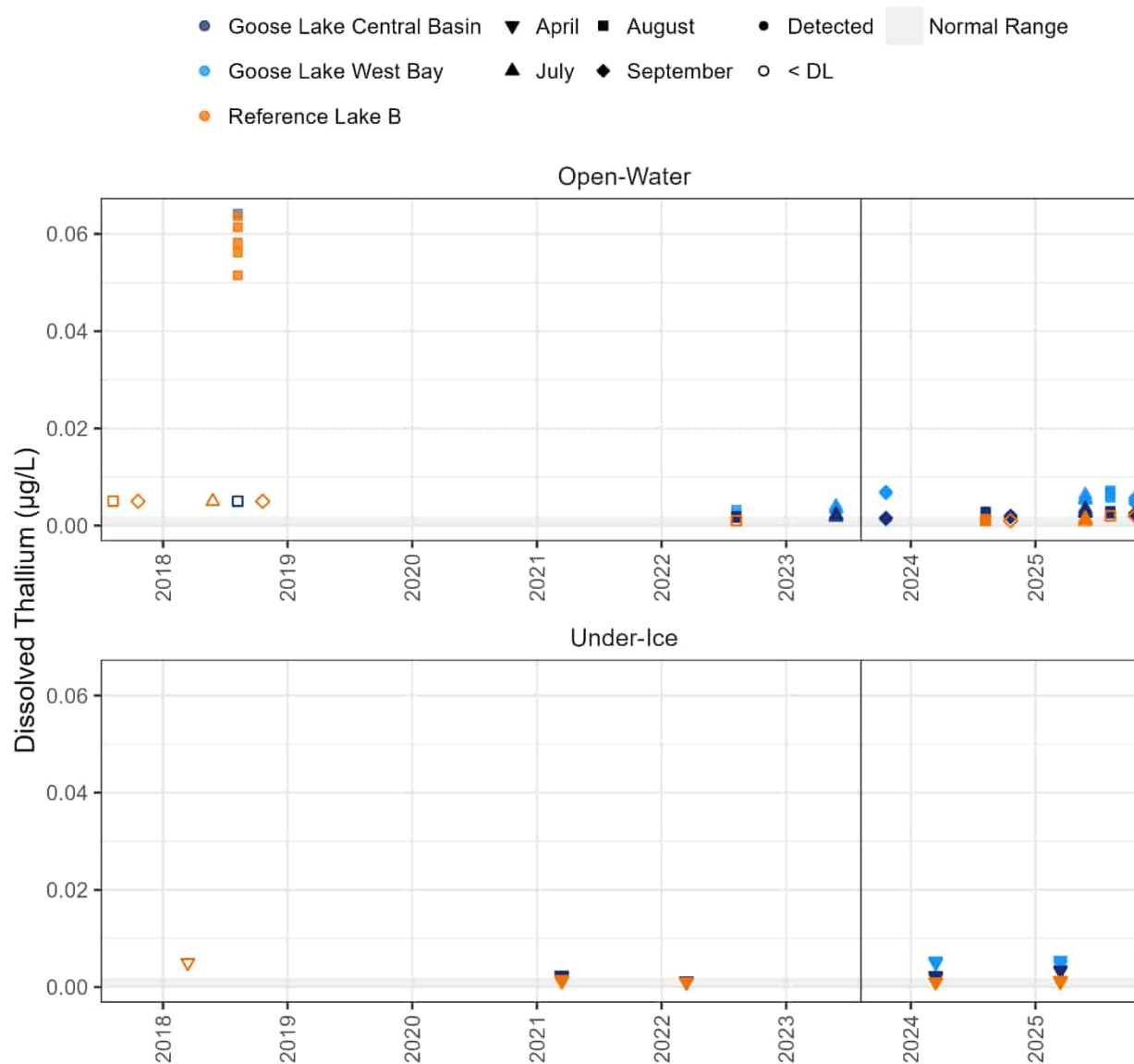
24 DISSOLVED STRONTIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

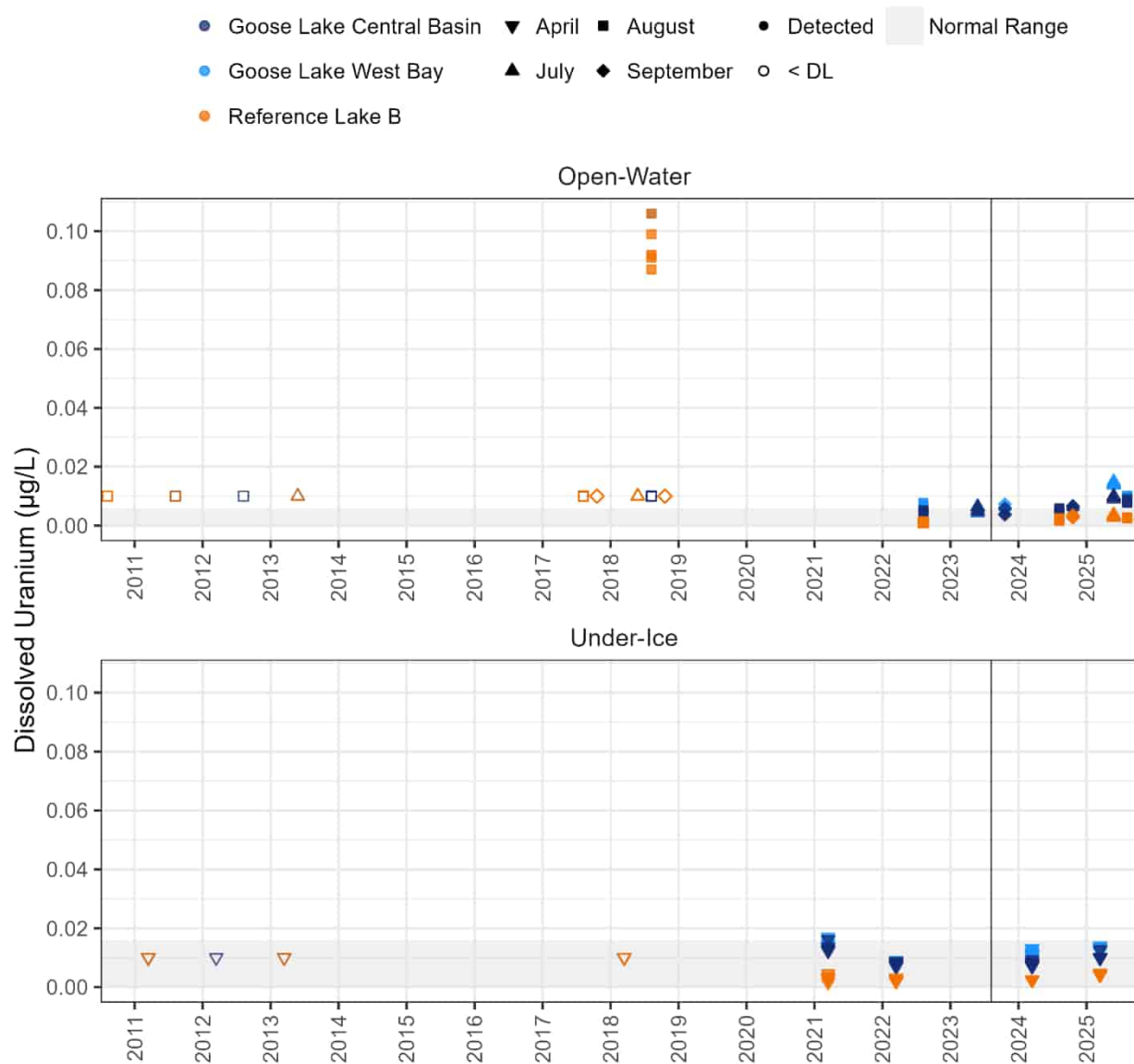
25 DISSOLVED THALLIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

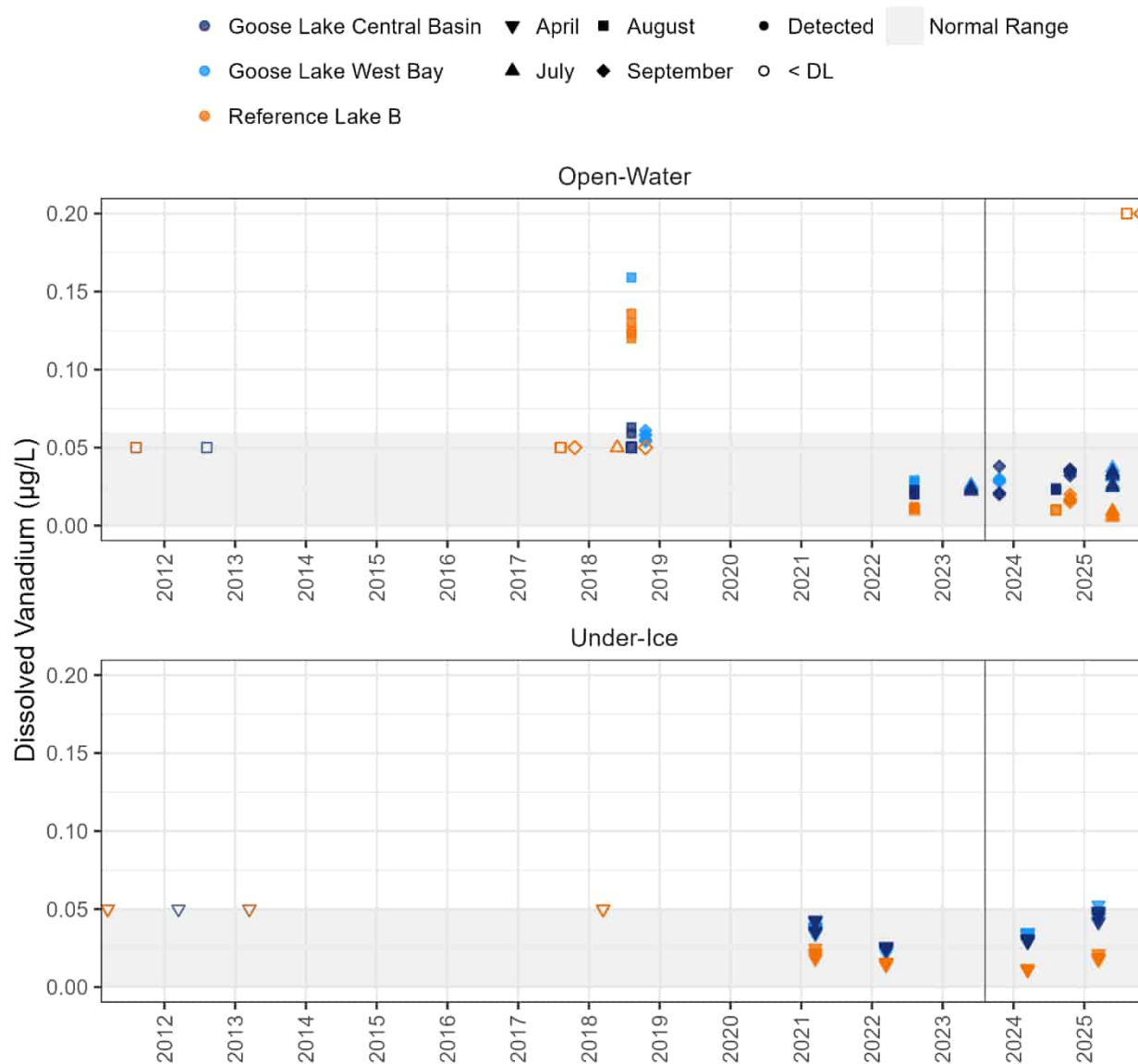
26 DISSOLVED URANIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

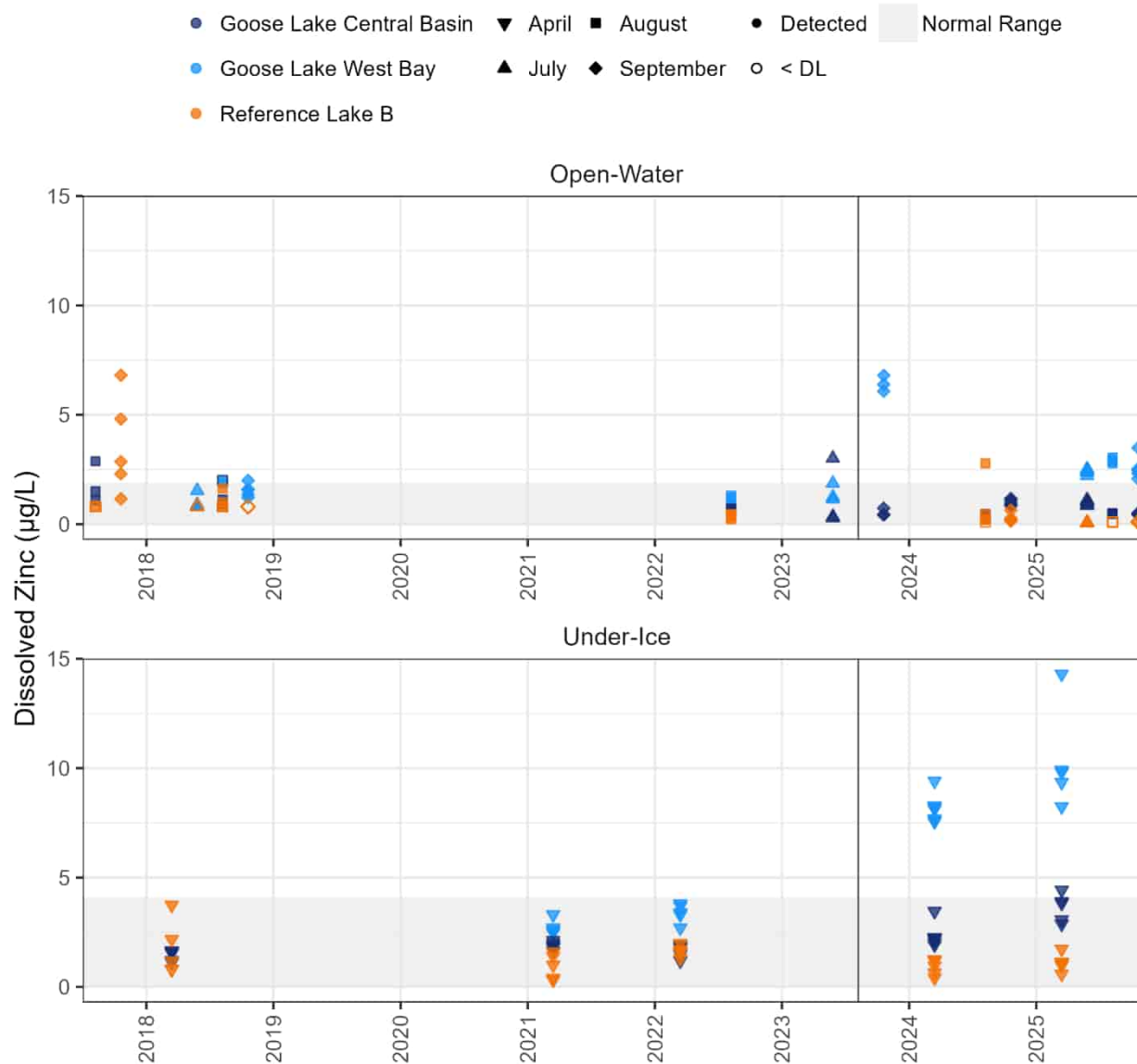
27 DISSOLVED VANADIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

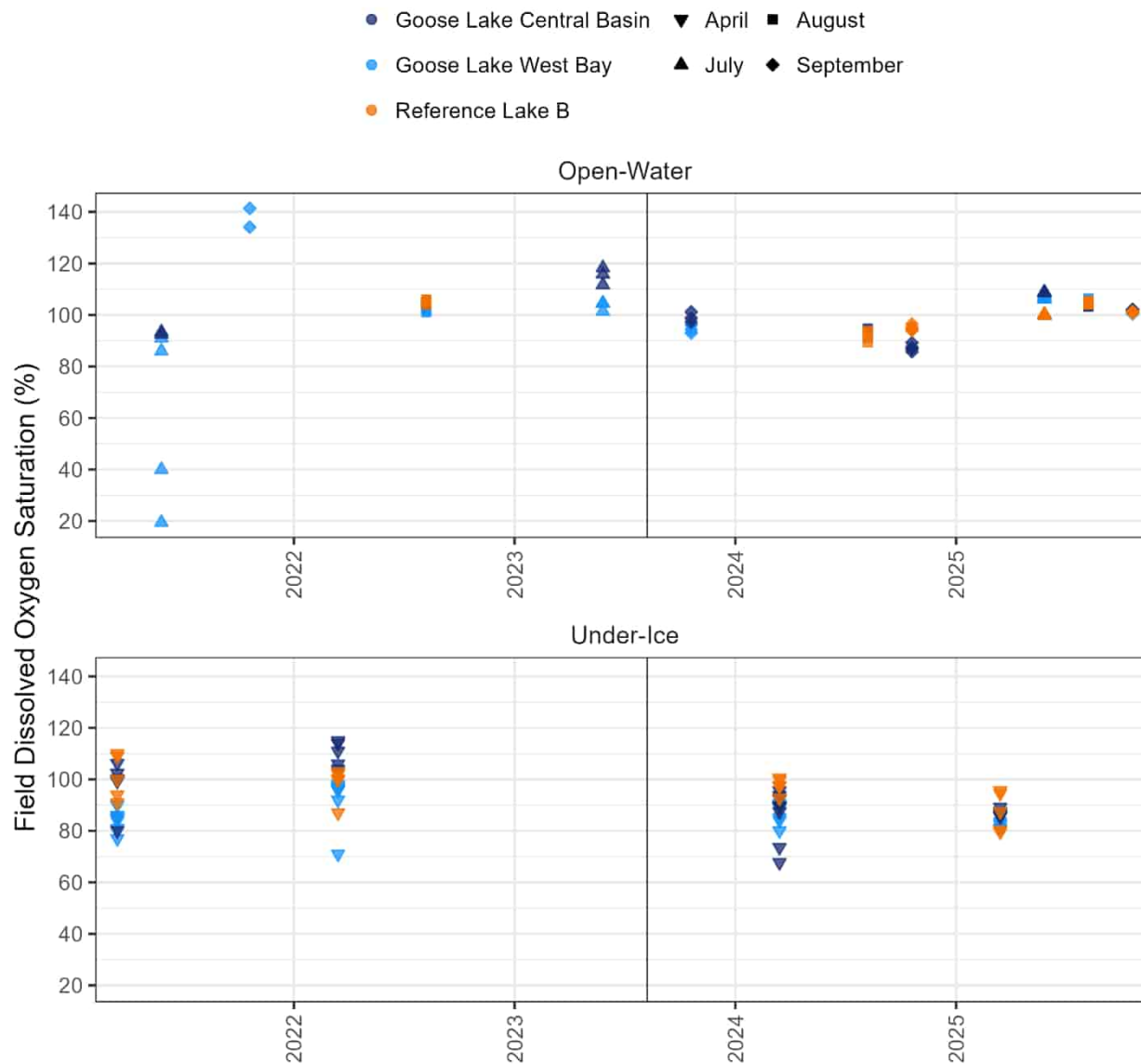
28 DISSOLVED ZINC



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

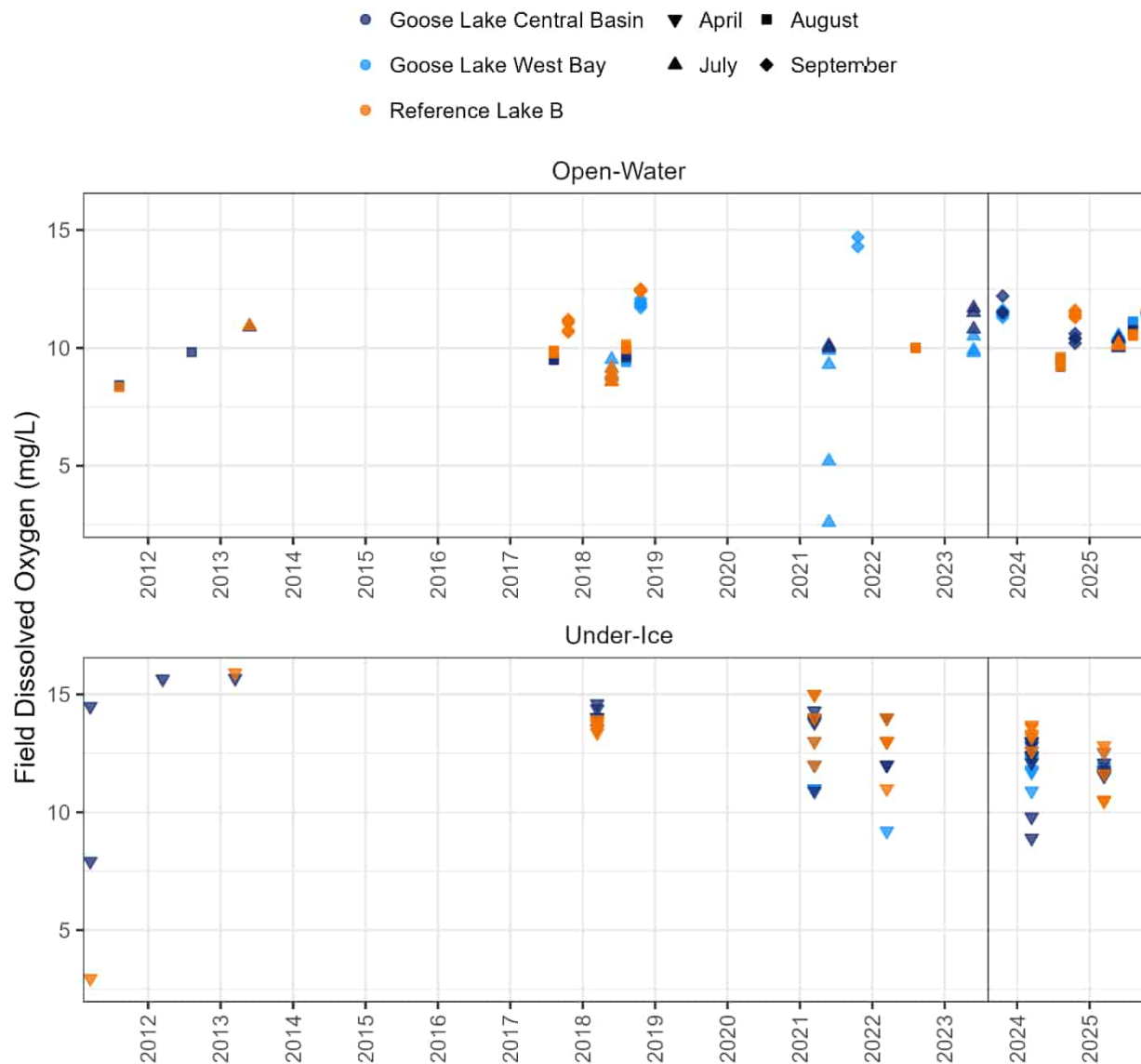
29 FIELD DISSOLVED OXYGEN SATURATION



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

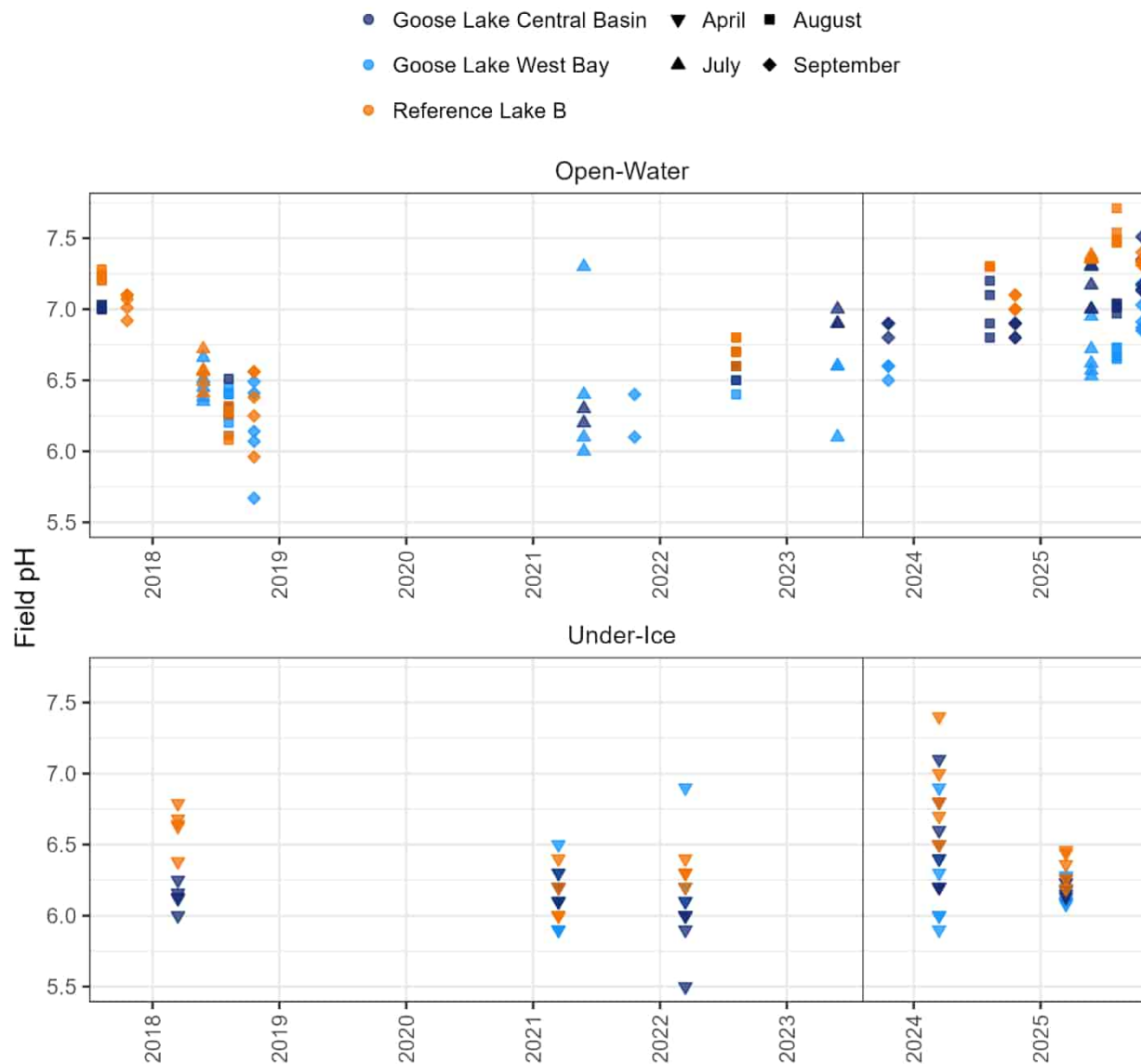
30 FIELD DISSOLVED OXYGEN



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

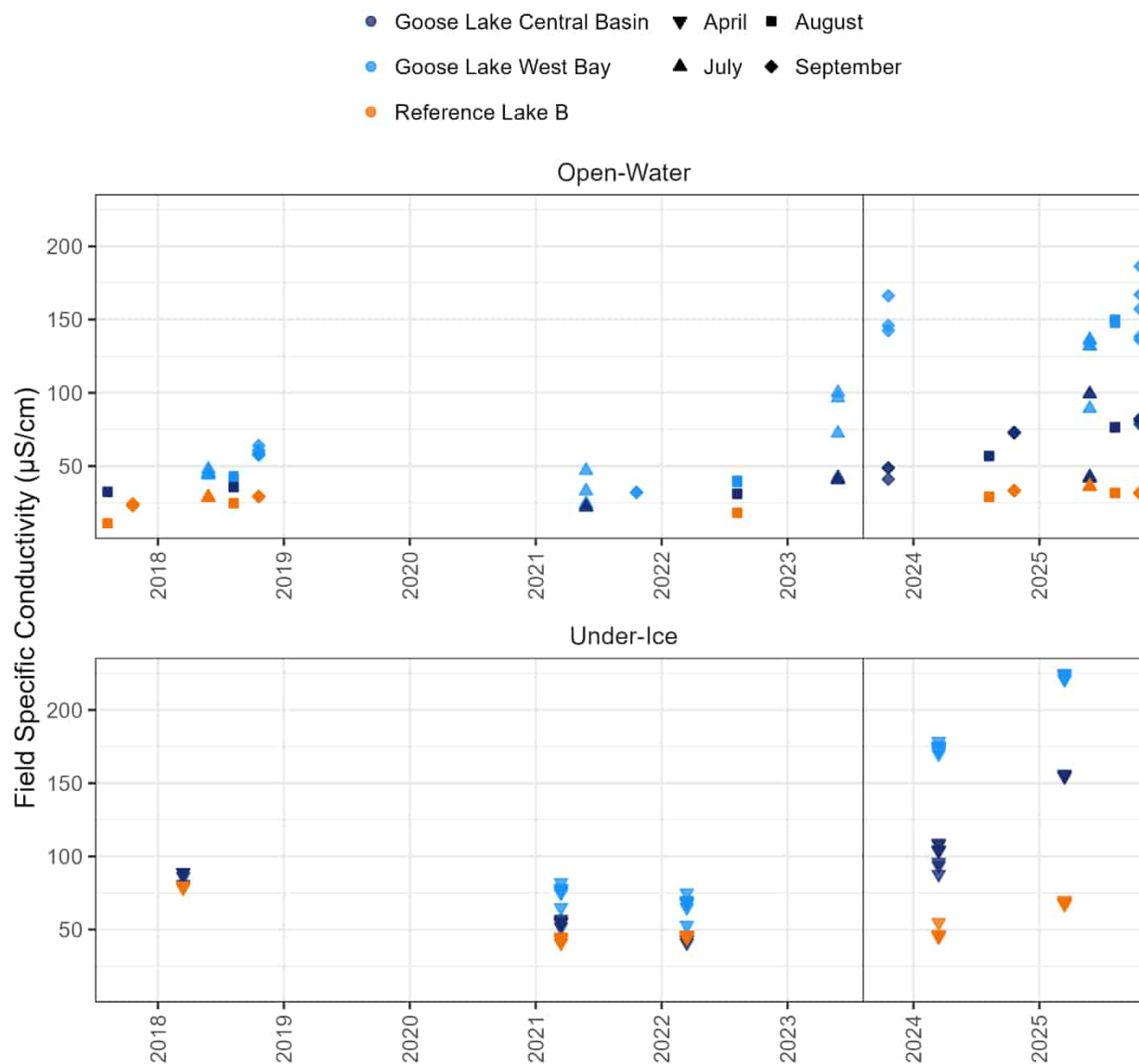
31 FIELD PH



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

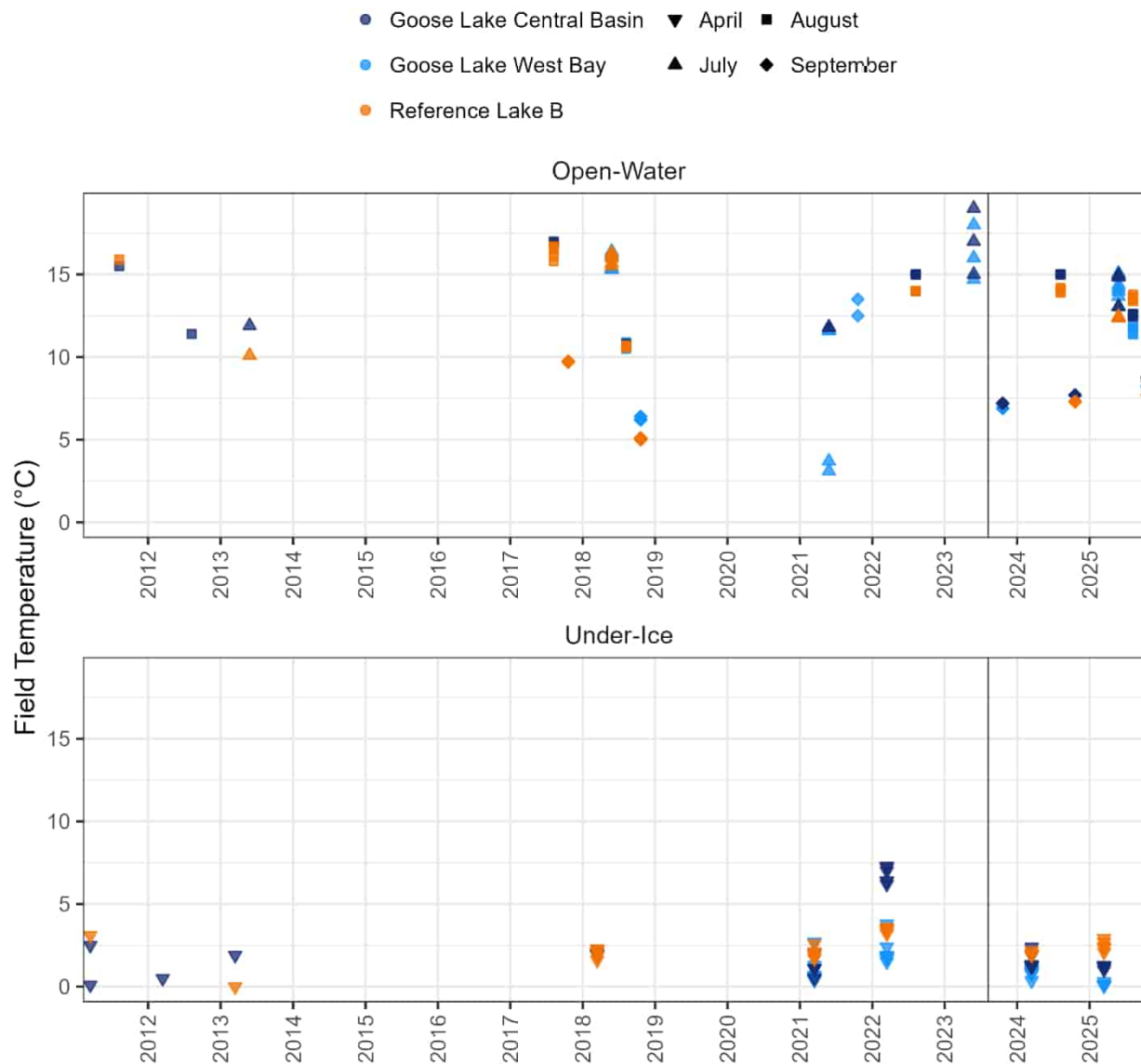
32 FIELD SPECIFIC CONDUCTIVITY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

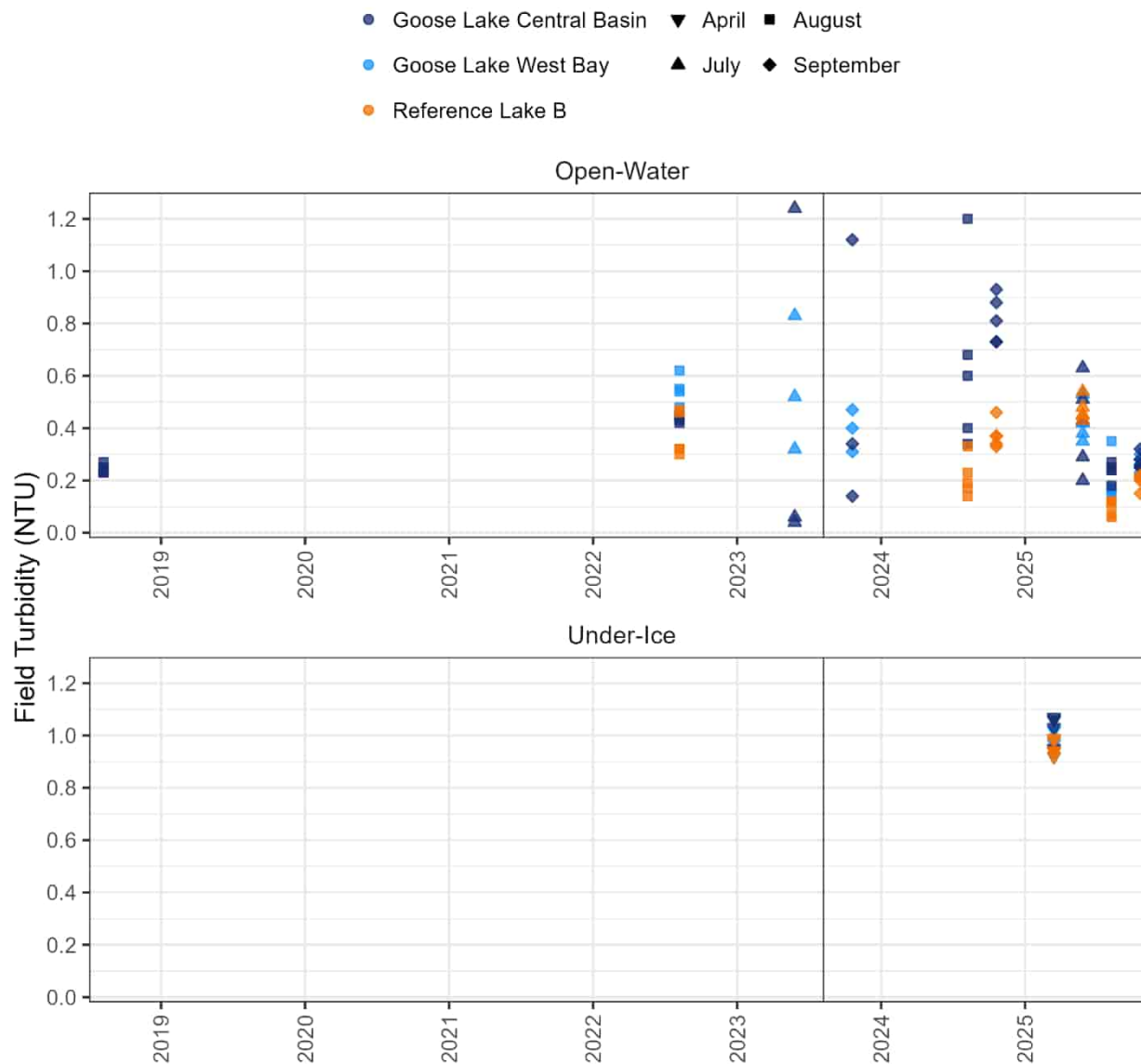
33 FIELD TEMPERATURE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

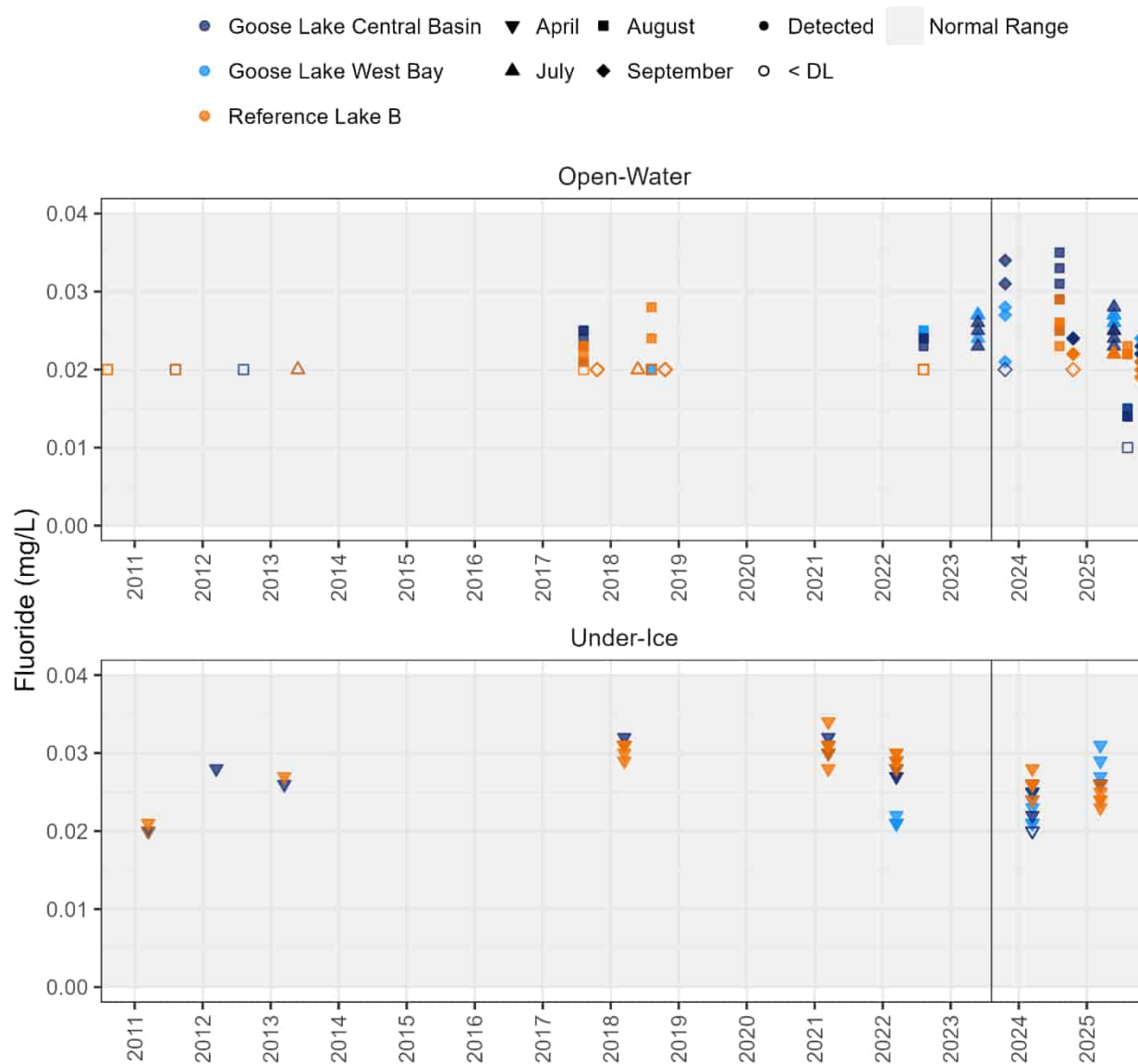
34 FIELD TURBIDITY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

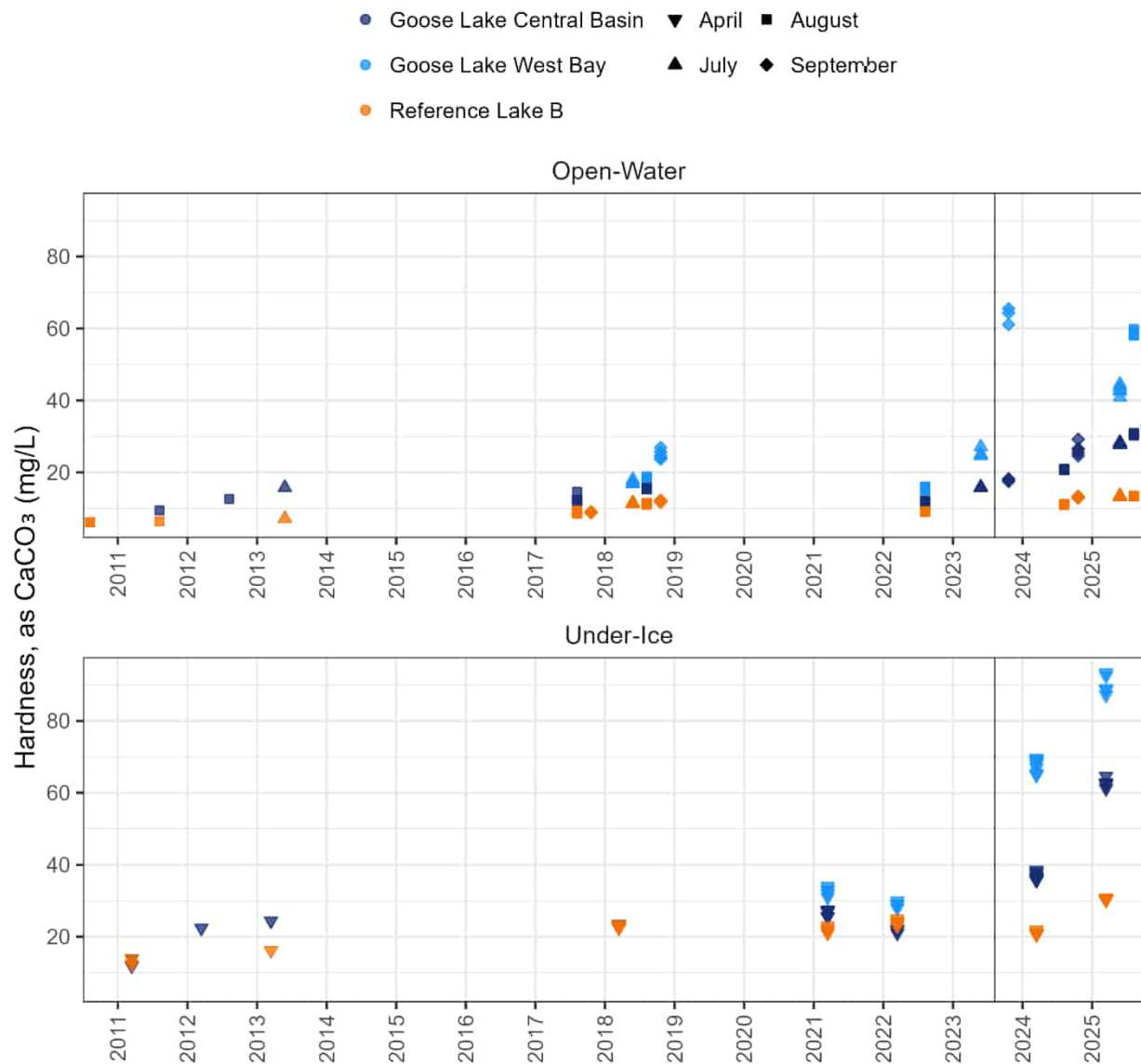
35 FLUORIDE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

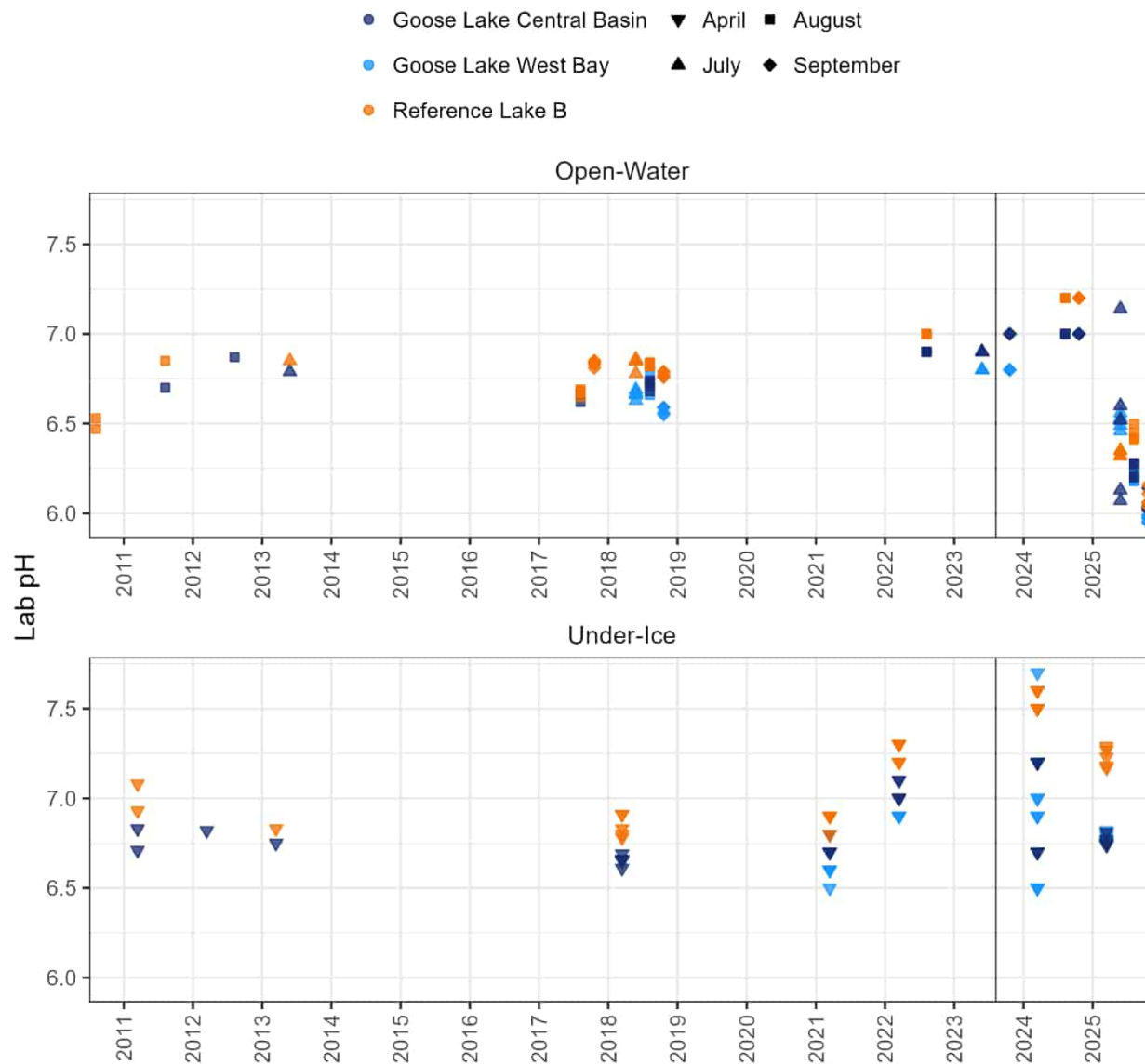
36 HARDNESS



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

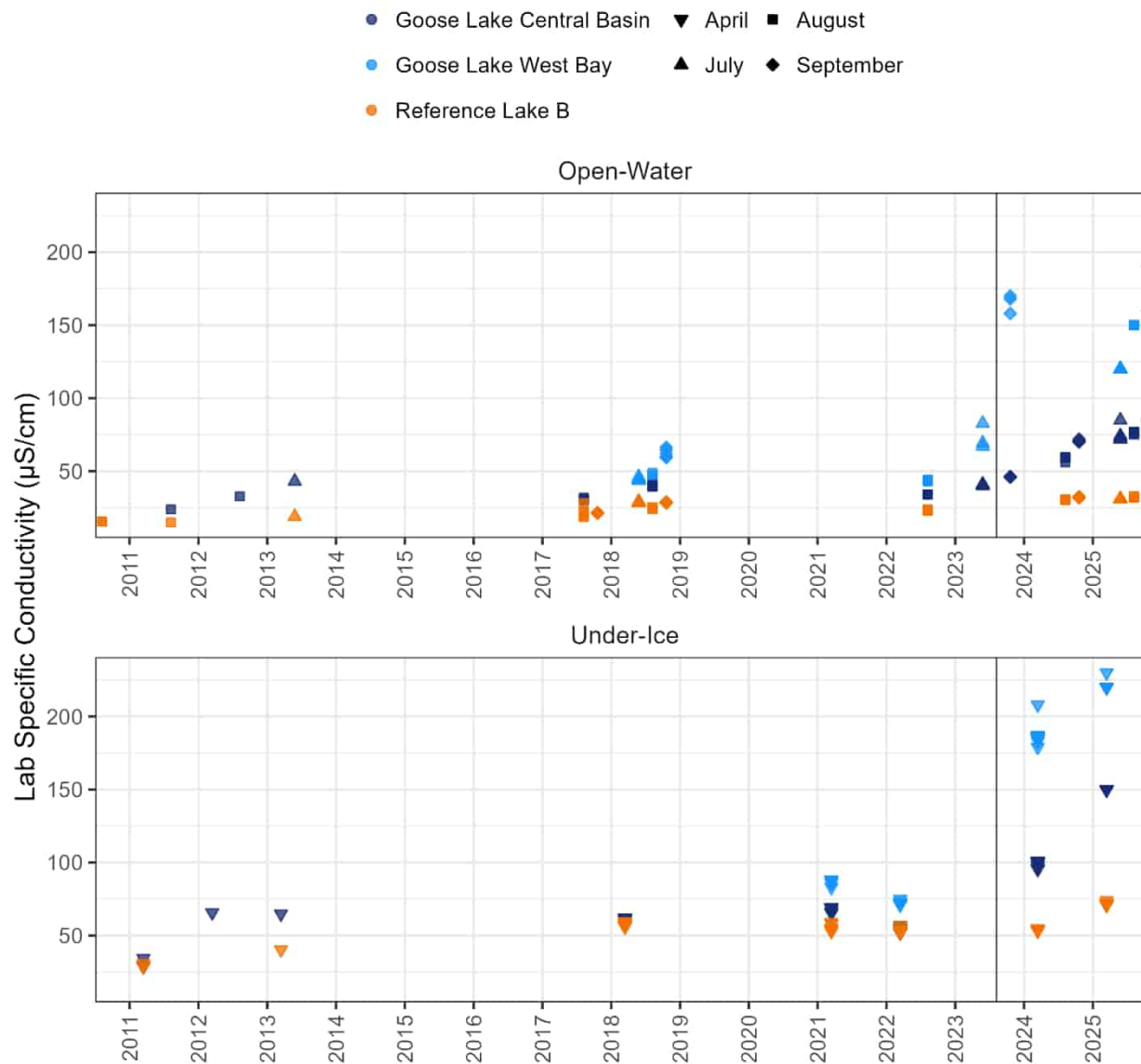
37 LABORATORY PH



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

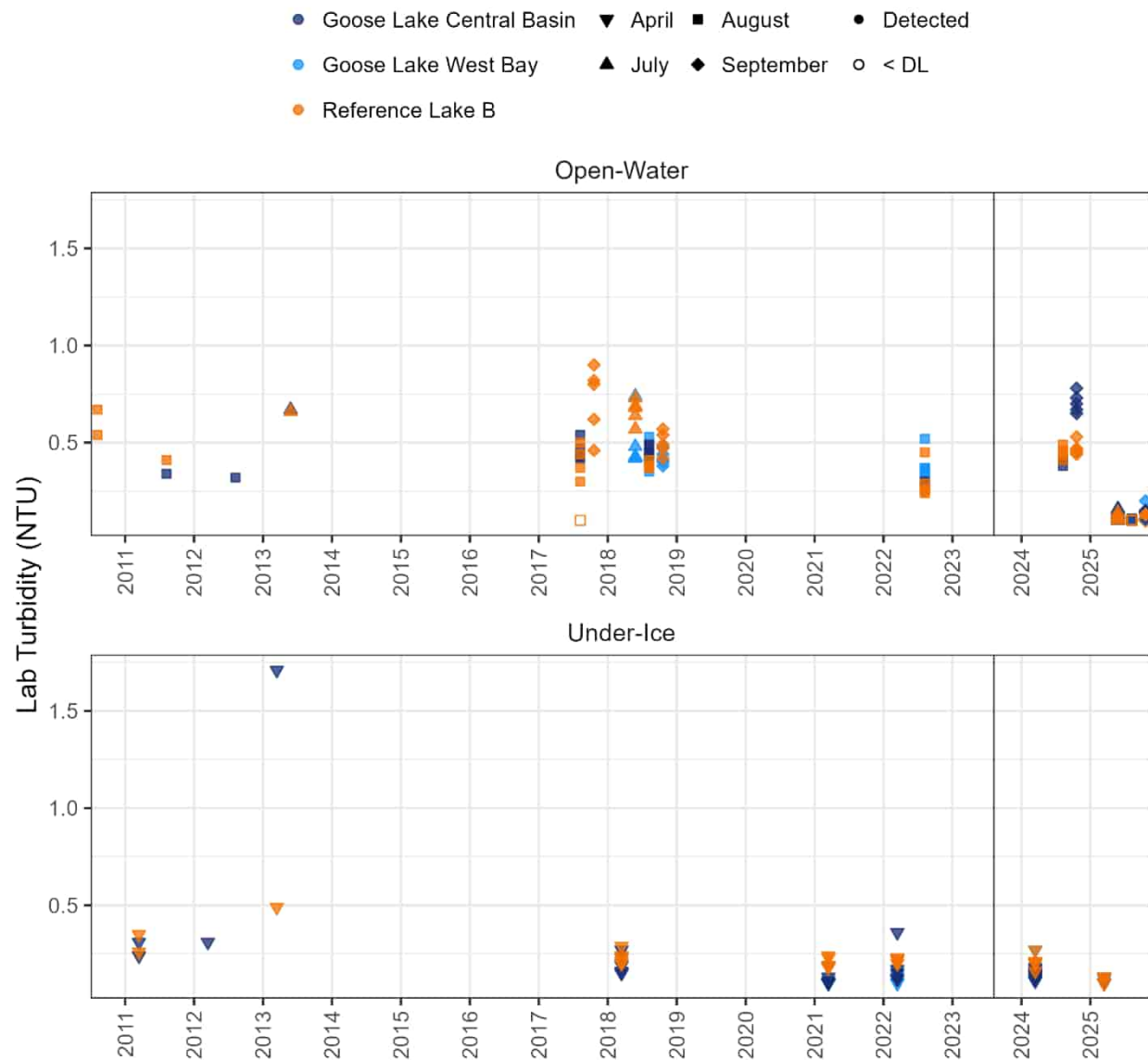
38 LABORATORY SPECIFIC CONDUCTIVITY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

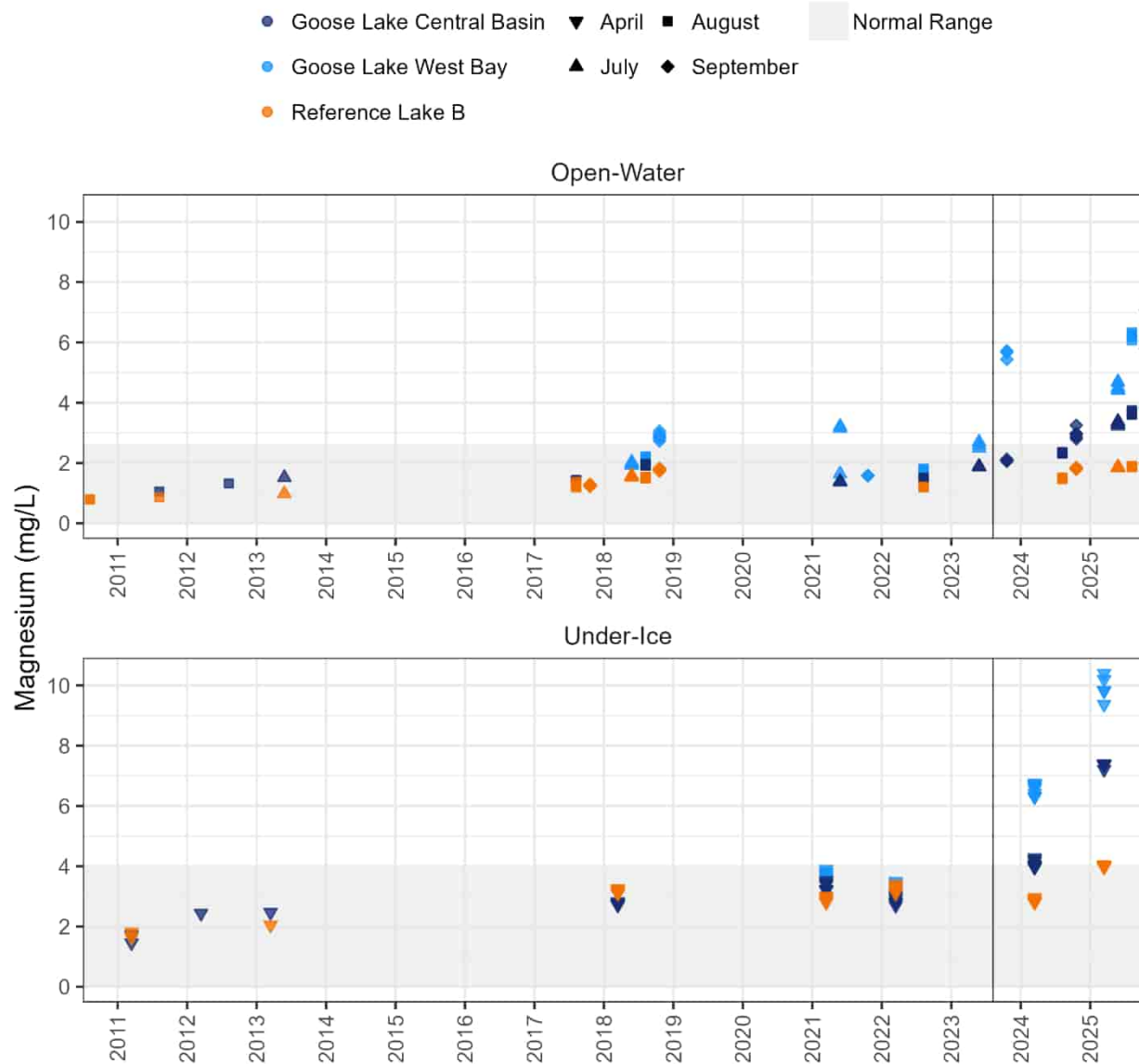
39 LABORATORY TURBIDITY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

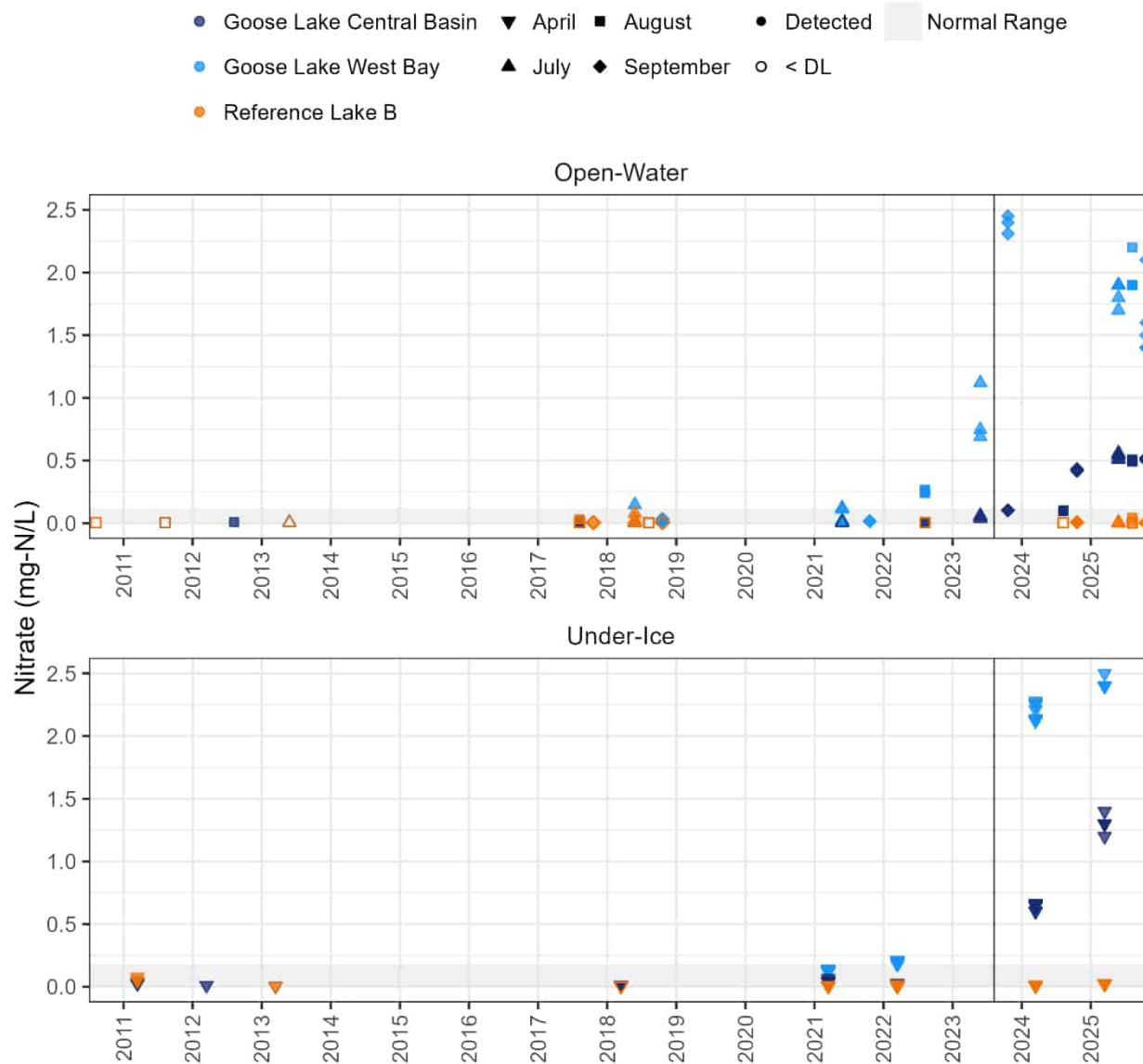
40 MAGNESIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

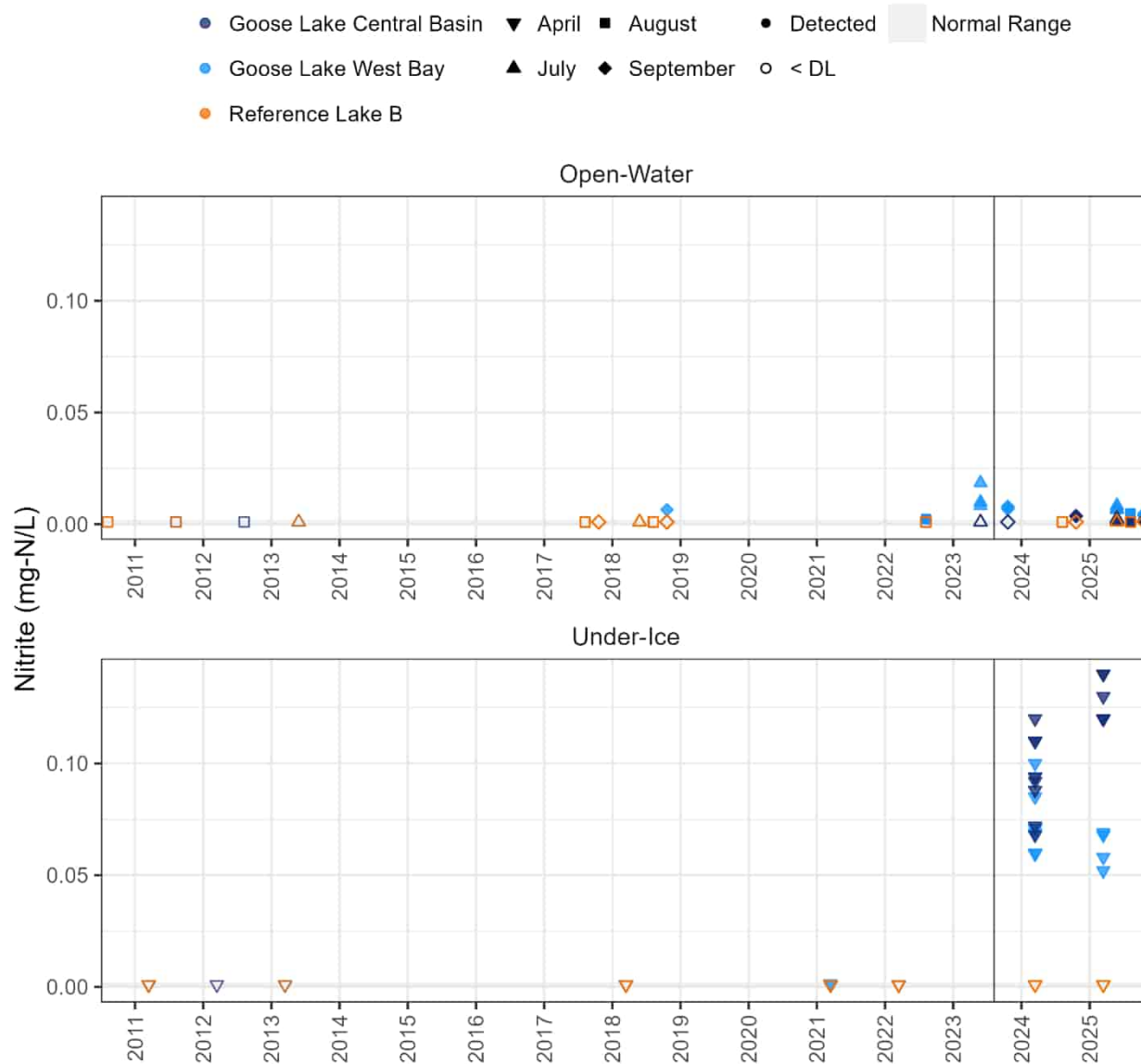
41 NITRATE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

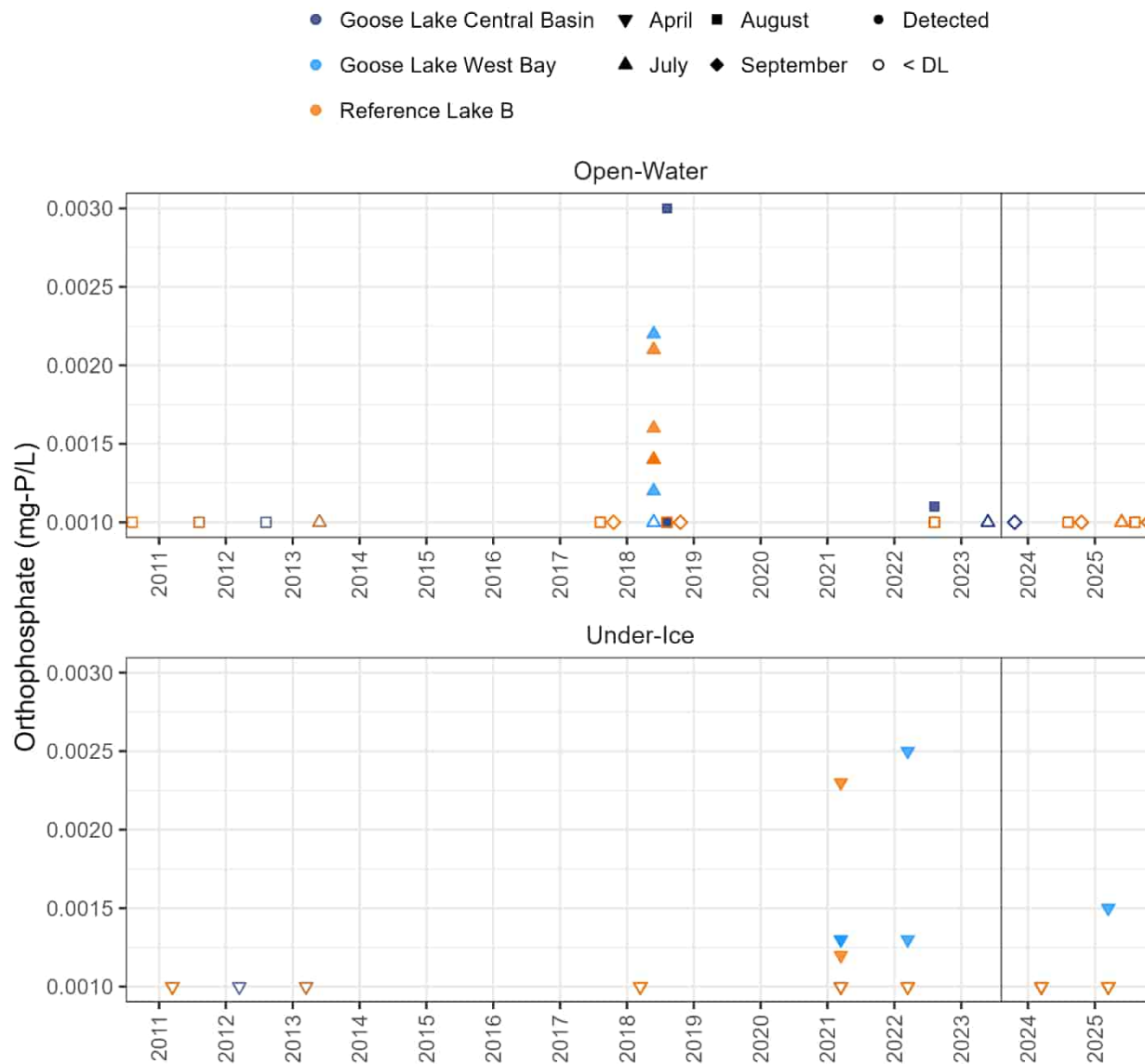
42 NITRITE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

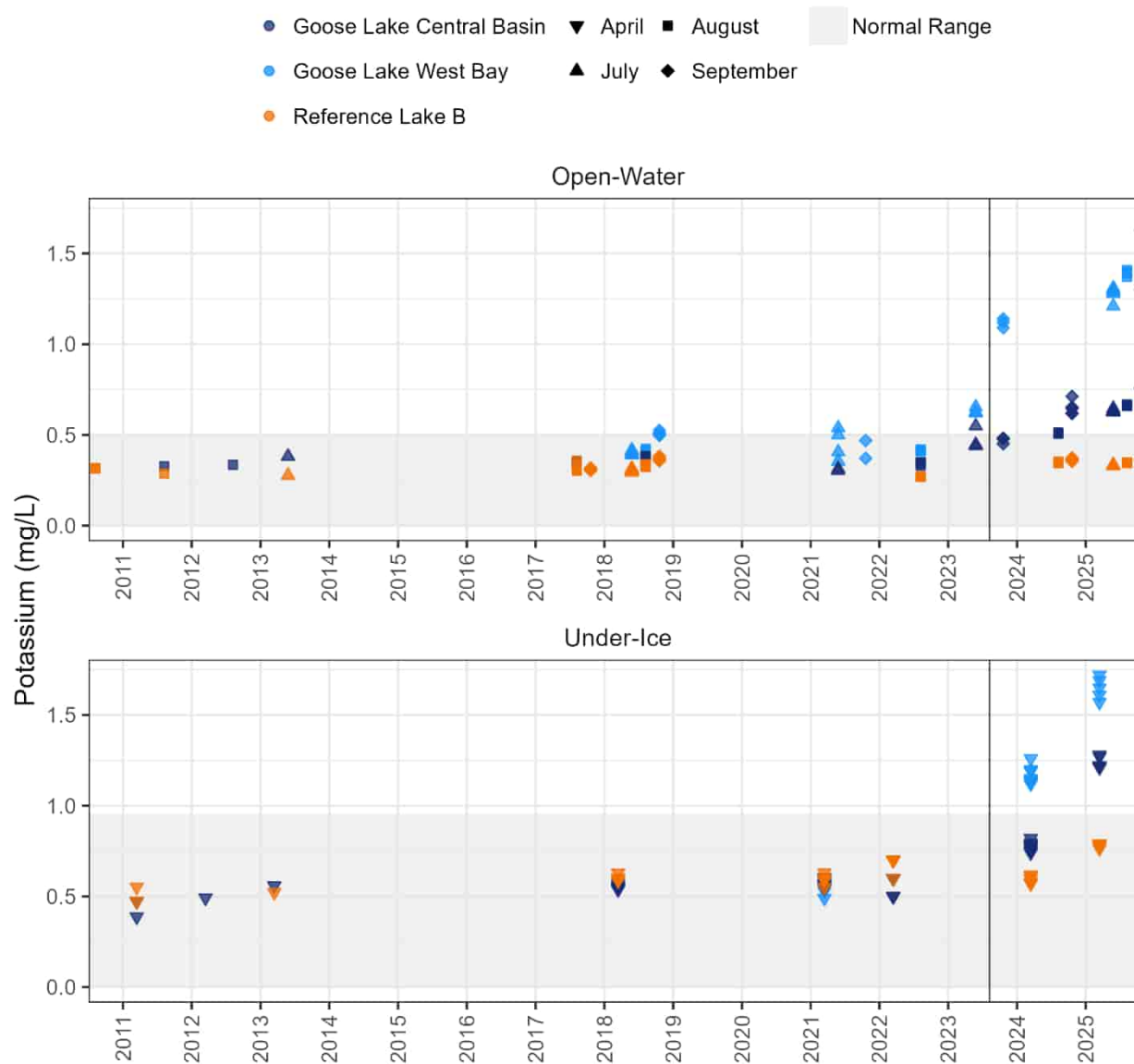
43 ORTHOPHOSPHATE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

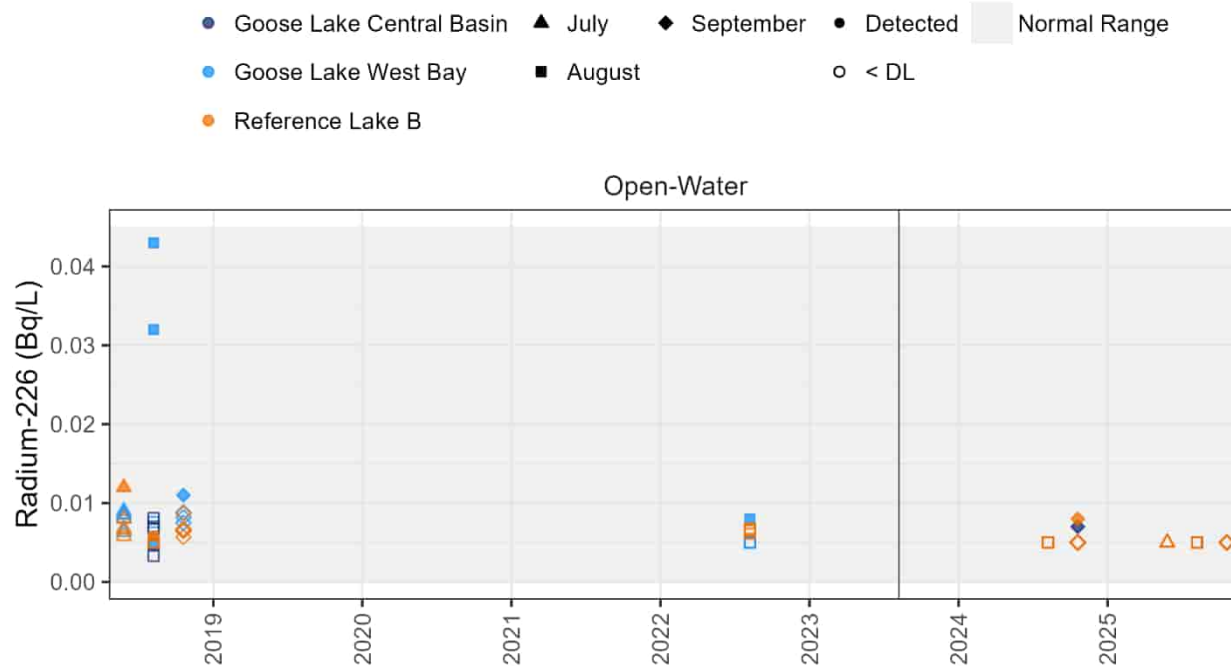
44 POTASSIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

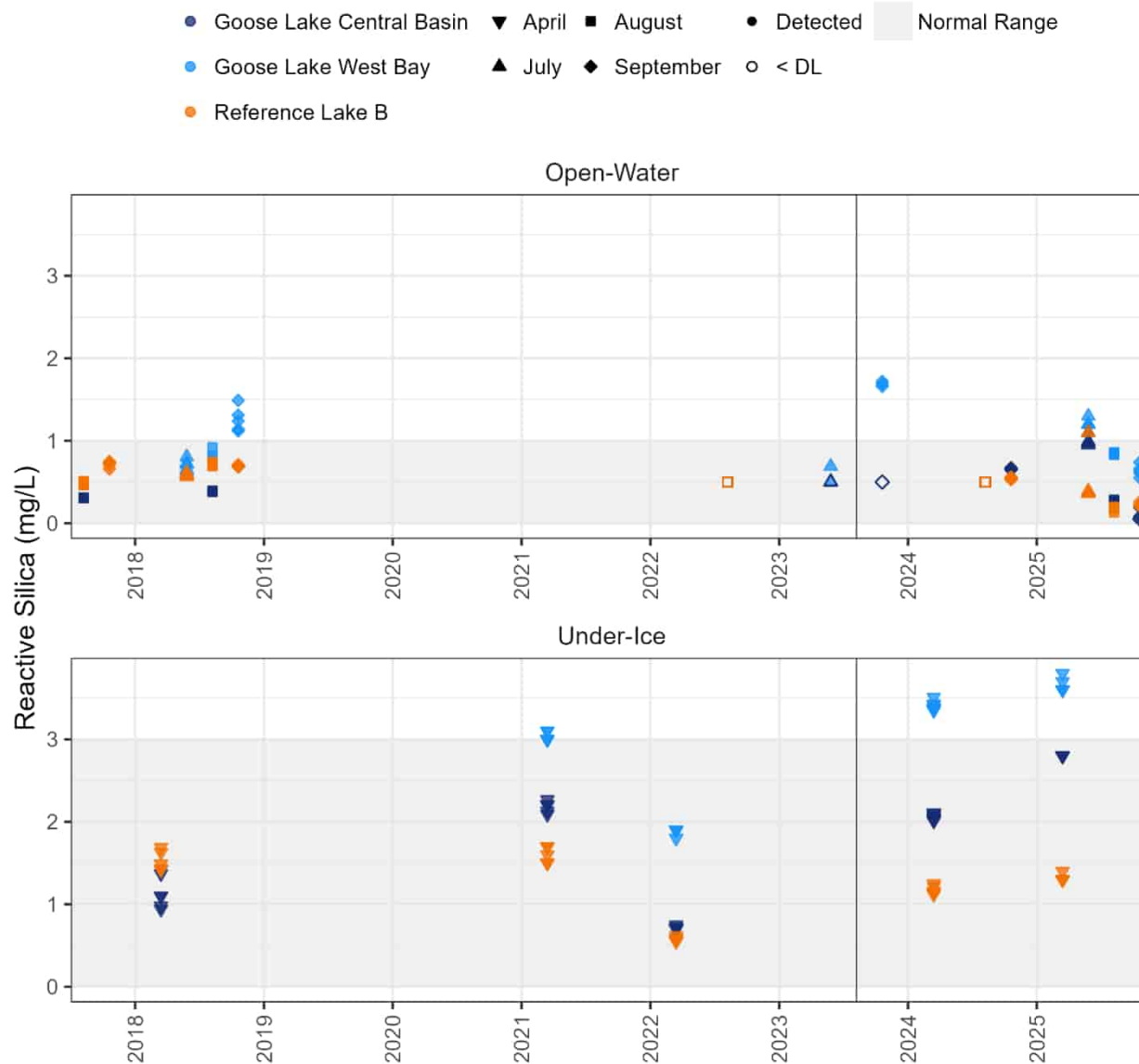
45 RADIUM-226



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

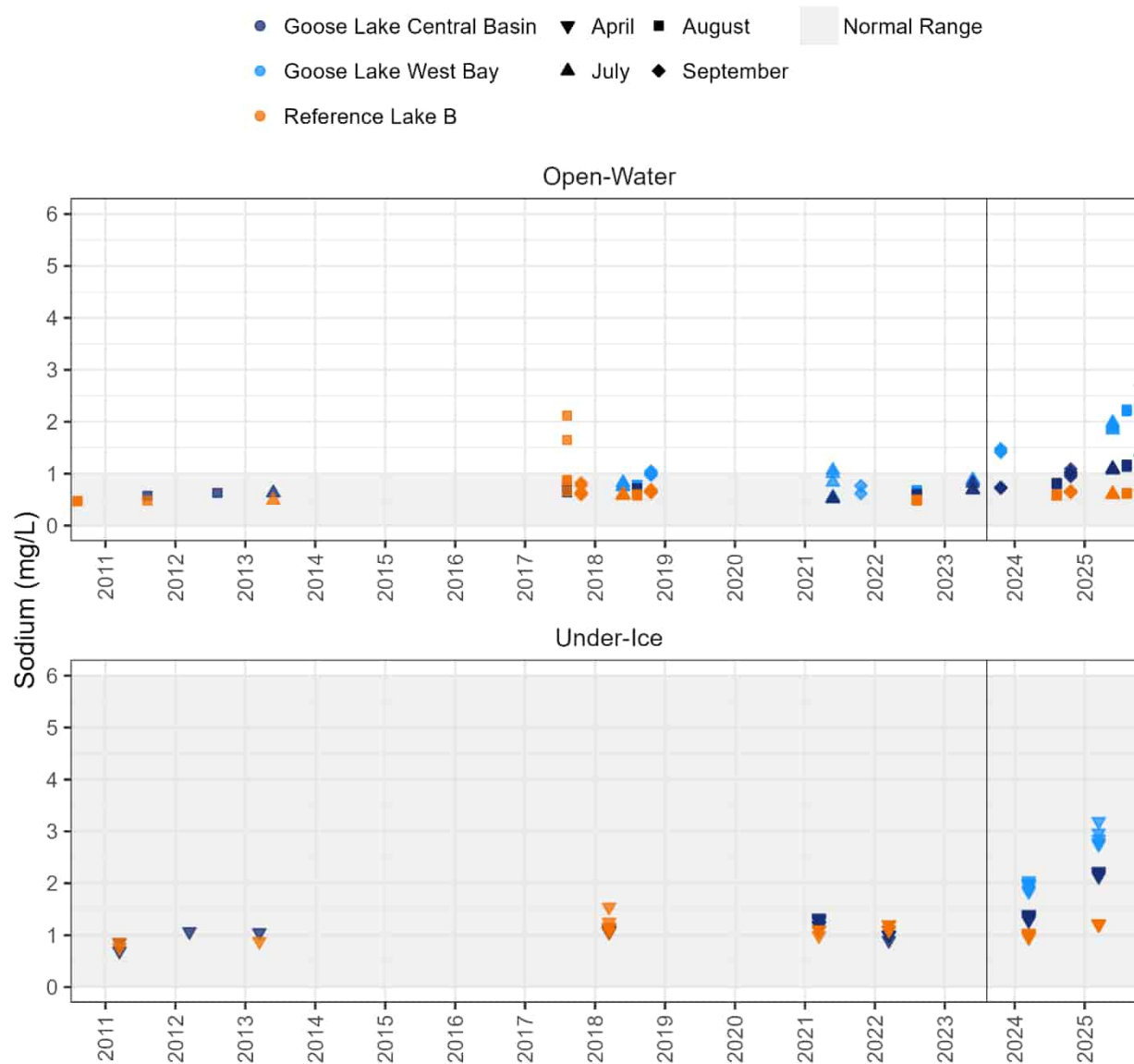
46 REACTIVE SILICA



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

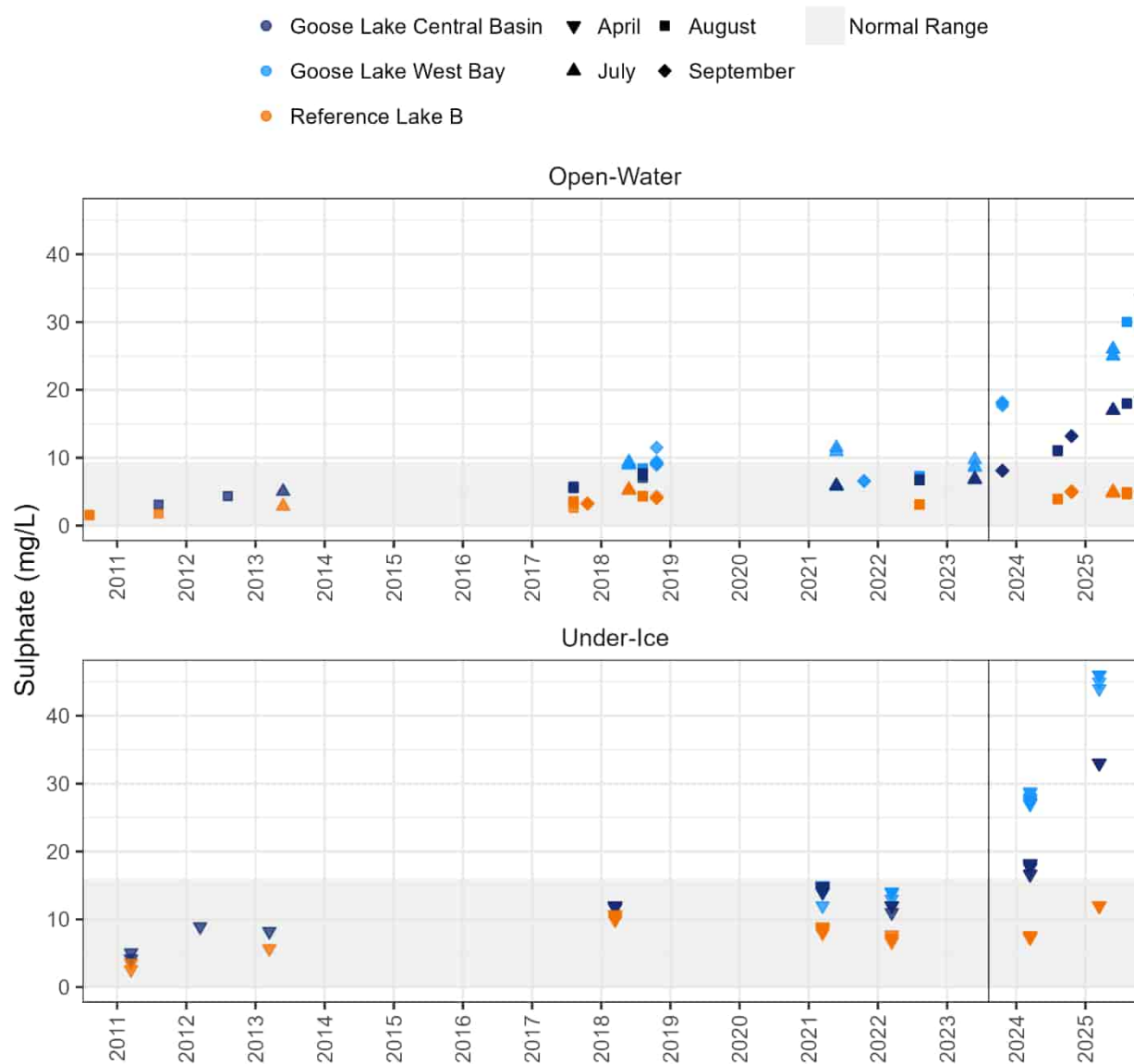
47 SODIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

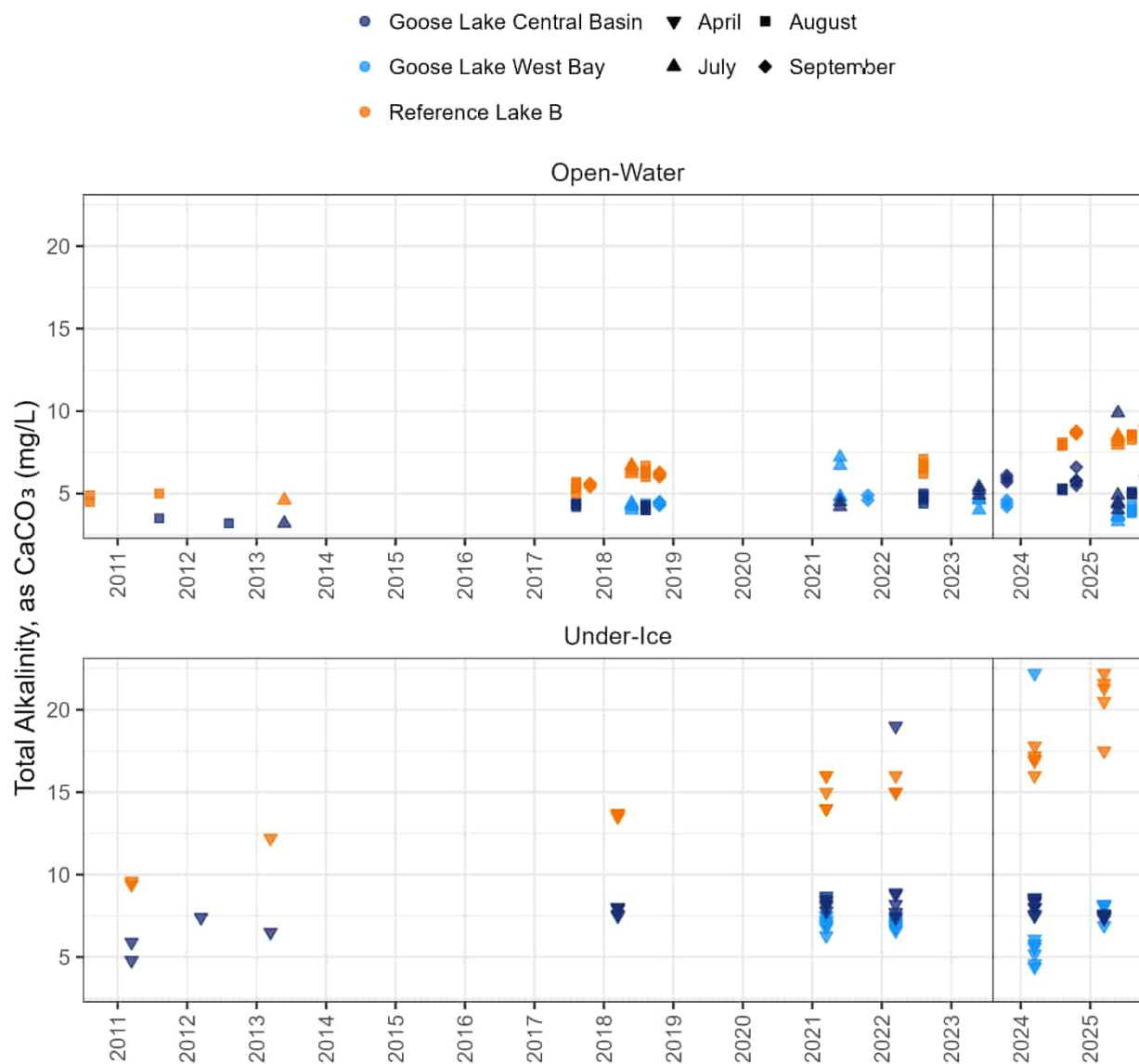
48 SULPHATE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

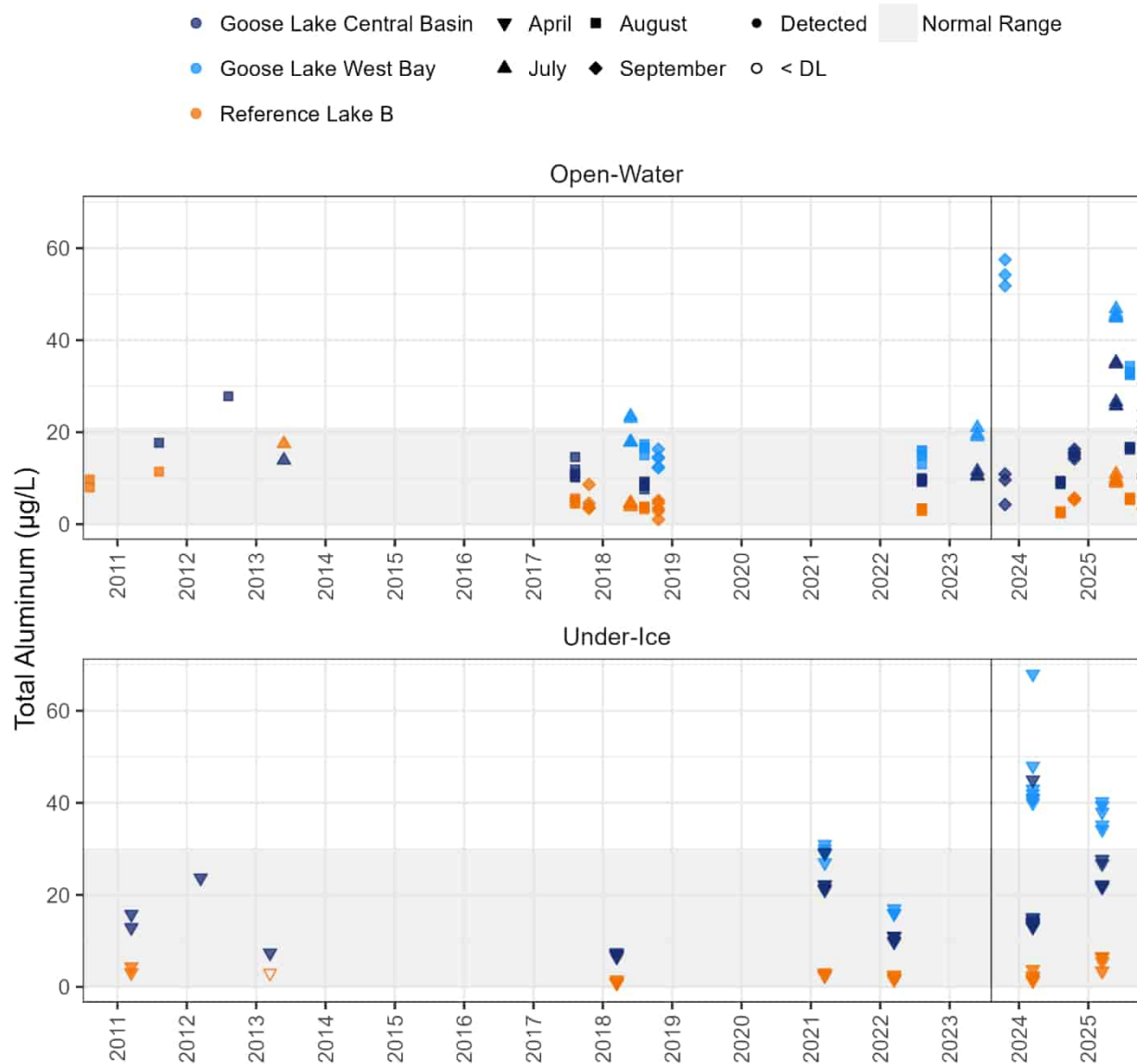
49 TOTAL ALKALINITY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

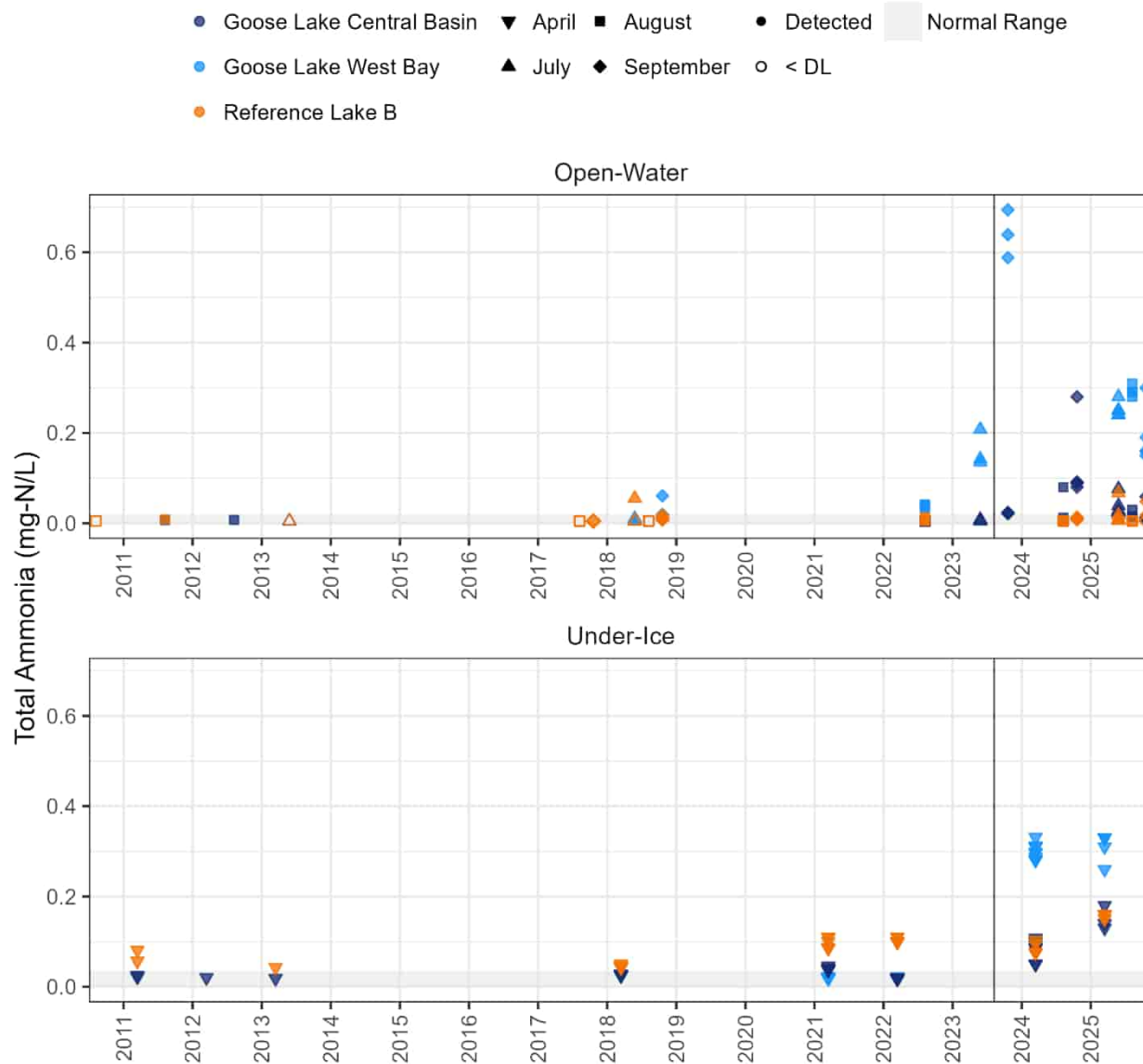
50 TOTAL ALUMINUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

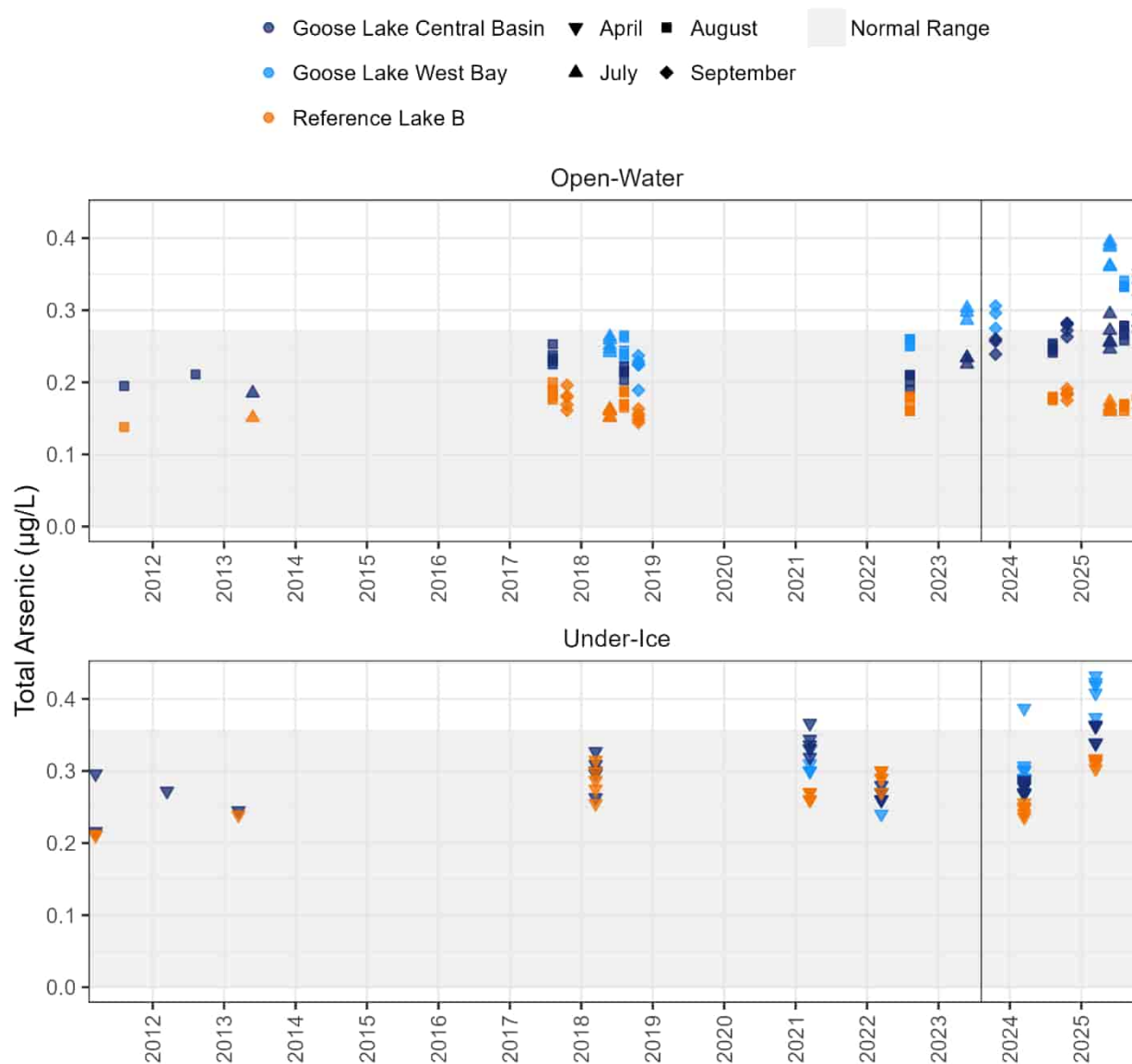
51 TOTAL AMMONIA



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

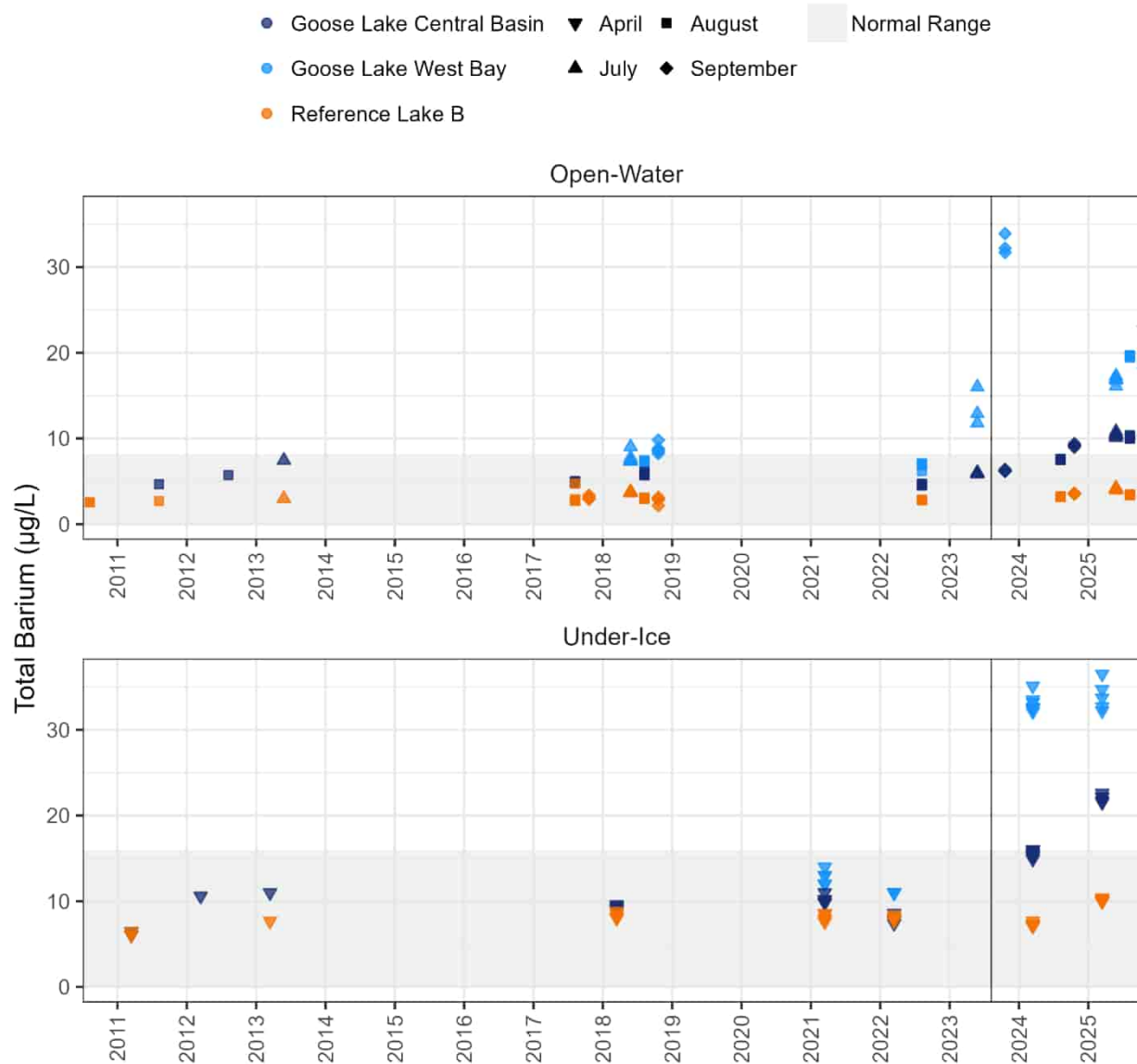
52 TOTAL ARSENIC



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

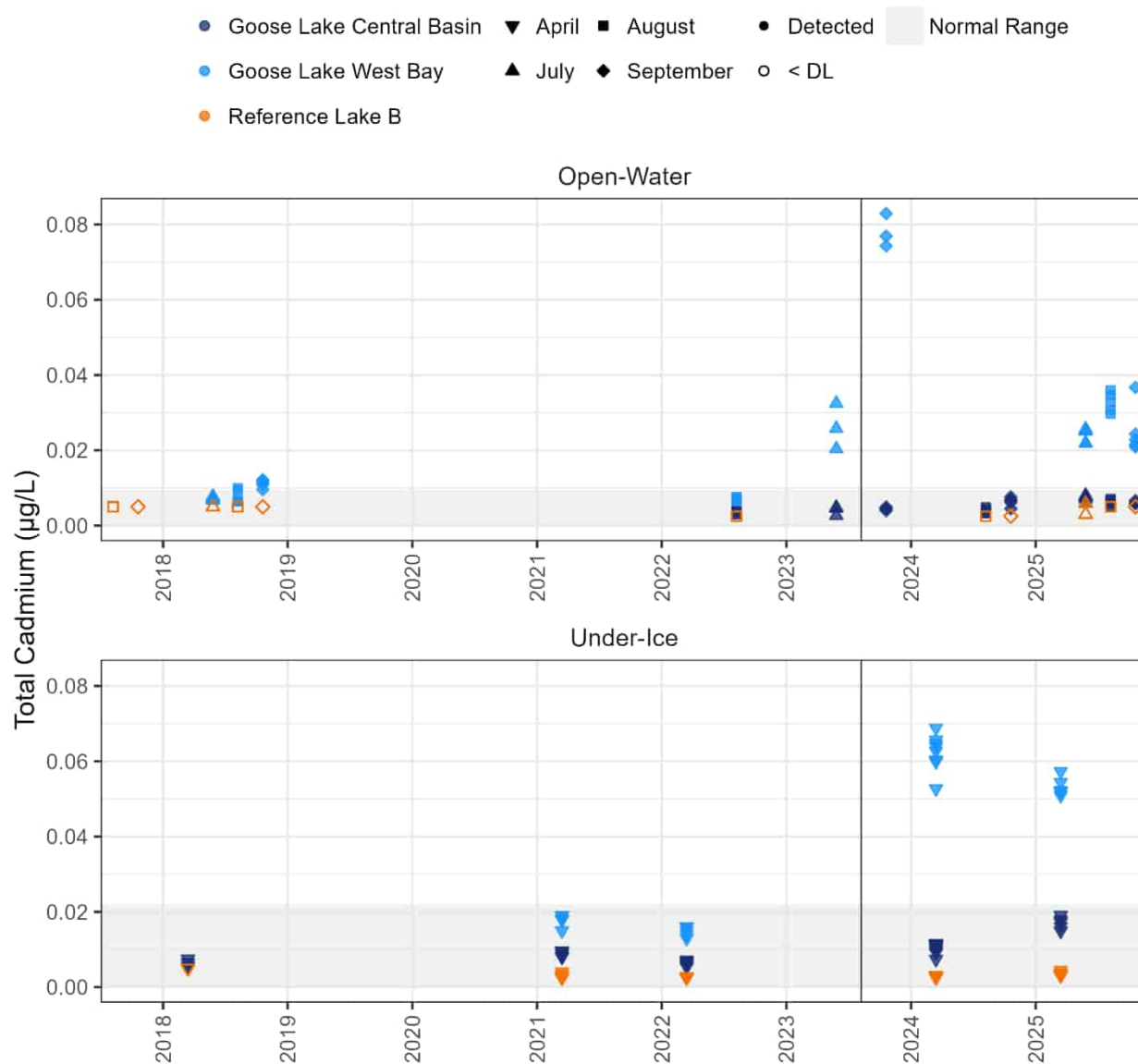
53 TOTAL BARIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

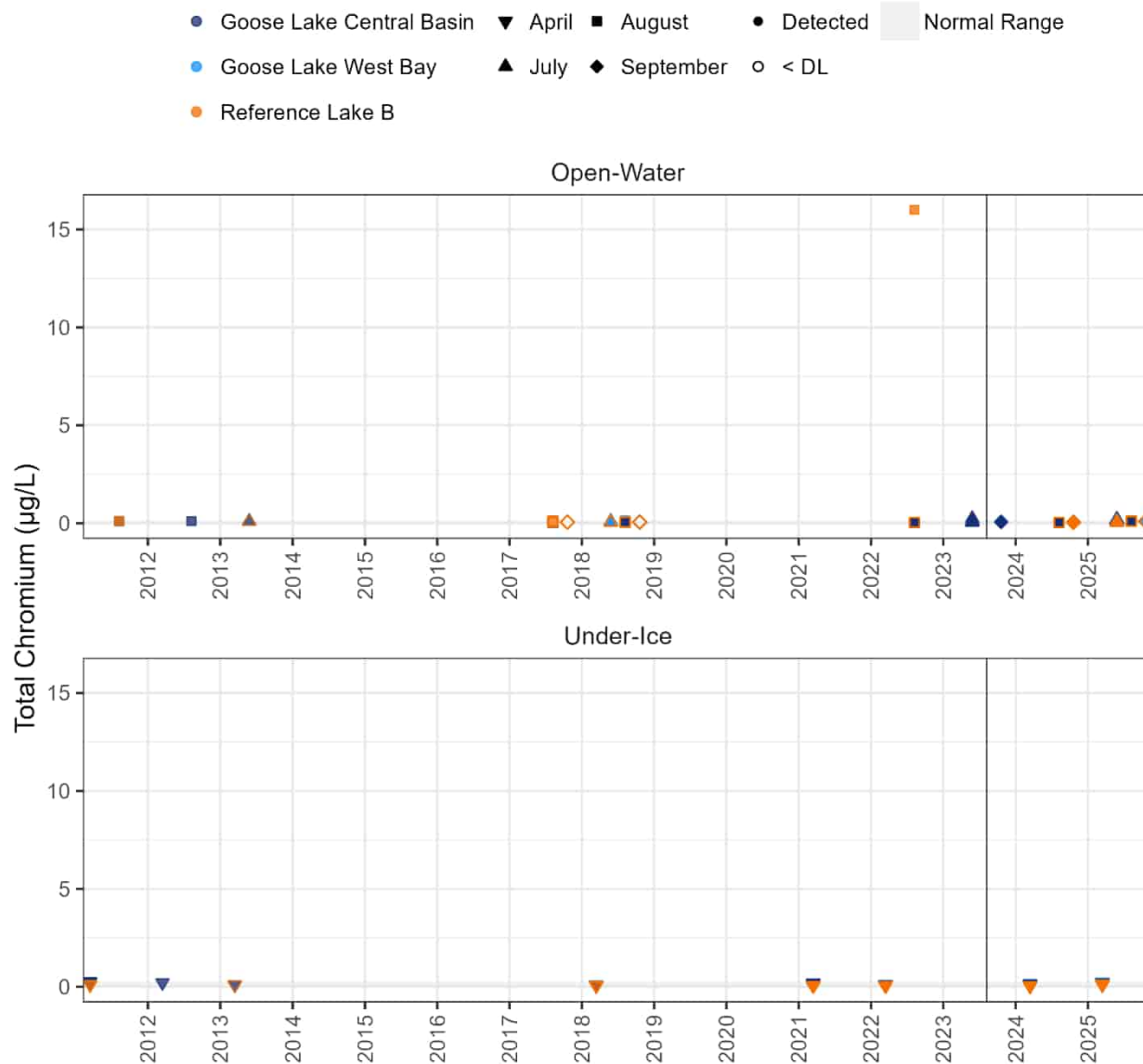
54 TOTAL CADMIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

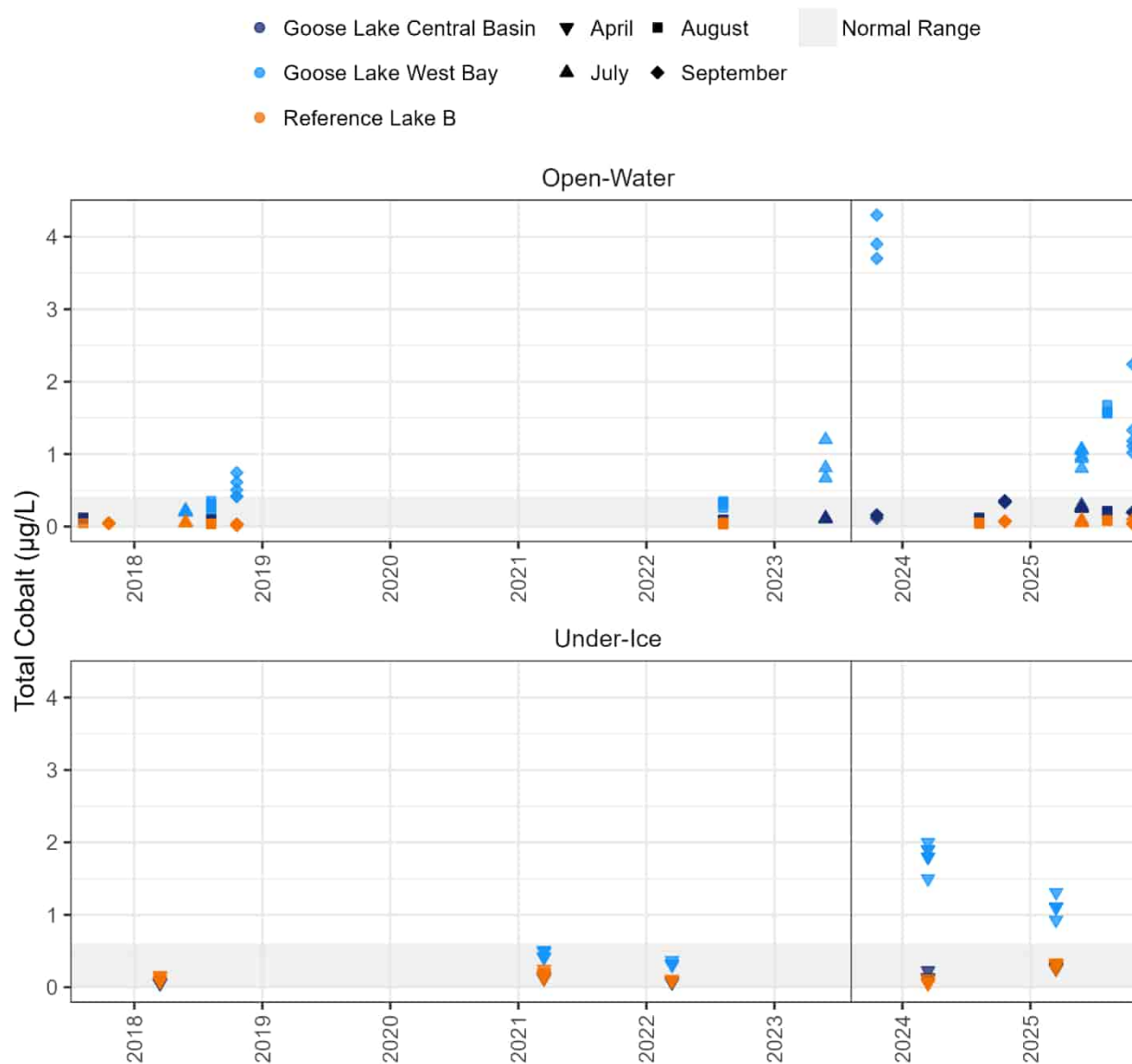
55 TOTAL CHROMIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

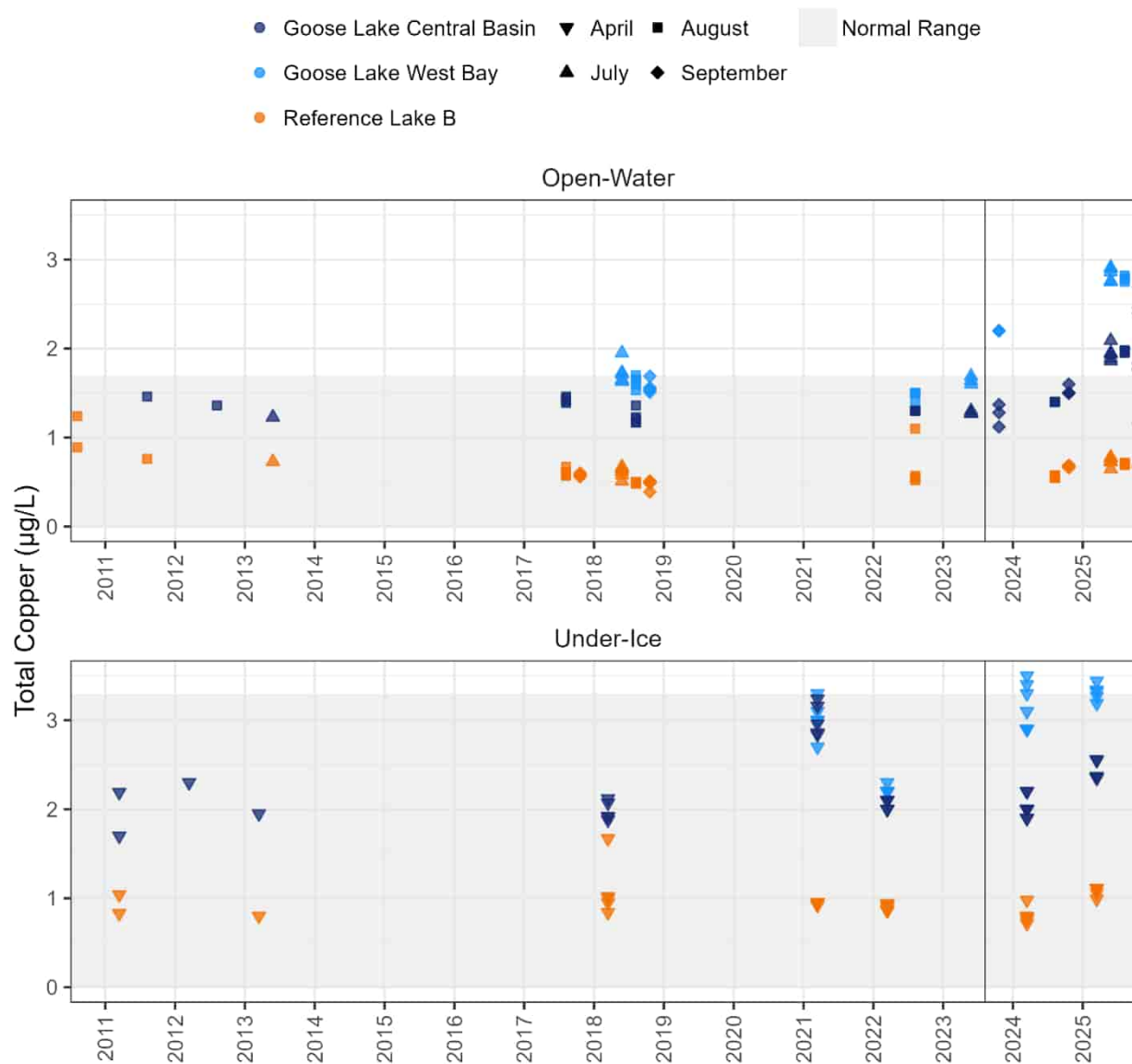
56 TOTAL COBALT



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

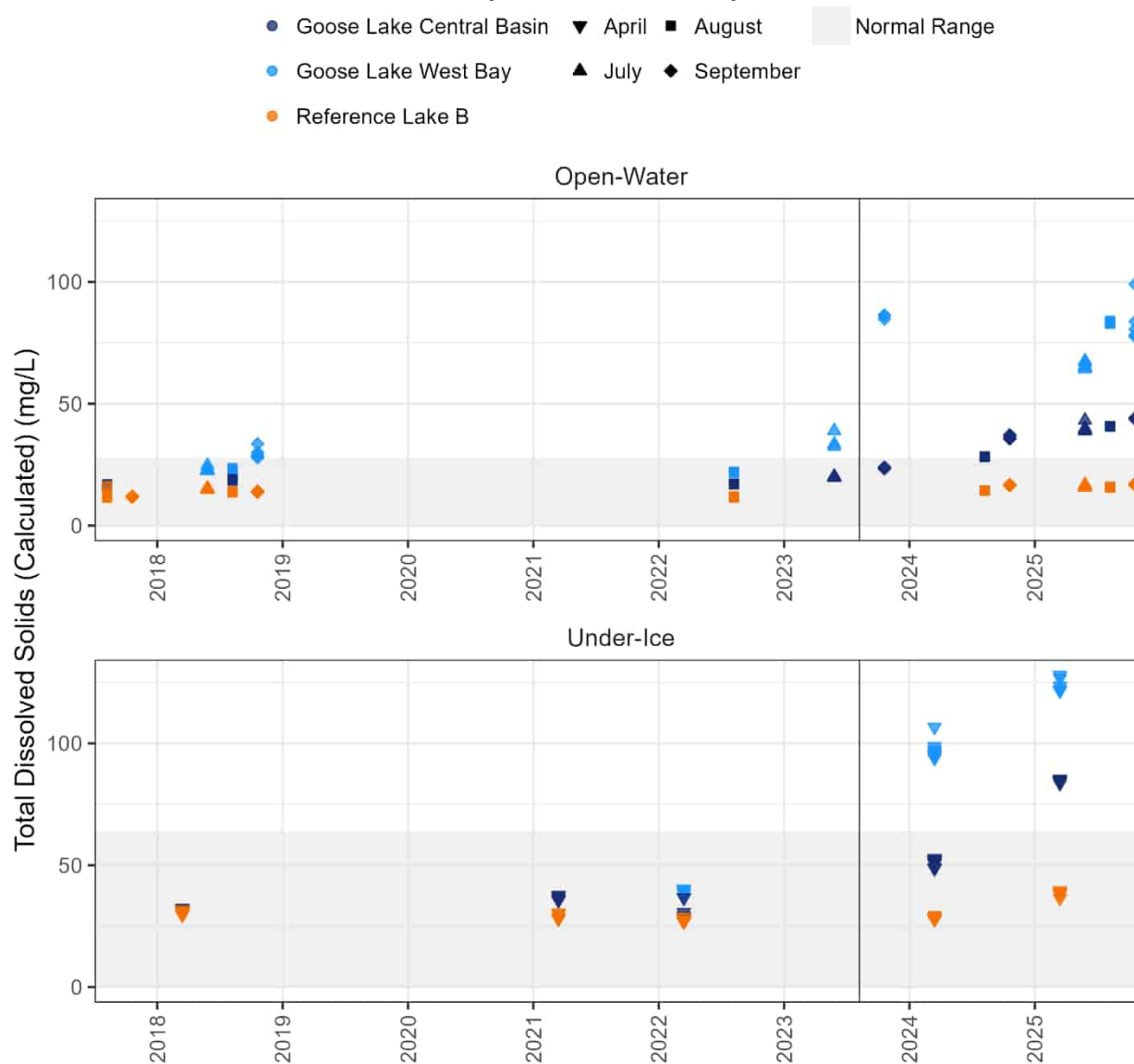
57 TOTAL COPPER



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

58 TOTAL DISSOLVED SOLIDS (CALCULATED)

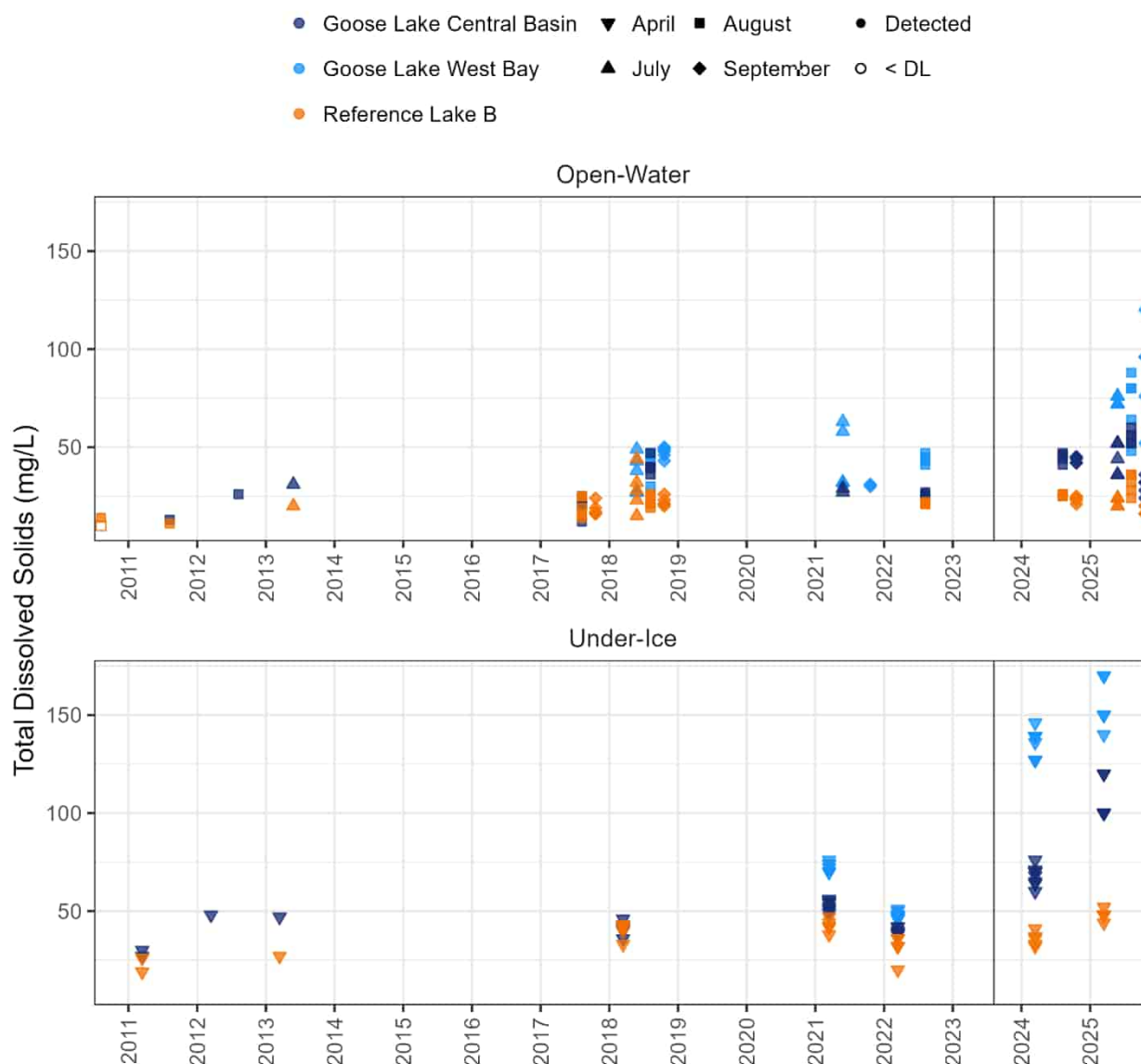


Note: This plot presents total dissolved solids concentrations calculated per APHA 2005 equation described in the main report.

Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

59 TOTAL DISSOLVED SOLIDS

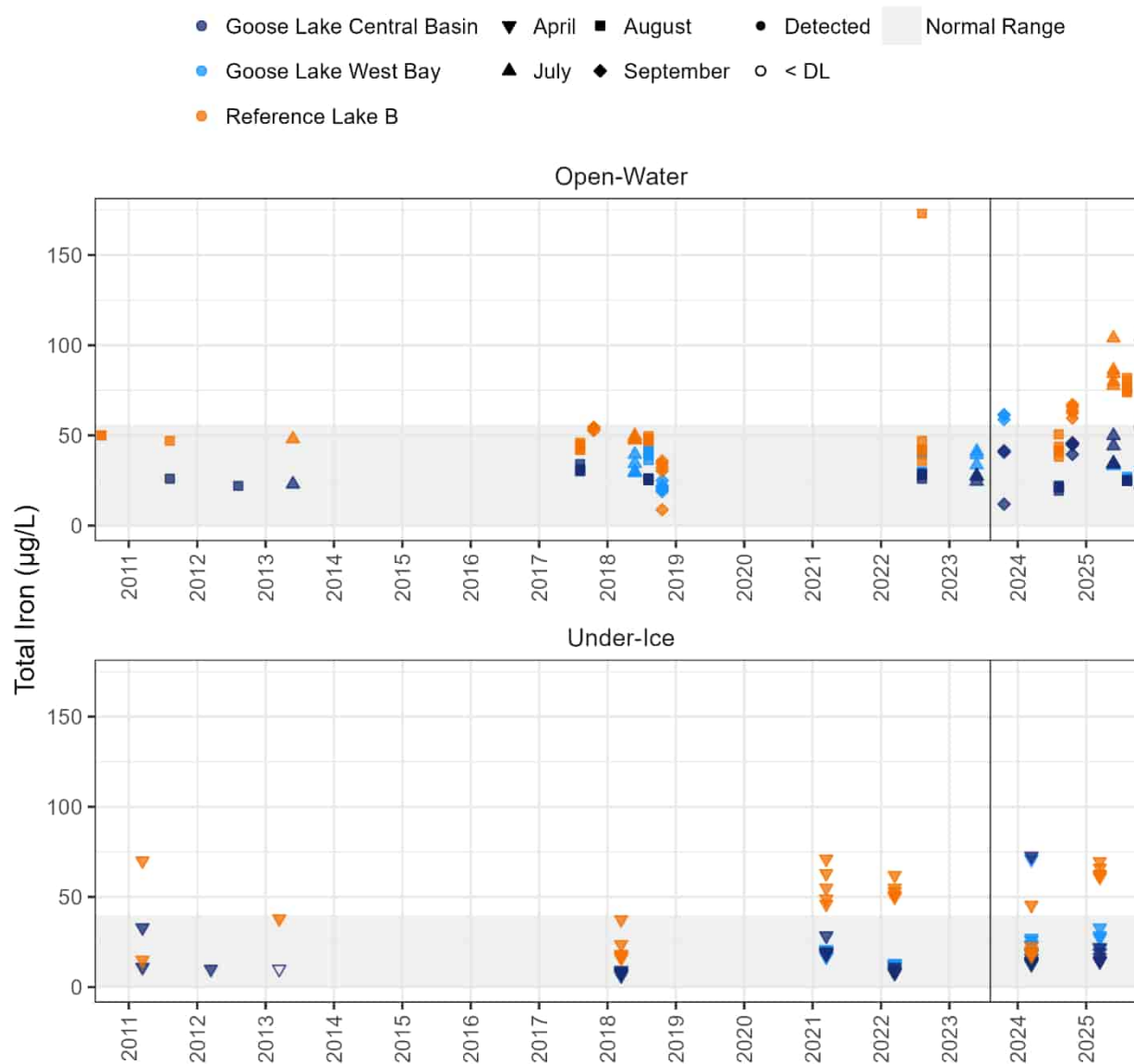


Note: This plot presents measured total dissolved solids concentrations by the laboratory (i.e., gravimetric total dissolved solid method).

Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

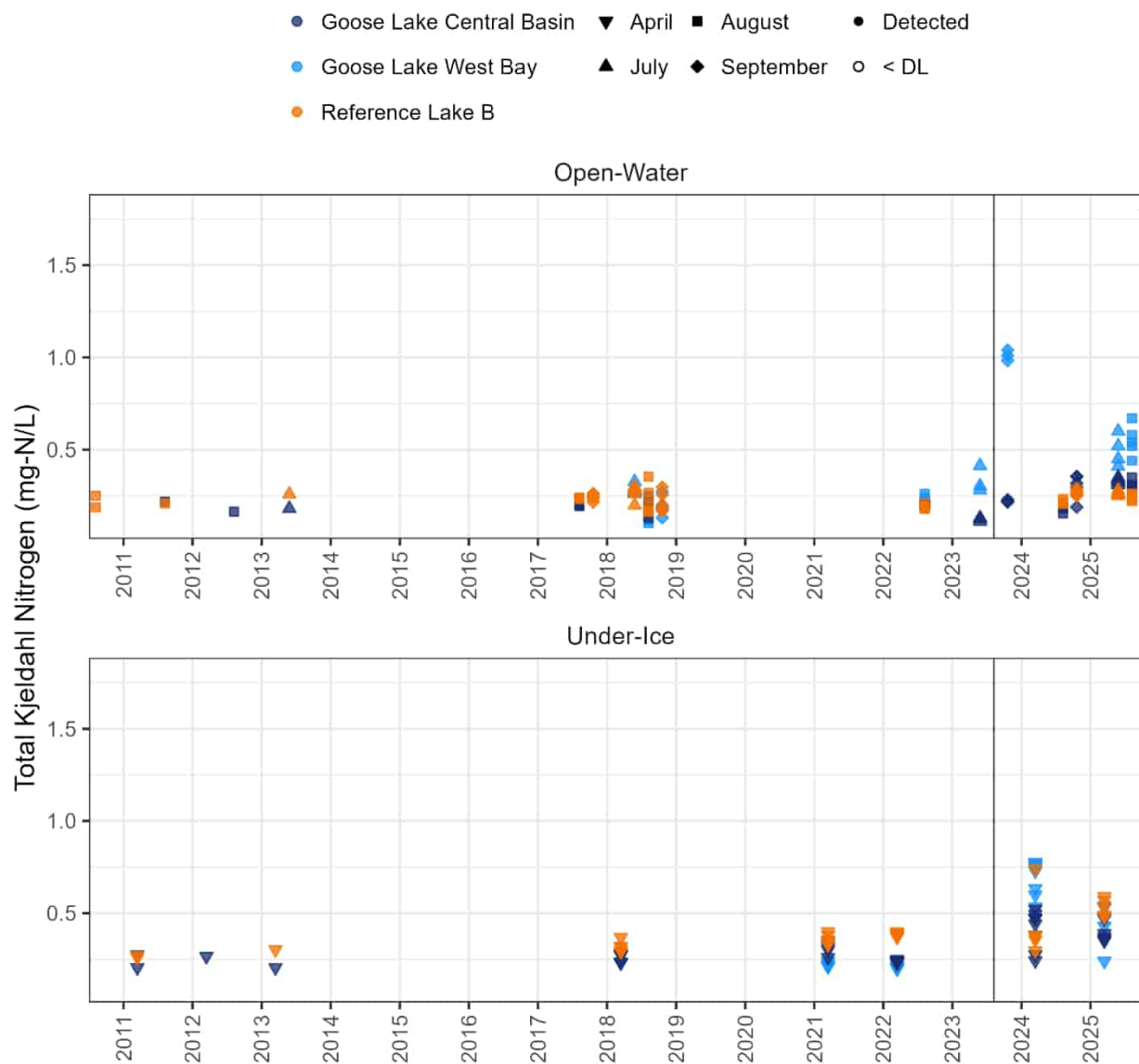
60 TOTAL IRON



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

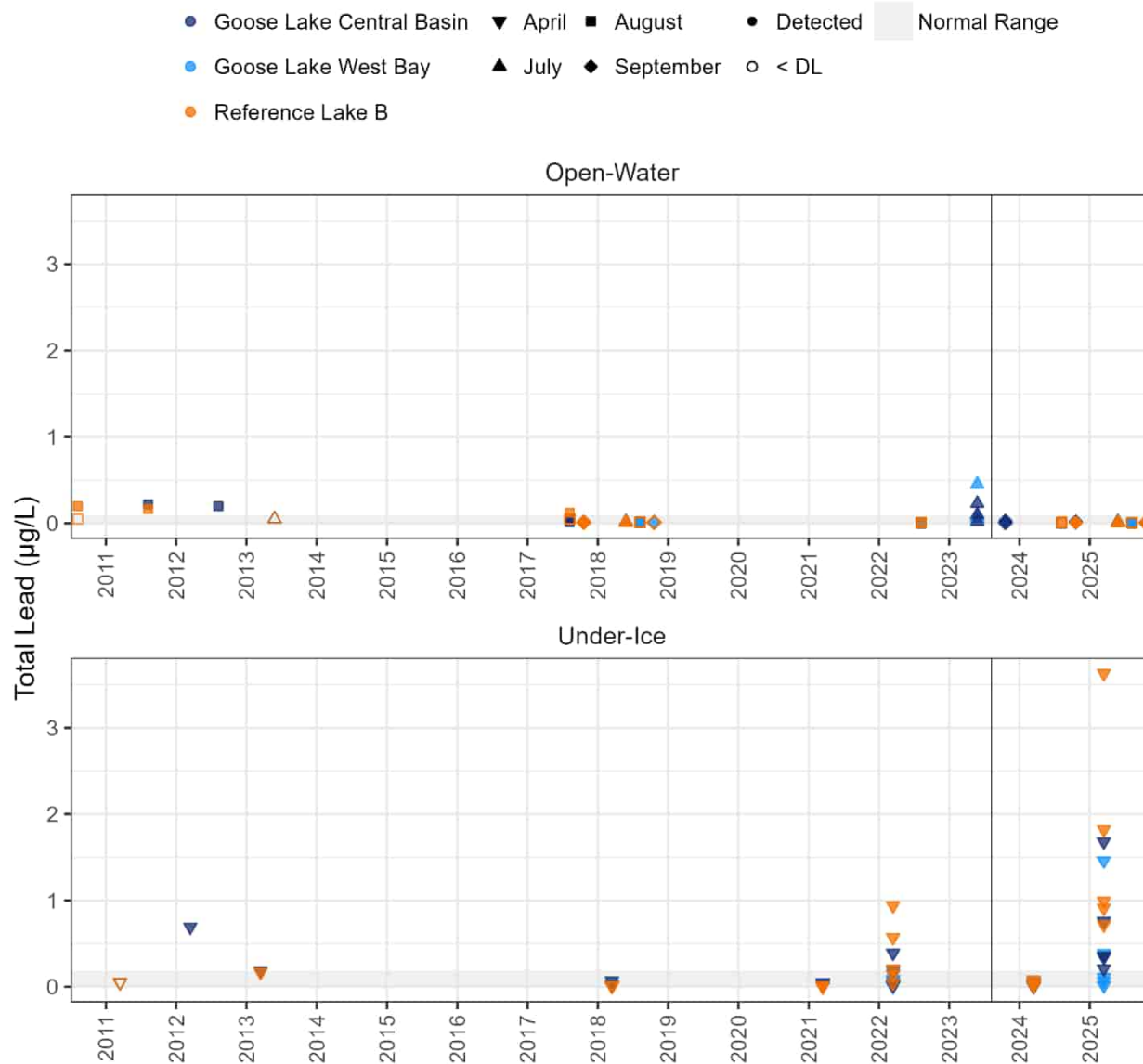
61 TOTAL KJELDAHL NITROGEN



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

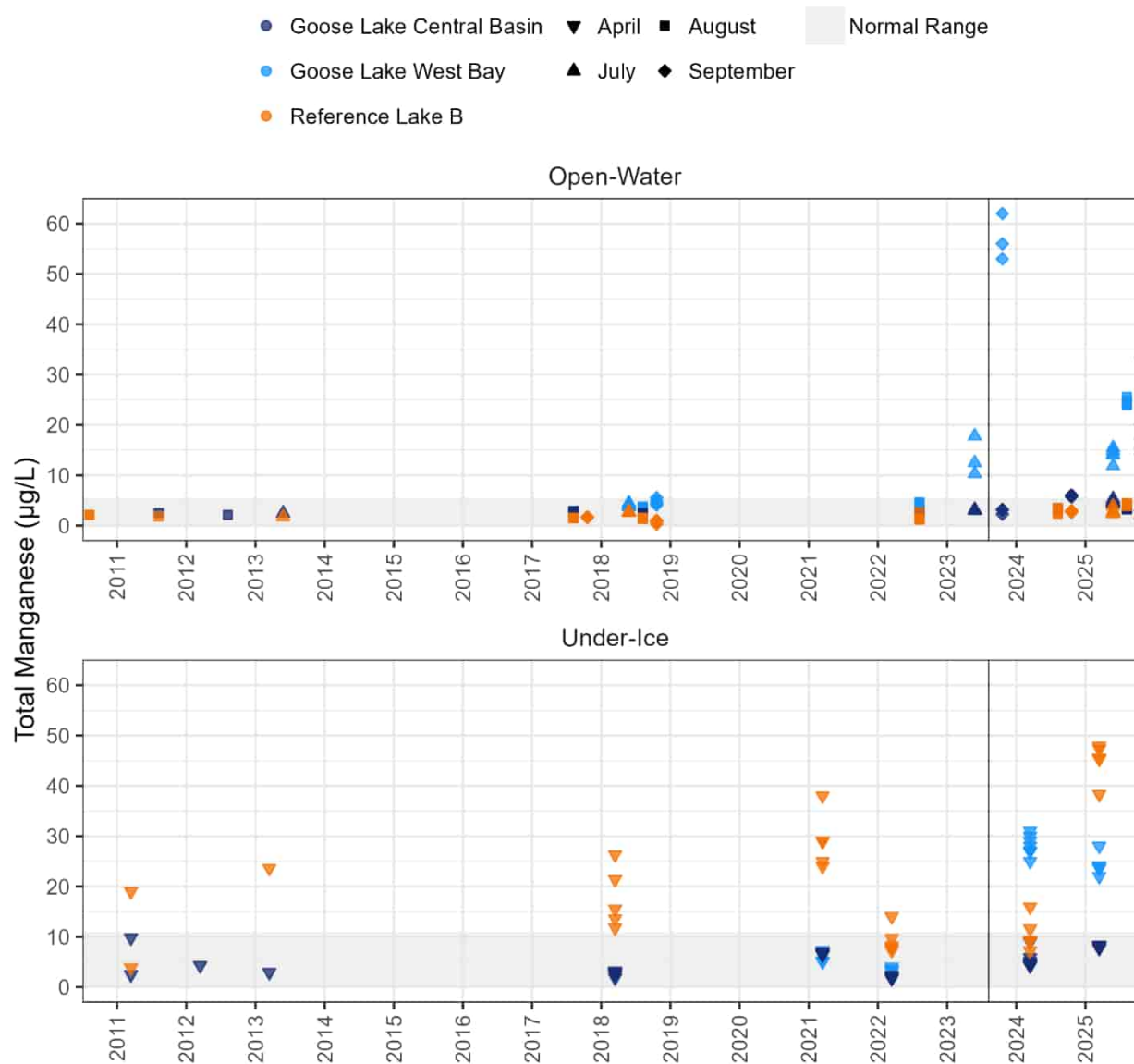
62 TOTAL LEAD



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

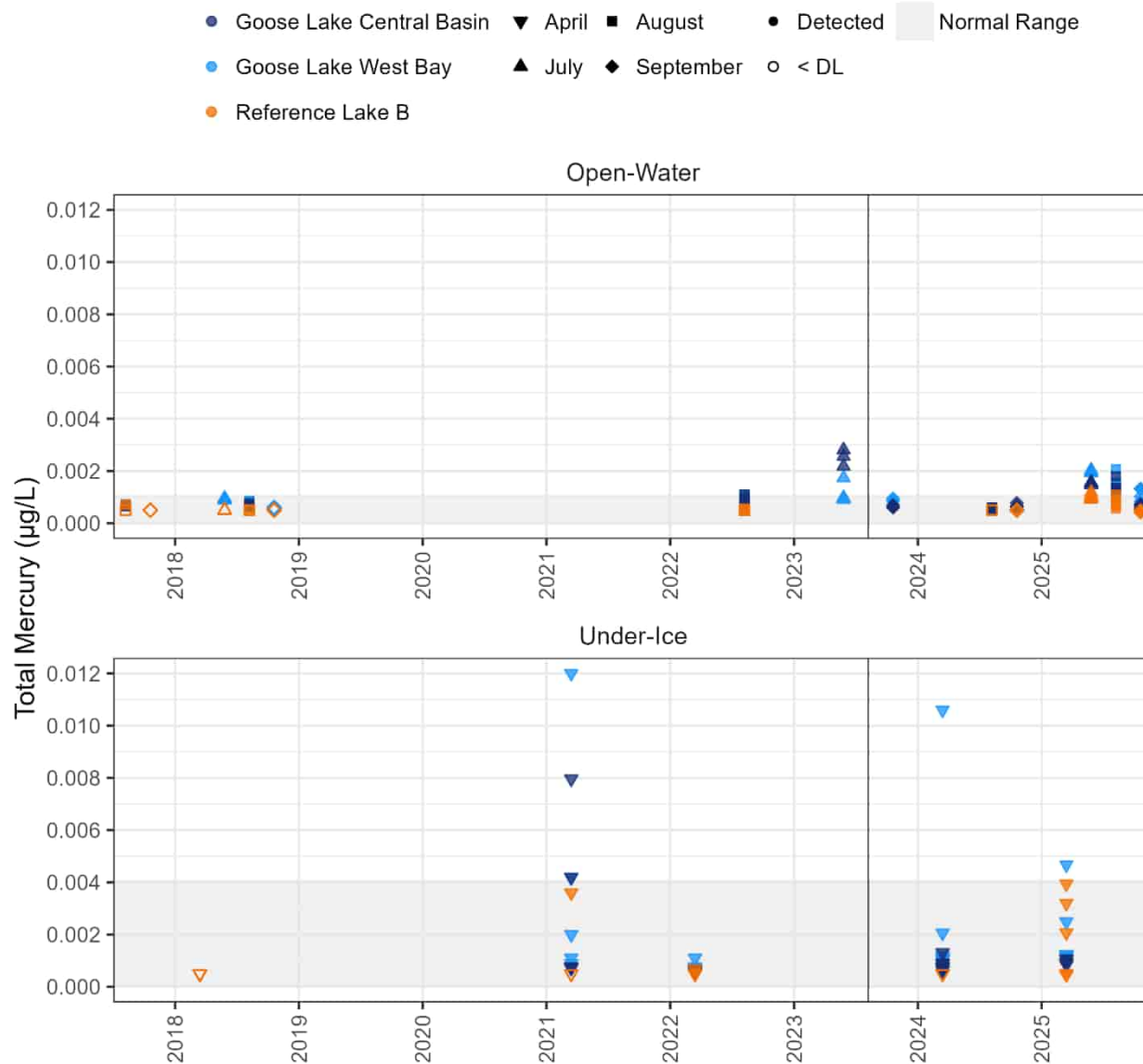
63 TOTAL MANGANESE



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

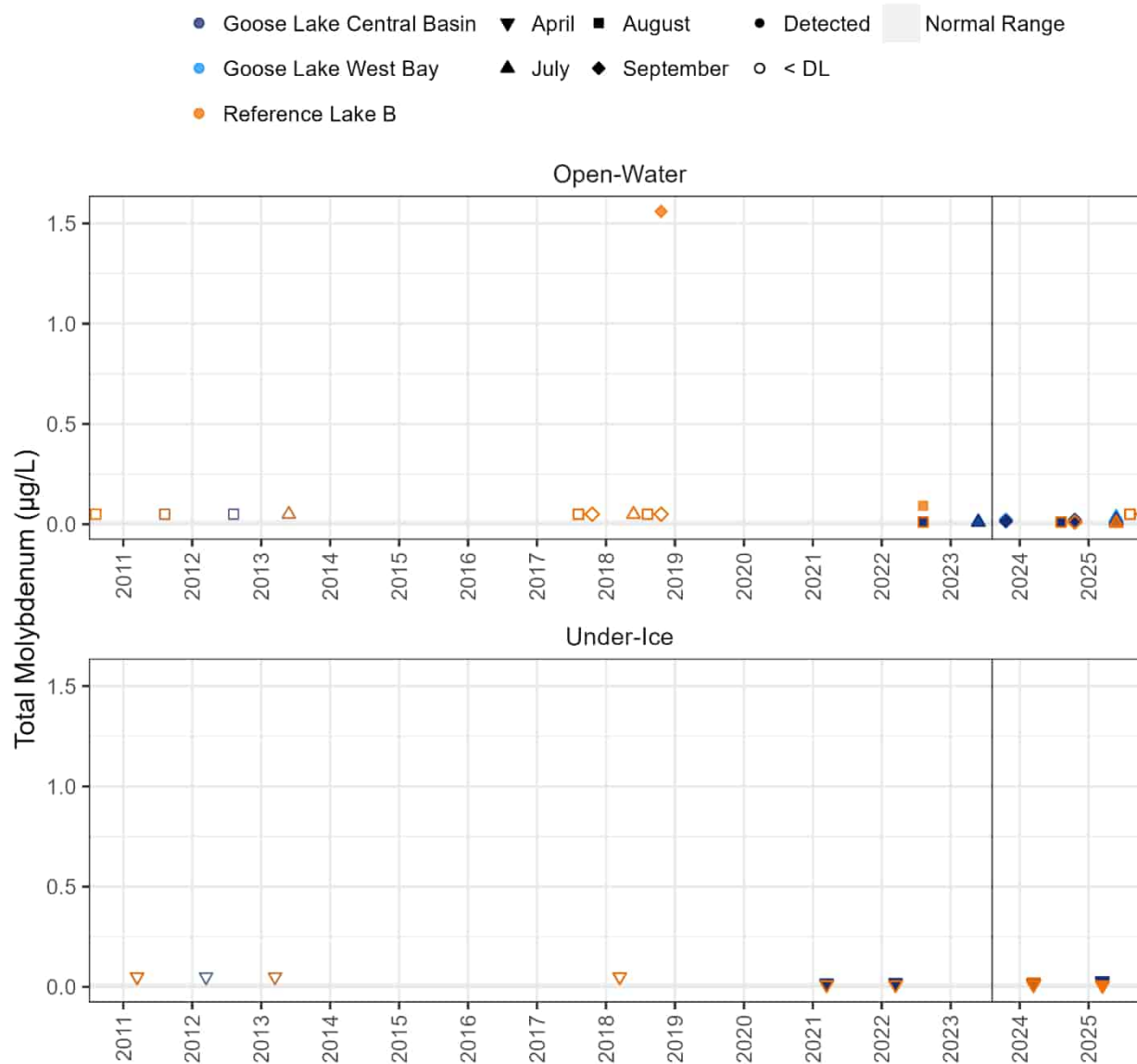
64 TOTAL MERCURY



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

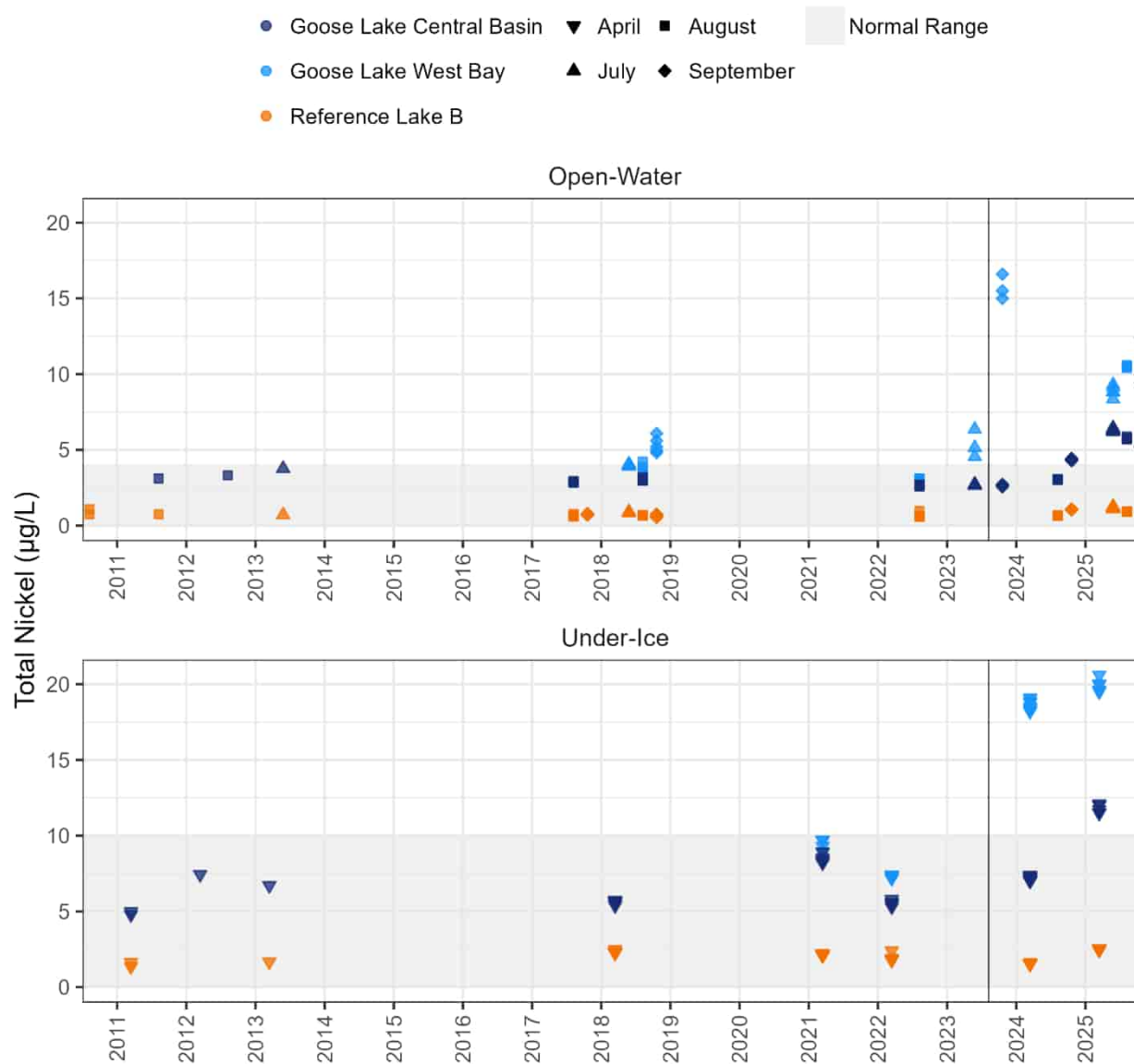
65 TOTAL MOLYBDENUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

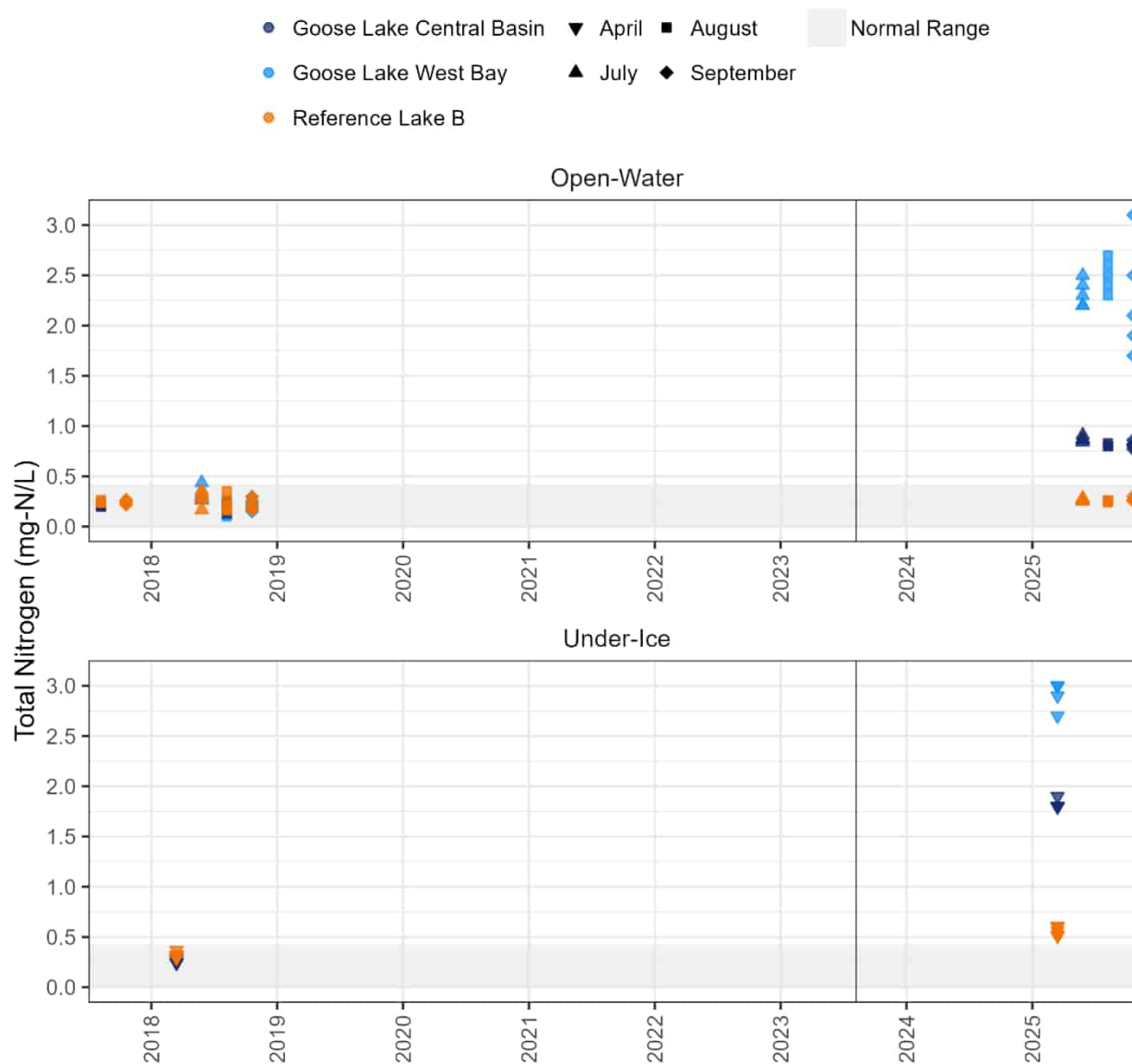
66 TOTAL NICKEL



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

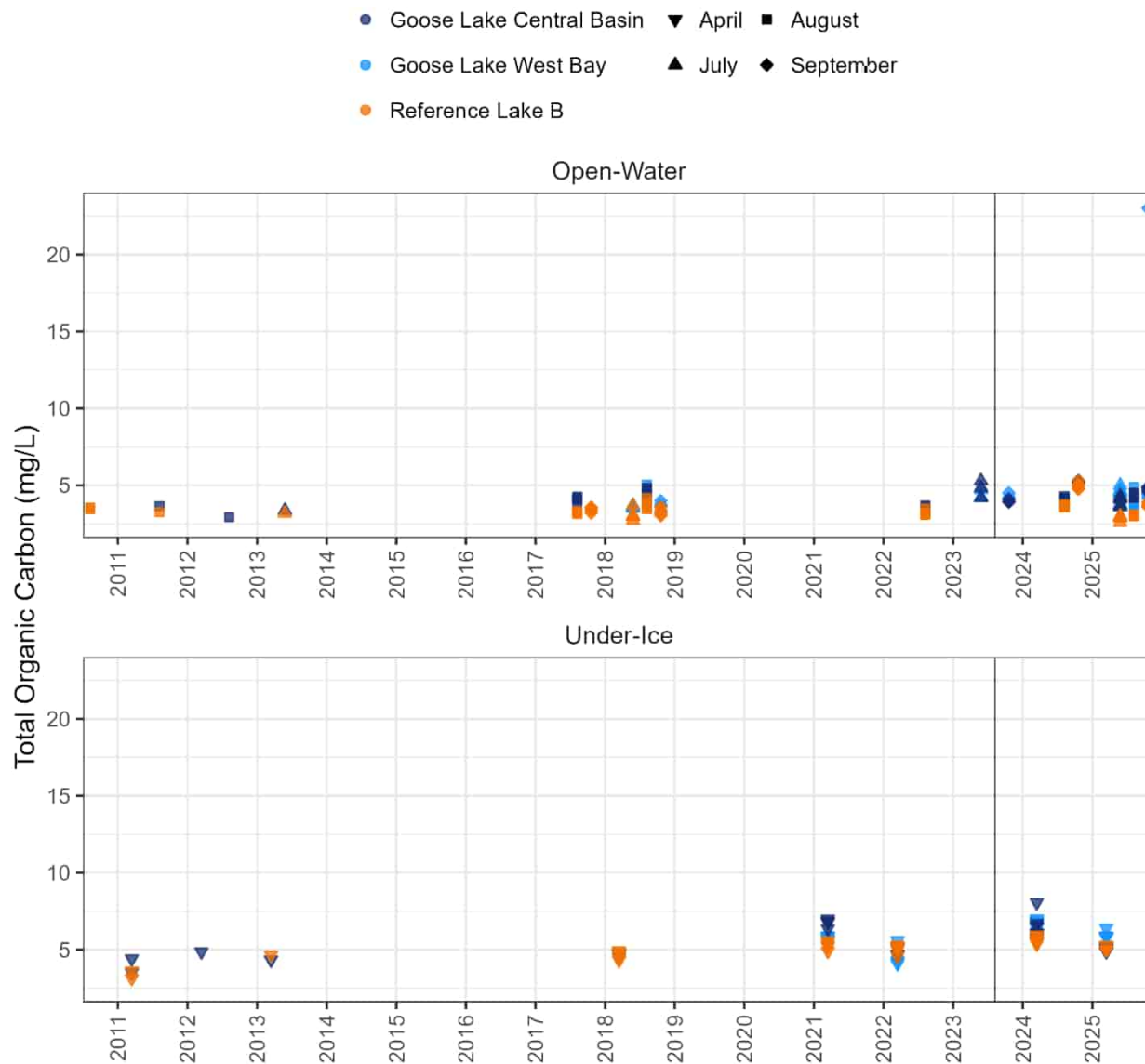
67 TOTAL NITROGEN



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

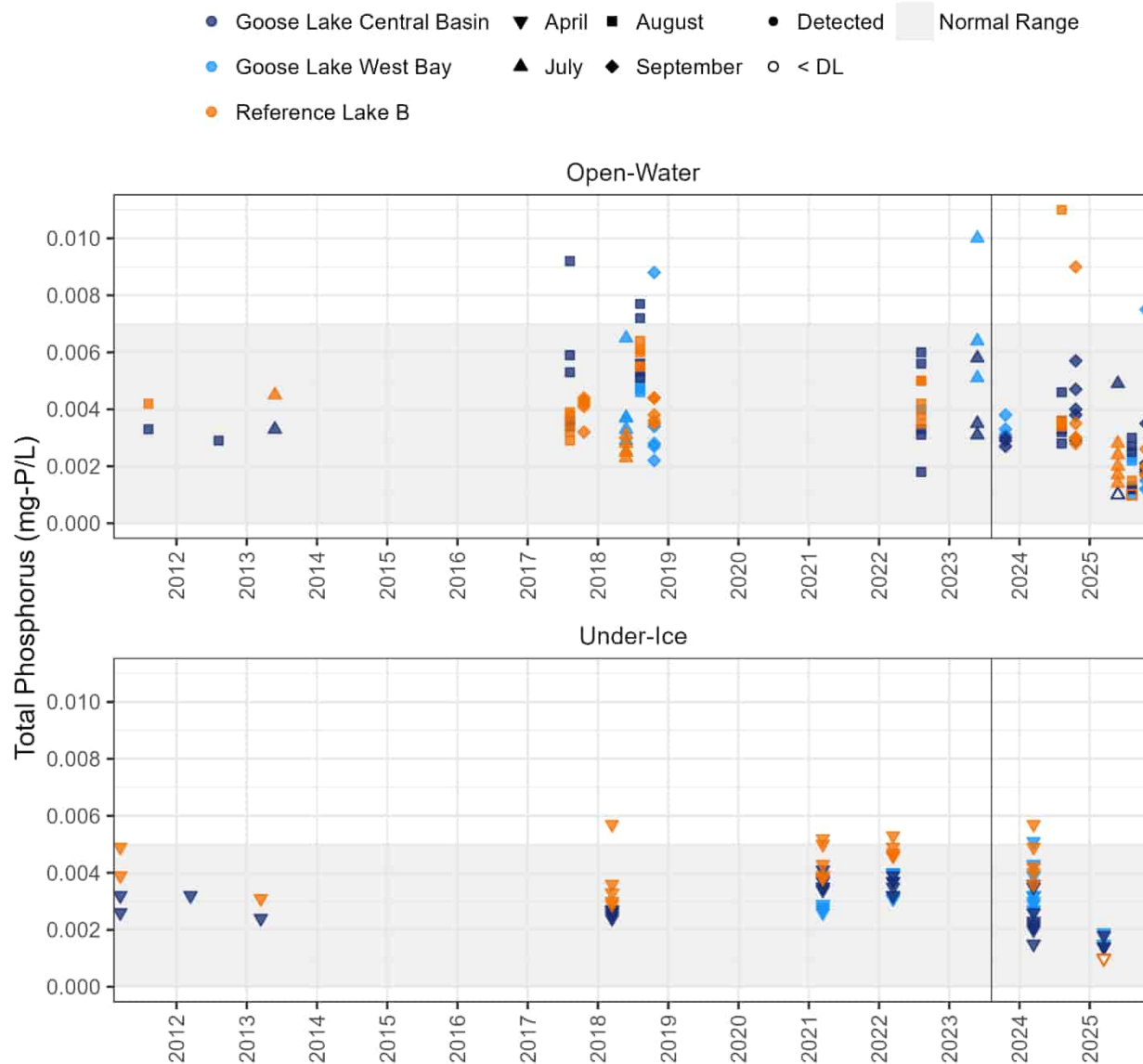
68 TOTAL ORGANIC CARBON



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

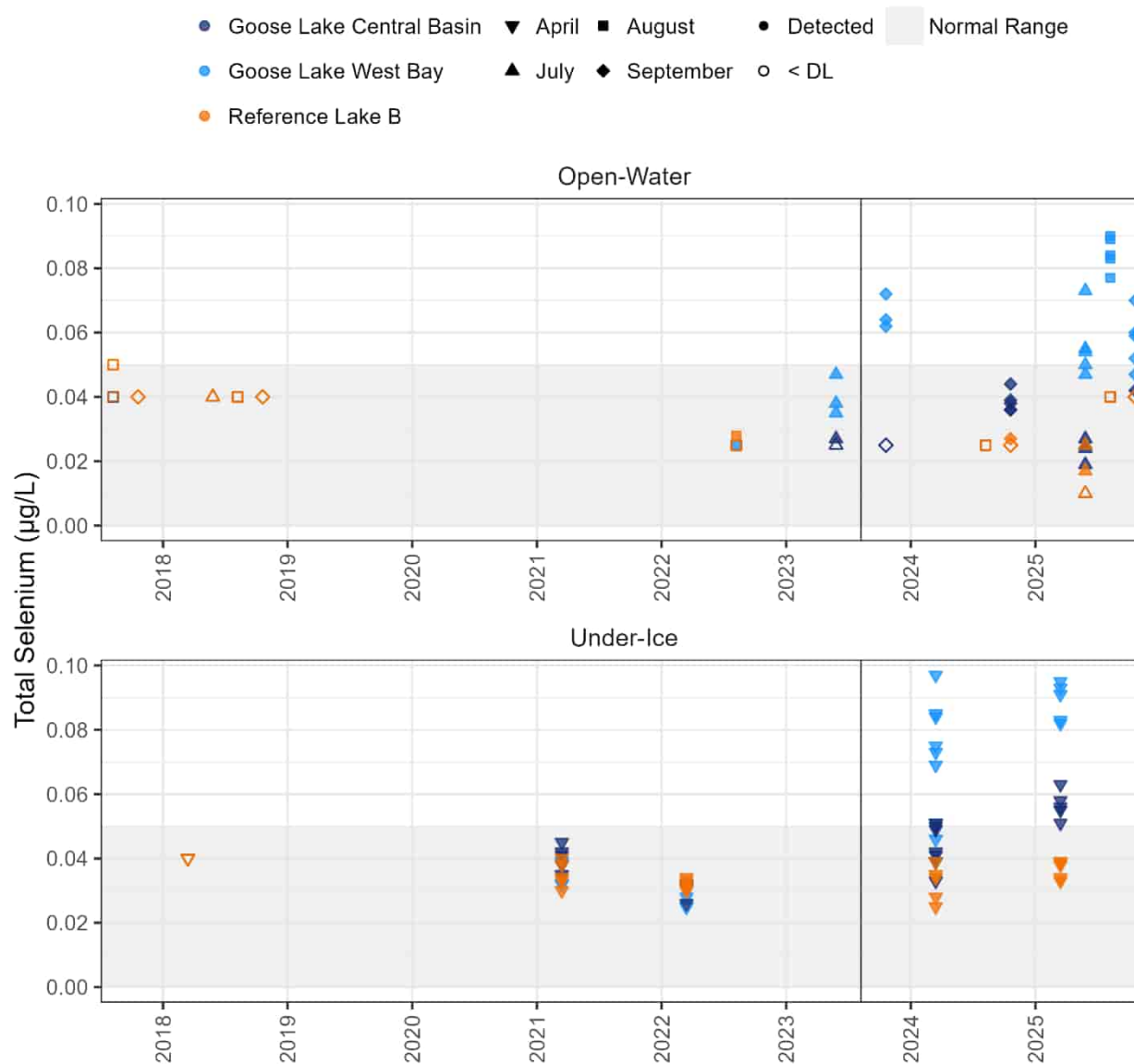
69 TOTAL PHOSPHORUS



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

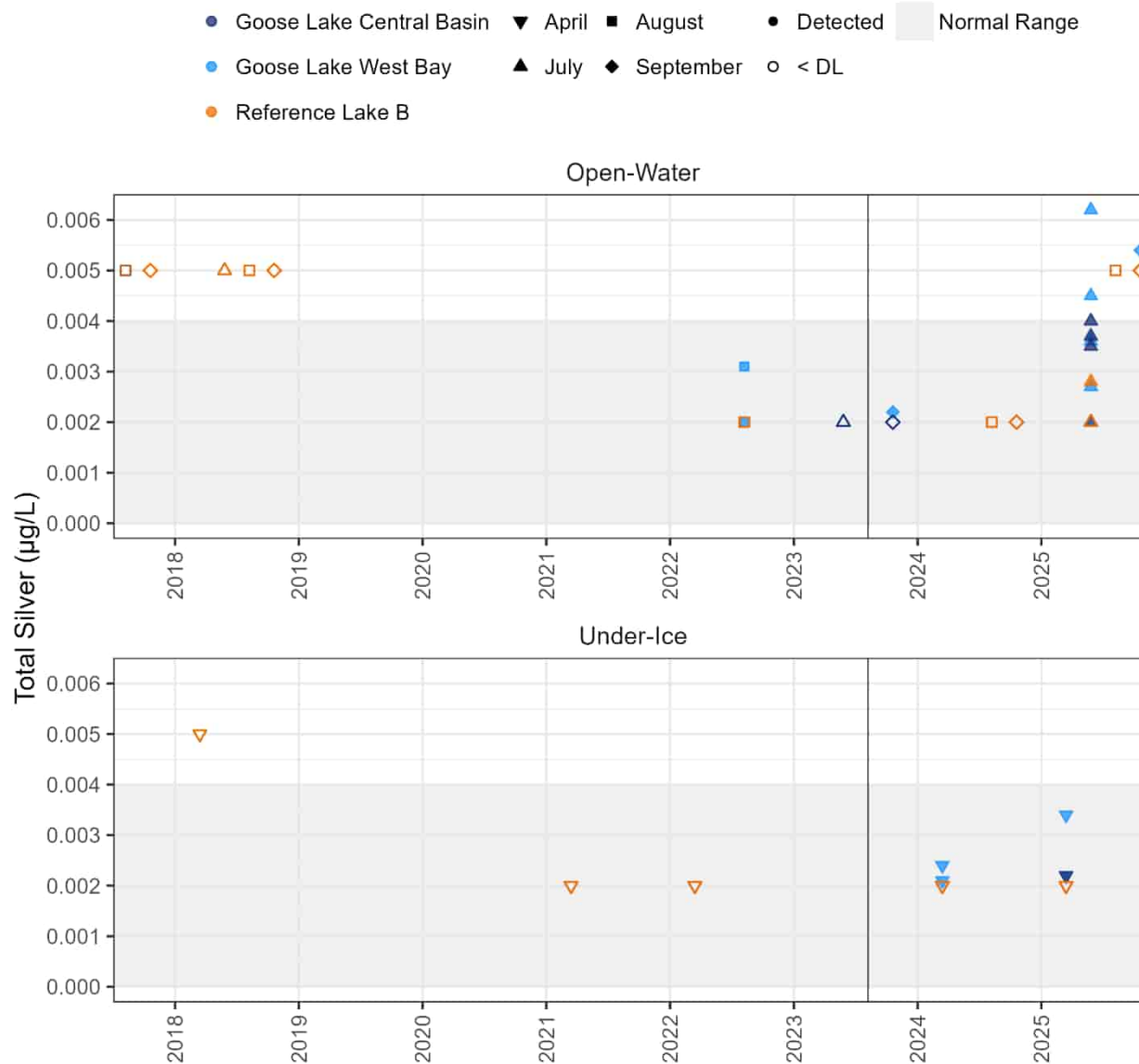
70 TOTAL SELENIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

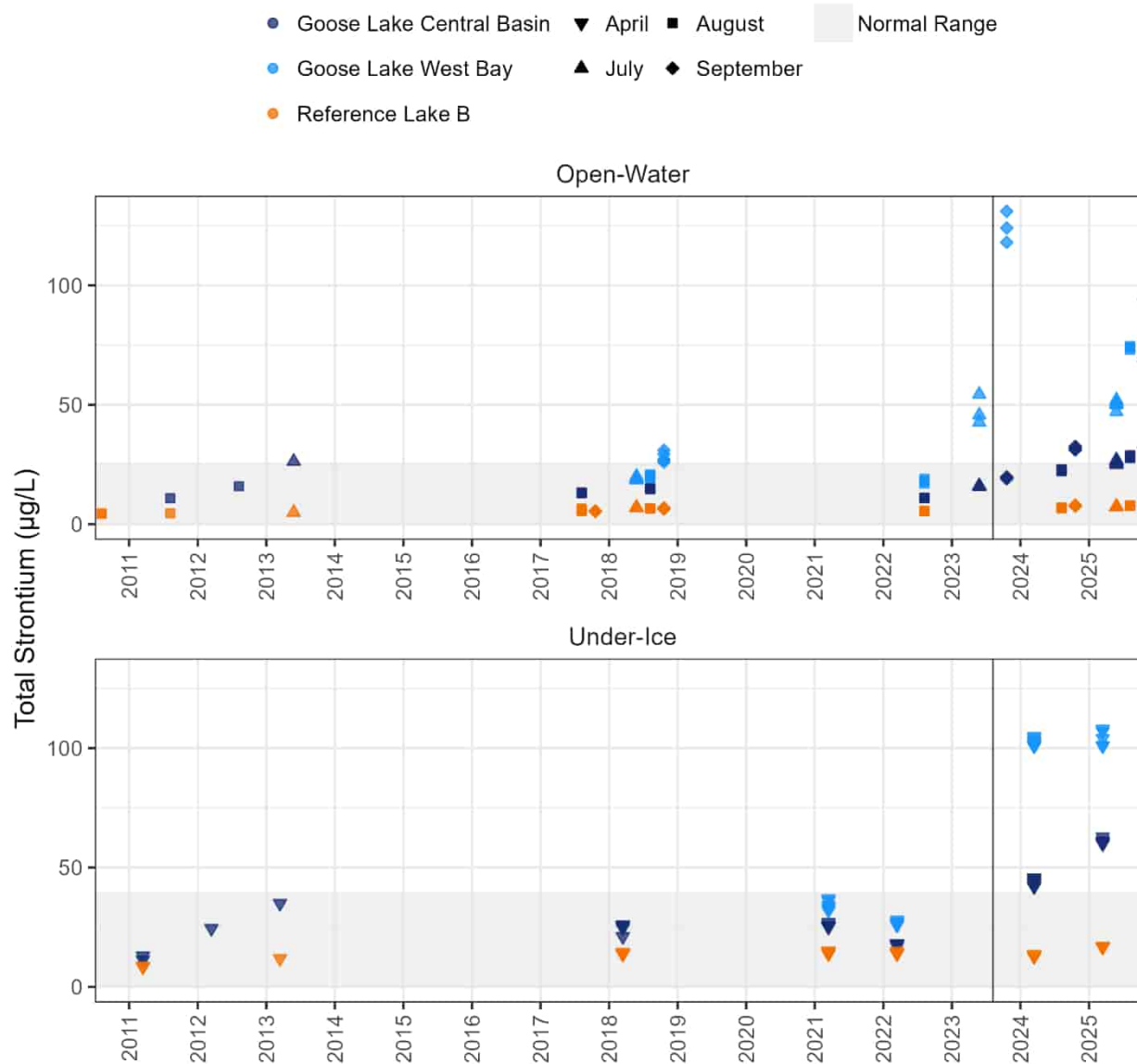
71 TOTAL SILVER



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

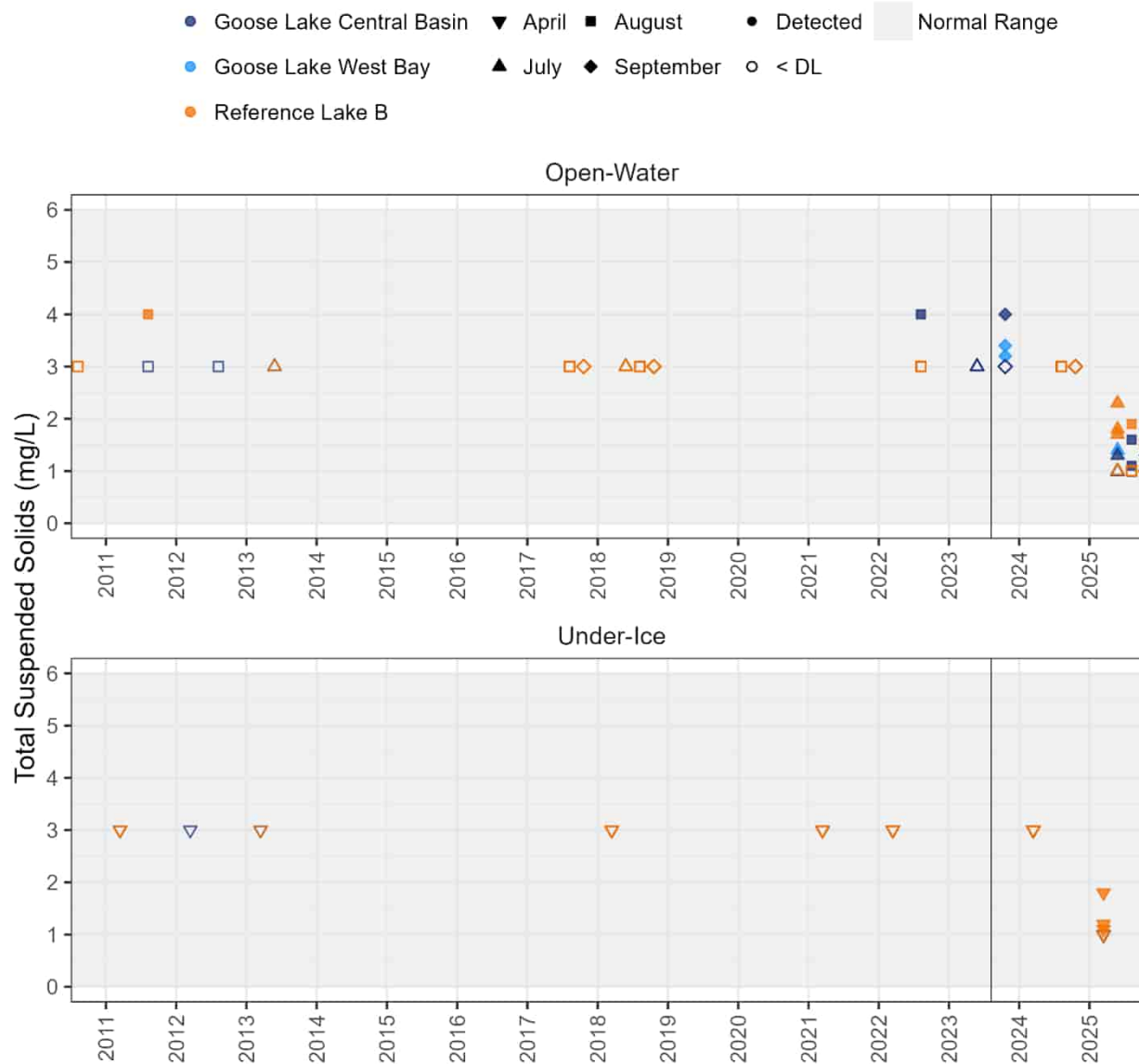
72 TOTAL STRONTIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

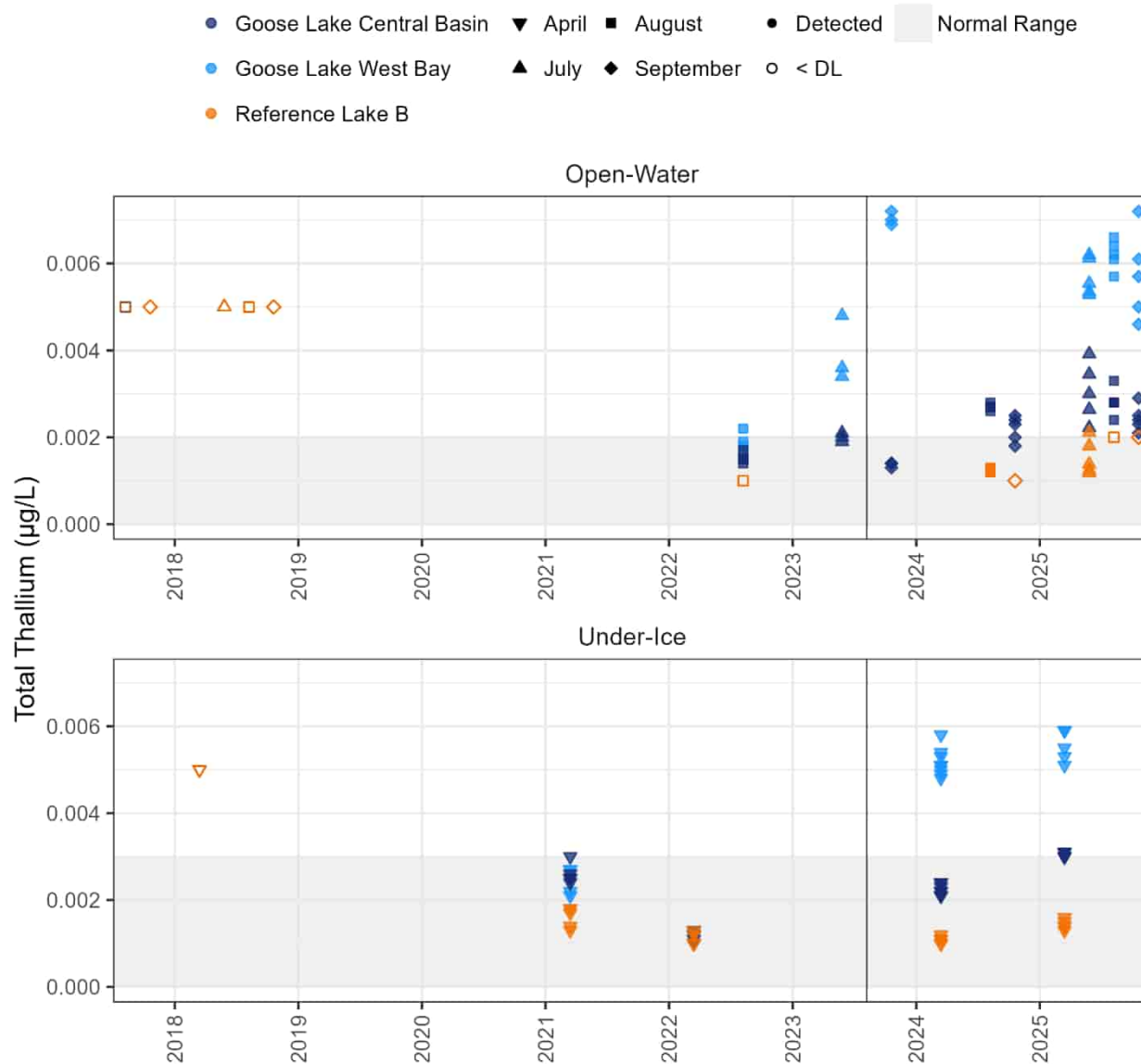
73 TOTAL SUSPENDED SOLIDS



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

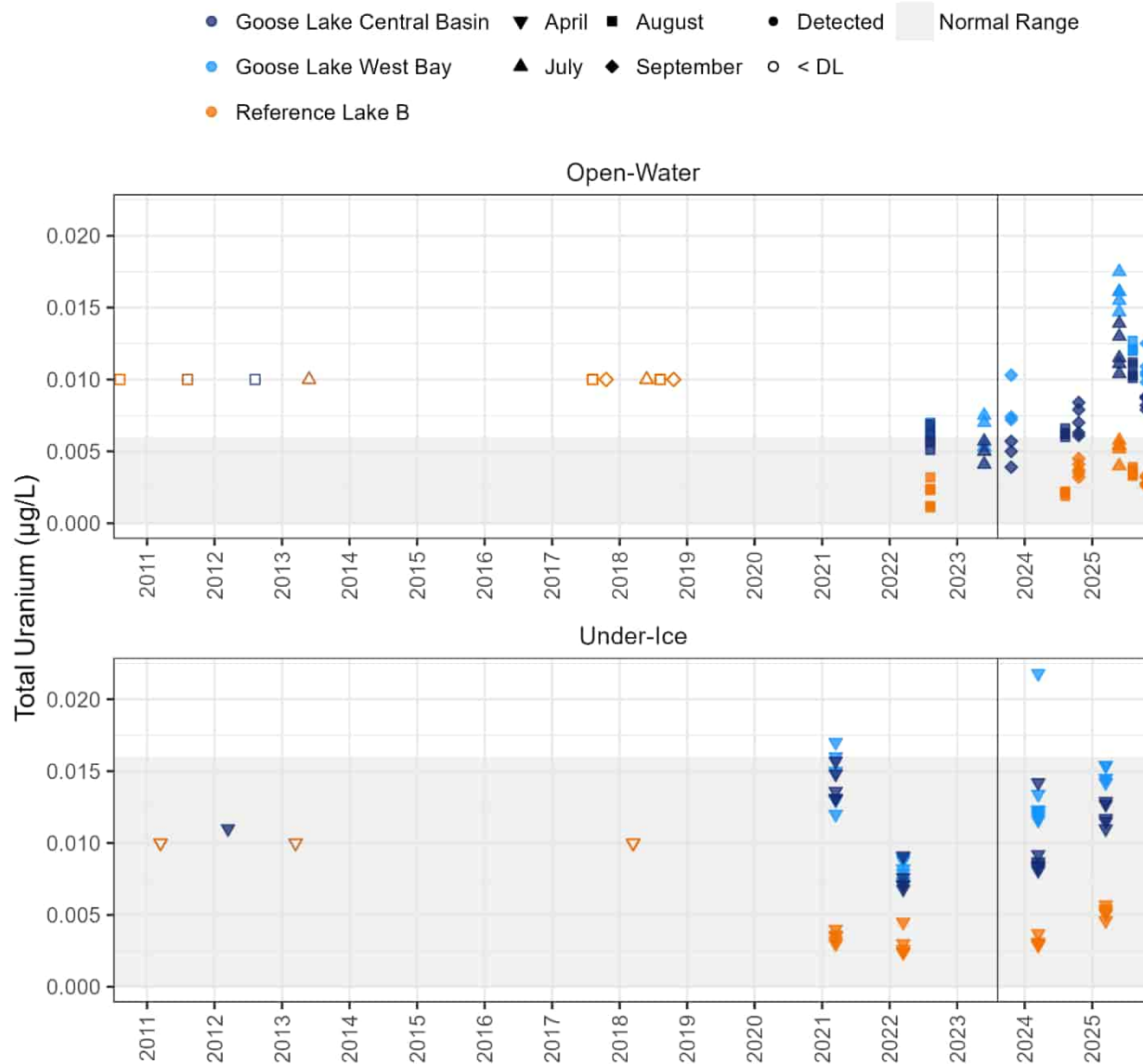
74 TOTAL THALLIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

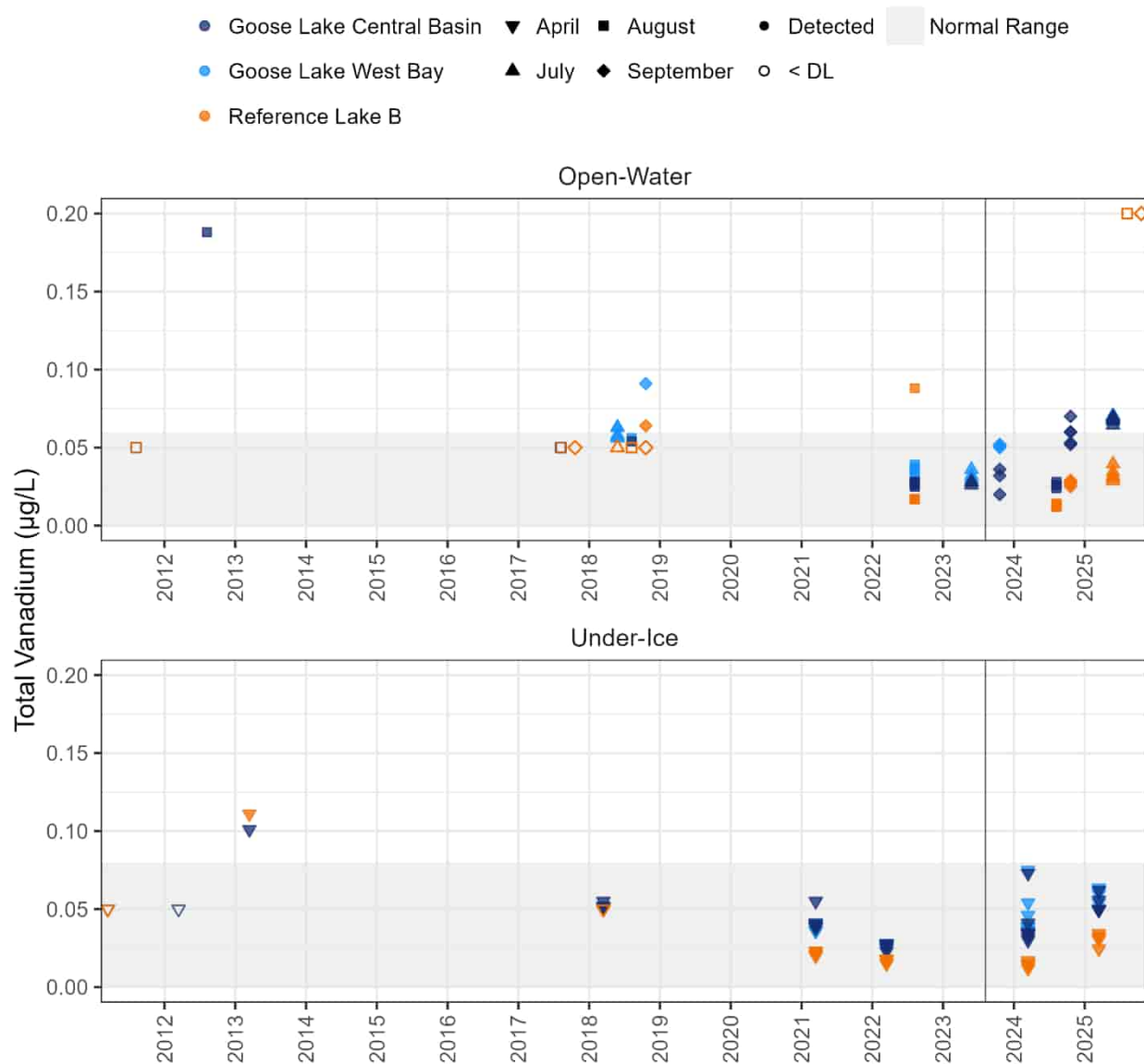
75 TOTAL URANIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

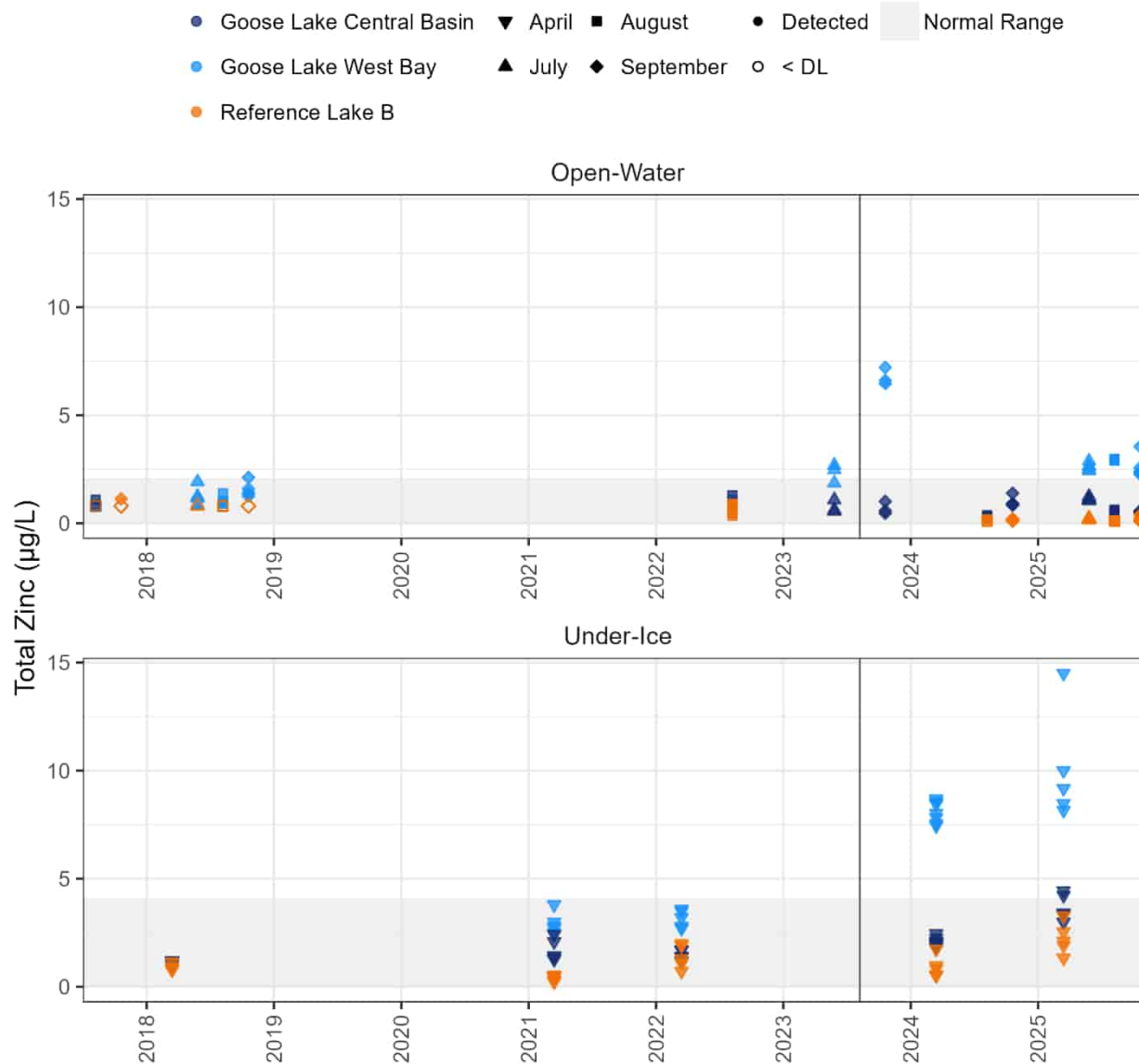
76 TOTAL VANADIUM



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

77 TOTAL ZINC



Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

APPENDIX F

**2025 Water Quality
Investigative Sampling**

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Photographs from June 2025 Investigative Sampling

F1. INTRODUCTION

The 2024 AEMP reported increasing concentrations for several parameter concentrations in the West Bay area of Goose Lake since September 2023. Parameters with concentrations that increased in 2024, especially in April and September, relative to baseline data were nitrate, ammonia, sulphate, chloride, calcium, magnesium, total dissolved solids, and total and dissolved aluminum, arsenic, barium, cadmium, cobalt, manganese, nickel, selenium, sulphur, strontium, uranium, and zinc.

This appendix describes the methods and results of additional sampling carried out in 2025 to better understand what the potential causes or sources of the increased concentrations might be, and the spatial extent of those changes (i.e., in what areas of the lake has water quality changed compared to baseline years).

The results presented herein support the Aquatic Effects Management Plan (AEMP) program for Goose Lake for the B2Gold Back River Project (Project). The 2025 AEMP results indicate that water quality in Goose Lake has changed to some degree compared to baseline years and the reference area. As a response to the Low Action Level exceedances identified in Section 5.5 of the main report in 2025 for nitrate, nitrite, and total and dissolved cobalt, this appendix investigates contributing factors to changes in Goose Lake water quality from the Project.

F2. METHODS

F2.1 2025 Investigation Sampling

WSP and B2Gold Nunavut met to discuss potential factors that may have contributed to the increased parameter concentrations in Goose Lake West Bay. In June 2025, ten investigation samples were collected near Site in areas that have the potential to report to Goose Lake, especially the West Bay Area. Targeted locations were at the Goose Lake inflow, upstream and downstream of the site road, the Echo Lake inflow, downstream of Site, just prior to flowing into Goose Lake and, based on field observations, any additional water located near Site that was flowing towards Goose Lake or might flow towards Goose Lake during rain events or as snow melted. The collection of water quality samples followed the methods described in Section 4.0 of the main report, except that water was collected directly into laboratory provided bottles. Quality assurance and quality control (QA/QC) procedures followed the methods for the AEMP and followed methods described in the updated AEMP study design for the Project (B2Gold Nunavut 2025). One field blank and one field duplicate (collected at INV-07) were collected for QA/QC purposes.

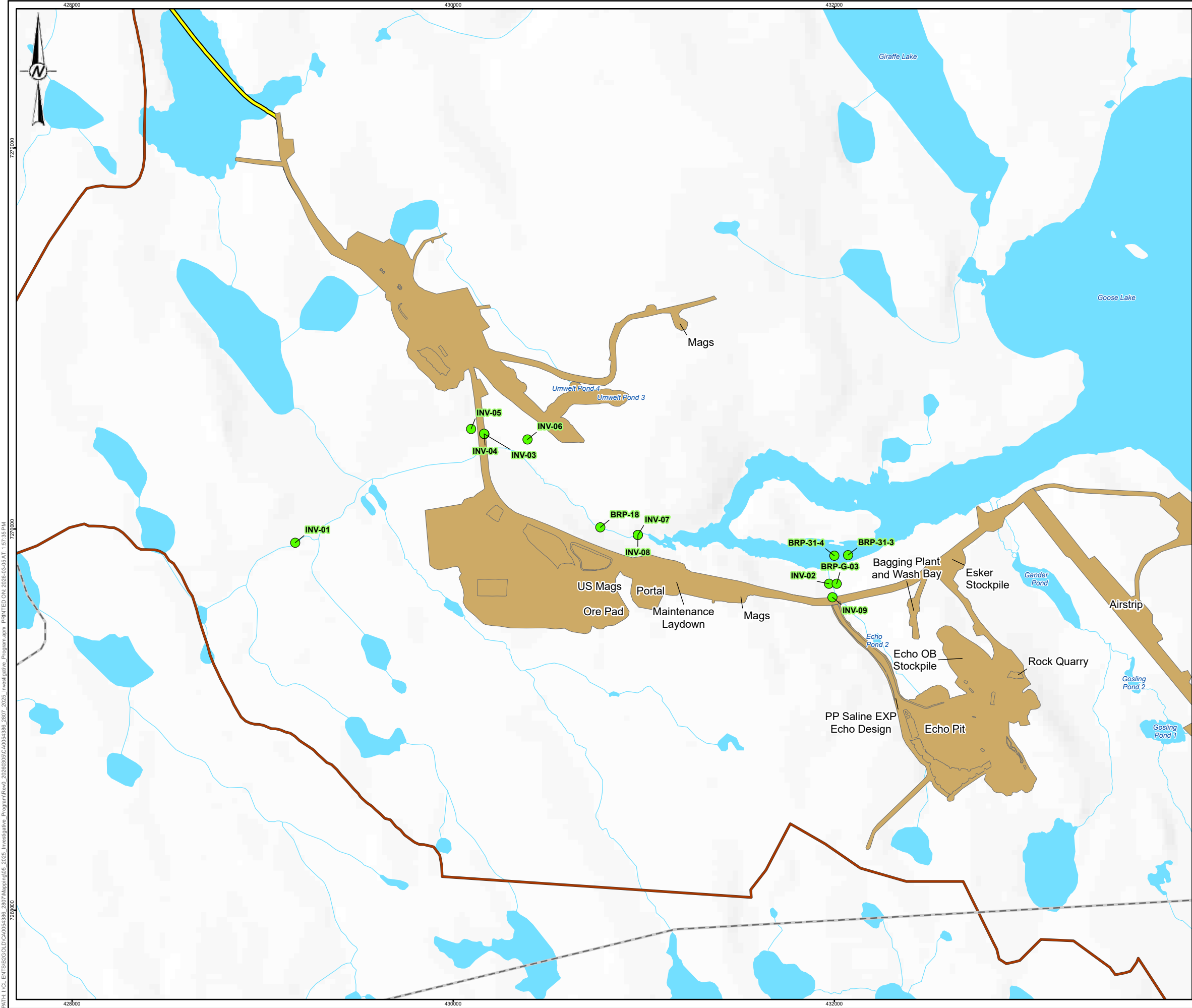
In addition to the ten investigation samples collected in June, two samples (BRP-31-3 and BRP-31-4) were collected in Goose Lake in the southern channel that flows from West Bay to Central Basin, near the Echo Lake inflow in July, August, and September. Methods followed those described for AEMP samples in the main report. The location where each sample was collected is provided in Table F2-1 and shown in Figure F2-1.

Table F2-1: Water Quality Sampling Locations for the Investigation Program

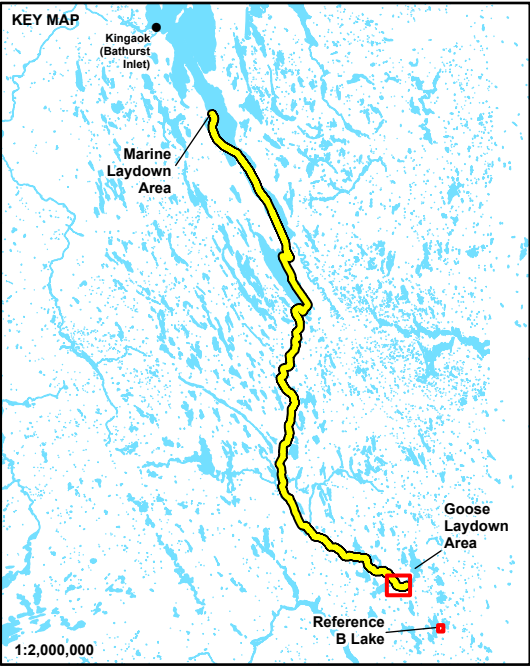
Sample	Description	UTM Easting (m)	UTM Northing (m)
INV-01	Stream flowing into Goose Lake West Bay, located upstream of Umwelt Lake discharge. Sample was collected in June.	429171	7269928
INV-02	Stream flowing into Goose Lake from Echo Lake, located near stream station BRP-G-03. Sample was collected in June.	431972	7269713
INV-03	Stream flowing into Goose Lake West Bay, located downstream of road, direct from culvert discharge. Sample was collected in June.	430164	7270498
INV-04	Stream flowing into Goose Lake West Bay, located downstream of road, from seepage through road. Sample was collected in June.	430162	7270500
INV-05	Stream flowing into Goose Lake West Bay, located upstream of road. Sample was collected in June.	430094	7270525
INV-06	Isolated pool to the north of the stream flowing into Goose Lake West Bay. Possible ephemeral connection to the stream flowing into Goose Lake during freshet and rain events. Sample collected in June.	430390	7270470
INV-07	Stream flowing into Goose Lake West Bay, located downstream of stream stations BRP-18. Sample was collected in June.	430969	7269969
INV-08	QA/QC sample: field duplicate of INV-07. Sample was collected in June.	430969	7269969
INV-09	Stream flowing into Goose Lake from Echo Lake, located upstream of stream station BRP-G-03, sampled from culvert (set of 5 culverts). Sample was collected in June.	431990	7269642
INV-10	QA/QC sample: field blank. Sample was collected in June.	-	-
BRP-31-3	southern channel that flows from West Bay to Central Basin, near the Echo Lake inflow. Samples were collected in July, August, and September.	432072	7269863
BRP-31-4	southern channel that flows from West Bay to Central Basin, near the Echo Lake inflow. Samples were collected in July, August, and September.	432000	7269860

Note: UTM coordinates are for NAD83, Zone 13W. Stream stations are documented in WSP 2026.

QA/QC = quality assurance and quality control.



- LEGEND**
- WATER QUALITY STATION
 - WATERCOURSE
 - WINTER ICE ROAD
 - INUIT OWNED LAND
 - JUNE 2024 AS-BUILT FOOTPRINT
 - POTENTIAL DEVELOPMENT AREA (GOOSE PROPERTY AREA)
 - WATERBODY



REFERENCE(S)
PROJECT DATA OBTAINED FROM CLIENT. INUIT OWNED LANDS DATA OBTAINED FROM NTI, © NUNAVUT TUNNGAVIK INC. HYDROGRAPHY DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
PROJECTED COORDINATE SYSTEM: NAD 1983 UTM ZONE 13N

CLIENT
B2GOLD BACK RIVER CORP.

PROJECT
B2GOLD BACK RIVER PROJECT

TITLE
SURFACE WATER QUALITY SAMPLING STATIONS FOR THE INVESTIGATION PROGRAM, 2025

CLIENT		YYYY-MM-DD	2026-03-05
		DESIGNED	BCF
		PREPARED	SP
		REVIEWED	JA
CONSULTANT		APPROVED	KS

PROJECT NO.
CA0054386.2807

REV.
0

FIGURE
F2-1

PATH: I:\CLIENTS\B2GOLD\CA0054386_2807\MapInfo\05_2025_Investigative_Program\Rev0_20260305\CA0054386_2807_2025_Investigative_Program.aprx PRINTED ON: 2026-03-05 AT: 1:57:35 PM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

F2.2 Additional Data Used to Evaluate Spatial and Temporal Trends

Addition data was used to investigate contributing factors to changes in Goose Lake water quality from the Project. Relevant data since 2011 were compiled from three additional main sources:

- Stream water quality results collected in inflows and outflows of Goose Lake (see WSP 2026)
- AEMP data collected in Goose Lake (see main report)
- Environmental monitoring occurs at Site for runoff and compliance purposes per the Water Licence requirements. In response to the results presented in the 2024 Annual AEMP Report (WSP 2025), additional parameters were added to the suite of analyses in operational sampling in 2025. Water chemistry data from Runoff and Compliance monitoring were provided by B2Gold Nunavut environmental staff and were added to the investigation dataset. Data were available from nine operational samples collected at BRP-18 between May 25, 2024 and August 10, 2025 and 13 samples collected at BRP-G-03.

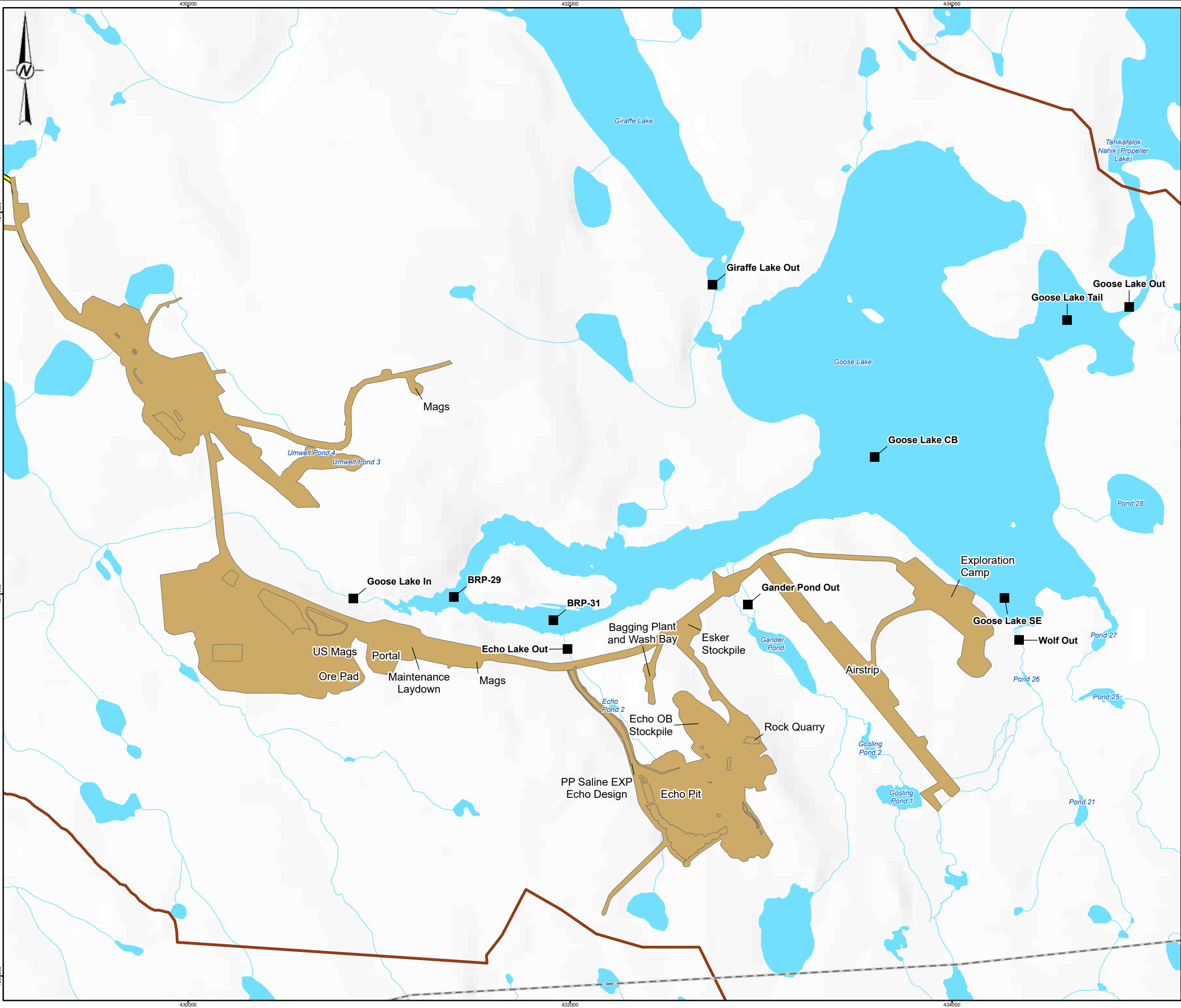
F2.3 Data Analysis

Because the Low Action Level was exceeded for nitrate, nitrite, and cobalt (i.e., parameters of interest with significant BACI effects and concentrations exceeding 80% of AEMP benchmarks), the investigation focused on the spatial and temporal trends for these parameters, in addition to specific conductivity as a general representation of higher ionic strength water.

Results from investigative sampling in June were tabulated to compare how concentrations for the aforementioned parameters compared in these samples. This information was used to evaluate which areas near the Project, based on a single month's results, was most likely to have contributed to changes in Goose Lake water quality.

Relevant data since 2011 (i.e., investigative sampling mentioned in Section F2.1 and additional data mentioned in Section F2.2) were then plotted to visually assess what areas may have contributed to greater parameter concentrations¹ in the West Bay of Goose Lake in late-2023, 2024, and 2025 compared to concentrations measured during the baseline period. Stations were grouped into main areas that represents stations in, or that represent input to, Goose Lake (Figure F2-2).

¹ This investigation used parameter concentrations as an indicator of where potential sources might be, but cannot identify the sources that may have contributed most to the change that occurred in Goose Lake's water quality because concentrations do not take into consideration the quantity of water, and thus loading, from each area.



LEGEND

- SURFACE WATER QUALITY AREA
- WATERCOURSE
- WINTER ICE ROAD
- INUIT OWNED LAND
- JUNE 2024 AS-BUILT FOOTPRINT
- POTENTIAL DEVELOPMENT AREA (GOOSE PROPERTY AREA)
- WATERBODY

KEY MAP

0 500 1,000
1:20,000 METRES

REFERENCE(S)
PROJECT DATA OBTAINED FROM CLIENT. INUIT OWNED LANDS DATA OBTAINED FROM NTI, © NUNAVUT TUNNGAVIK INC. HYDROGRAPHY DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
PROJECTED COORDINATE SYSTEM: NAD 1983 UTM ZONE 13N

CLIENT
B2GOLD BACK RIVER CORP.

PROJECT
B2GOLD BACK RIVER PROJECT

TITLE
SURFACE WATER QUALITY AREAS FOR THE INVESTIGATION

CLIENT		YYYY-MM-DD	2026-03-05
		DESIGNED	BCF
CONSULTANT		PREPARED	SP SK
		REVIEWED	JA
		APPROVED	KS

PROJECT NO.
CA0054386.2807

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FIGURE
F2-2

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F3. RESULTS

Quality assurance and quality control results are presented in Appendix F1, Table F1-1. Analytical results for samples used for investigative purposes (i.e., INV samples) are provided in Attachment F1, Table F1-2, and operational data collected at BRP-18 and BRP-G-03 are provided in Attachment F1, Tables F1-3 and F1-4, respectively. The source of data and station grouping used in the spatial and temporal analysis (i.e., investigative sampling, environmental monitoring, and additional historical data since 2011 from streams and AEMP sampling) are tabulated in Attachment F1, Table F1-5. A photograph at each investigative station sampled in June are presented in Attachment F2.

F3.1 Quality Control Results

Field blank and field duplicate results are presented in Appendix F1, Table F1-1. The total manganese concentration in the field blank was greater than five times the detection limit; however, this was not observed in other blank samples collected in June, indicating that this was considered an isolated occurrence that was unlikely to affect the validity of the overall dataset for this parameter. No parameter in the duplicate sample was notably different from one another (i.e., the relative percent difference was less than 25% for all parameters). The overall quality of the water quality data was acceptable, and results reported are considered reliable for use in future data analyses.

F3.2 Potential Contributing Factors

Based on a conversation with B2Gold Nunavut and field crew observations, the following were identified as potential factors that may have contributed to the increased parameter concentrations in Goose Lake West Bay:

- Seepage and runoff from Site might be reporting to Goose Lake during freshet and during precipitation events.
- Roads were constructed using pit basted material, which likely contained nitrogen species, and water seeping through road and reporting to Goose Lake.
- Contact water might be entering the environment near Echo Lake outflow and reporting to Goose Lake.
- B2Gold Nunavut has indicated that between 2023 and late 2024, rocks were stockpiled near the portal. Soil samples showed elevated concentrations of chloride and signs that the brine had seeped to nearby areas. The contaminated soil was not removed; the stockpile area may be a source of elevated chloride concentrations that may be reporting to Goose Lake.

F3.3 2025 Investigation Sampling Results

The following provides a summary of water quality results, for investigation samples collected in June only, to identify areas near the project most likely to have contributed to changes in Goose Lake water quality (Table F3-1):

- Specific conductivity, nitrate, and cobalt concentrations were highest at INV-06. While water from this isolated pool likely flows into Goose Lake during freshet and rainfall events, its impact on Goose Lake's water quality may be minor if the flow is limited.
- For water that was flowing to Goose Lake in June, specific conductivity and parameter concentrations were greatest in water entering Goose Lake from Llama and Umwelt Lakes (i.e., INV-07) and from Echo Lake (i.e., INV-02).

- Specific conductivity and concentrations of most parameters were relatively low in samples upstream of Umwelt Lake discharge (INV-01) and in samples flanking the haul road (i.e., INV-05, located upstream of the haul road and samples INV-03 and INV-04, located downstream of the haul road) and indicate these areas are unlikely to be the main contributors to elevated concentrations measured just prior to Goose Lake, at INV-07.
- Nitrite concentrations were approximately an order of magnitude greater at INV-02 (i.e., in the inflow from Echo Lake) compared to other areas sampled in June.

Investigative sampling in June suggest that two main areas are likely influencing water quality in Goose Lake: water flowing to Goose Lake from the Echo Lake area, and water flowing into Goose Lake from Llama and Umwelt lakes, downstream of the haul road.

Table F3-1: Concentrations of Selected Parameters at Stations Sampled for Investigative Purposes in June 2025

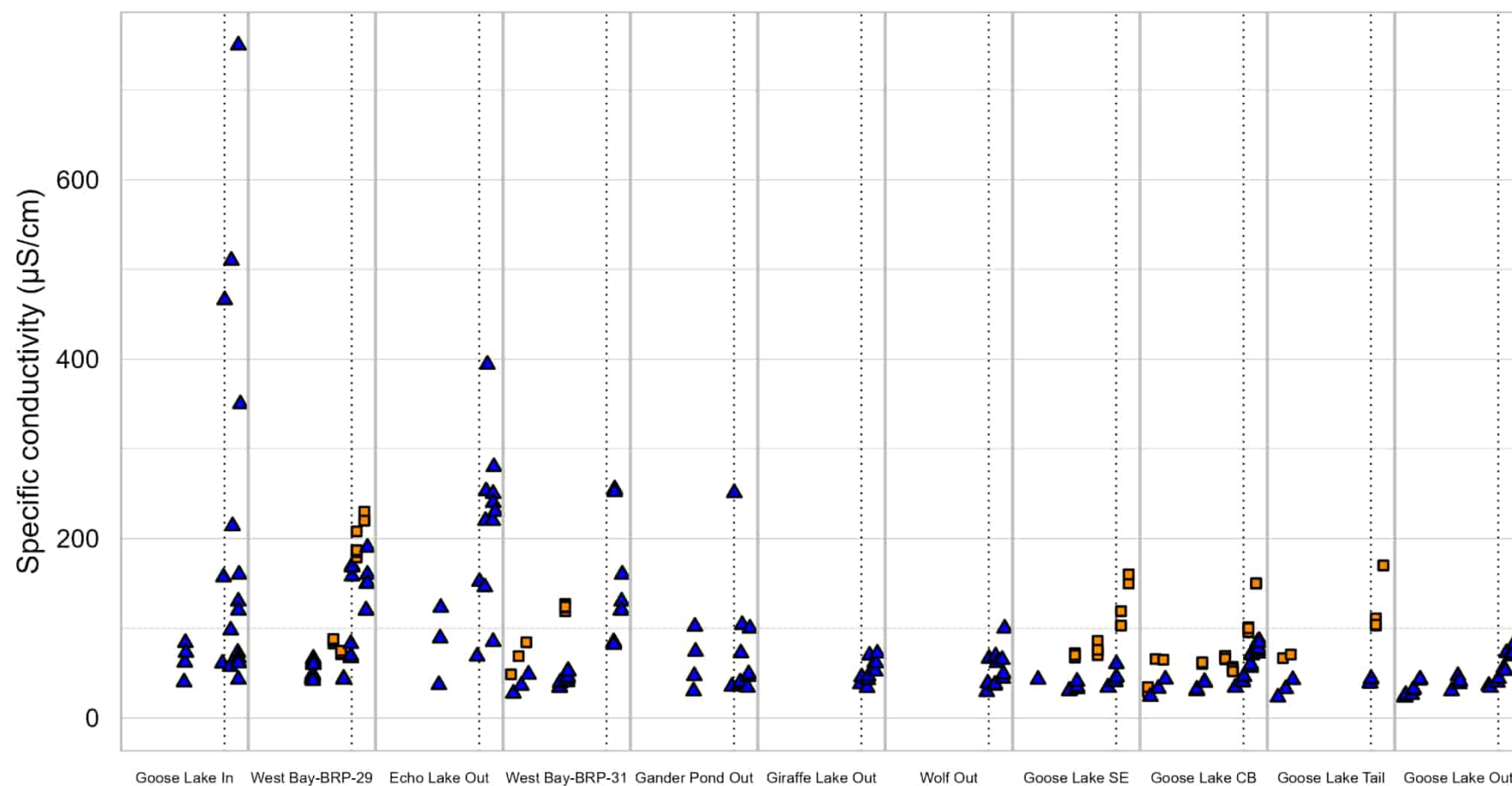
Sample	Field Specific Conductivity (µS/cm)	Nitrate (mg-N/L)	Nitrite (mg-N/L)	Total Cobalt (µg/L)	Dissolved Cobalt (µg/L)
INV-01	60	<0.003	<0.001	0.21	0.19
INV-02	222	6.8	0.026	1.3	0.37
INV-03	64	0.74	<0.001	0.80	0.81
INV-04	63	0.60	<0.001	0.19	0.18
INV-05	63	0.54	<0.001	0.21	0.18
INV-06	710	9.7	0.0063	23	22
INV-07	119	2.1	0.0030	0.77	0.74
INV-09	87	0.19	0.0017	6.8	0.30

Note: BRP-31-3 and BRP-31-4 samples were collected in July, August, and September and were thus not compared to results from investigative samples collected in June. Data at these stations were used in Section F4 when evaluating overall spatial and temporal trends.

F4. OVERALL SPATIAL AND TEMPORAL TRENDS

F4.1 Specific Conductivity

Specific conductivity increased after September 2023 in water flowing into Goose Lake from Llama and Umwelt Lakes (i.e., “Goose Lake In”) and from Echo Lake (i.e., “Echo Lake Out”) compared baseline years (Figure F3-1). In Goose Lake, increases were most apparent in the West Bay areas (i.e., BRP-29 and BRP-31), but also, to a lesser extent, in Goose Lake Central Basin and its outflow to Propeller Lake. Specific conductivity also increased after September 2023 in under-ice conditions in West Bay (BRP-29), and in the main basin and southeast area of Goose Lake; however, no under-ice stream data were available to trace whether a different source may be contributing to increases in winter. Seasonal variability may contribute to some of the increase in under-ice specific conductivity in Goose Lake as seasonal increases also occurred in Reference B Lake (average specific conductivity in April 2025 = 68 µS/cm and in September 2025 = 32 µS/cm; Appendix D, Table D-3).



Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions.

Figure F3-1: Specific Conductivity in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025

F4.1.1 Nitrate

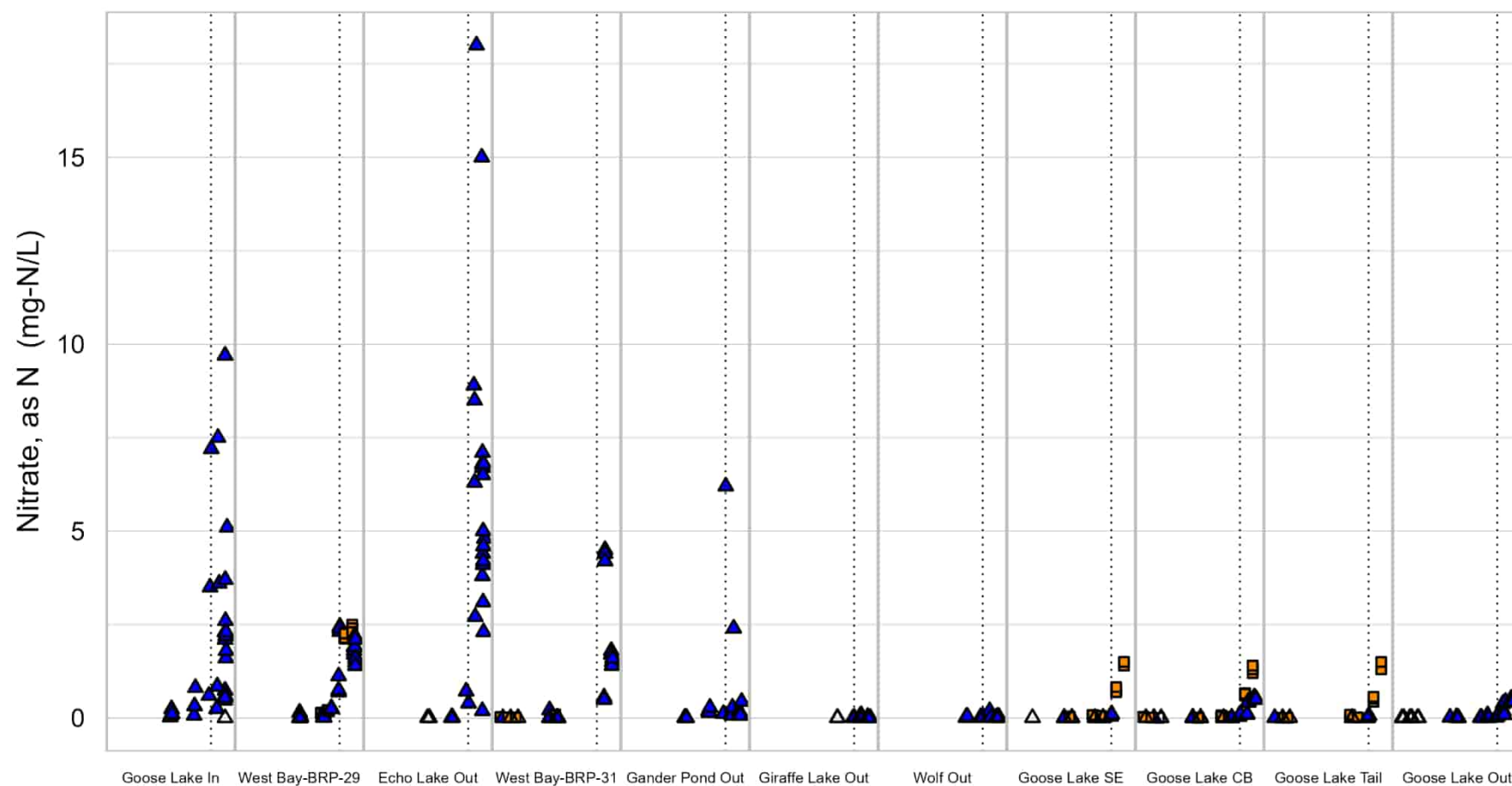
An overview of spatial trends for nitrate indicate that nitrate concentrations have been highest in the two most western inflows to Goose Lake: the inflow from Llama and Umwelt lakes and the inflow from Echo Lake (Figure F3-2). The increase in concentration in these streams coincides with an increase in concentration at both locations in Goose Lake West Bay (BRP-29 and BRP-31) but also, to a lesser extent, in Goose Lake Central Basin and its outflow to Propeller Lake. Nitrate concentrations also increased after September 2023 in under-ice conditions in West Bay (BRP-29), and in the main basin and southeast area of Goose Lake; however, no under-ice stream data were available to trace the likely source of the increase. Seasonal variability may contribute to some of the increase in under-ice nitrate concentrations in Goose Lake as seasonal increases also occurred in Reference B Lake (average nitrate concentration in April 2025 = 0.024 mg-N/L and in September 2025 = 0.0027 mg-N/L; Appendix D, Table D-3).

These results are consistent with those presented in the 2024 AEMP report (WSP 2025), which presented nitrate concentrations in the stream flowing into West Bay from Llama and Umwelt lakes (at BRP-18) greater than 2.5 mg-N/L in 2023 and 2024, and greater than 7.5 mg-N/L in 2024 in the stream flowing from Echo Lake (at BRP-19). Nitrate concentrations in Gander Pond were also occasionally greater than 2.0 mg-N/L in September 2023 and 2024. In 2025, high nitrate concentrations were measured in streams flowing into Goose Lake West Bay (WSP 2026).

The samples collected in June targeted different areas to potentially locate potential source(s) of elevated nitrate. Concentrations were lowest (below detection limit) at INV-01 and were less than 1.0 mg-N/L in samples flanking the haul road (i.e., INV-05, located upstream of the haul road and samples INV-03 and INV-04, located downstream of the haul road). These results indicate that although nitrate concentrations immediately downstream of the haul were greater than those measured in Reference B Lake, they do not appear to explain the large increase in concentrations (i.e., greater than 1.25 mg-N/L) measured in West Bay in 2025.

Nitrate concentrations increased in water flowing in the bedrock valley leading to Goose Lake West Bay, between the haul road and the lake inlet (i.e., between INV-03/INV-04 and INV-07, where nitrate concentrations were 0.60 mg-N/L downstream of the haul road and 2.1 mg-N/L at INV-07, near the downstream end of the channel, prior to flowing into Goose Lake; Table F3-1). Nitrate concentrations in the isolated pool north of the channel (i.e., INV-06), had a nitrate concentration of 9.7 mg-N/L, and may represent a source of nitrate entering Goose Lake when connected (i.e., flowing) to the main BRP-18 channel (e.g., during freshet and precipitation events). However, the impact from this isolated pool on Goose Lake's water quality likely depended on how much water could flow from this pool into Goose Lake and how much precipitation, dilution, and biochemical processes may be influencing the relative contribution from this input.

Results indicate that nitrate concentrations in inflows from Echo Lake and Llama and Umwelt lakes, and to a lesser degree Gander Pond, may have contributed to the increase in nitrate measured in Goose Lake West Bay between 2023 and 2025, with the inlet from Echo Lake contributing the greatest concentrations of nitrate to Goose Lake in 2025. Within Goose Lake, the largest increase occurred in West Bay; however, concentrations also increased in Goose Lake Central Basin and its outflow to Propeller Lake.

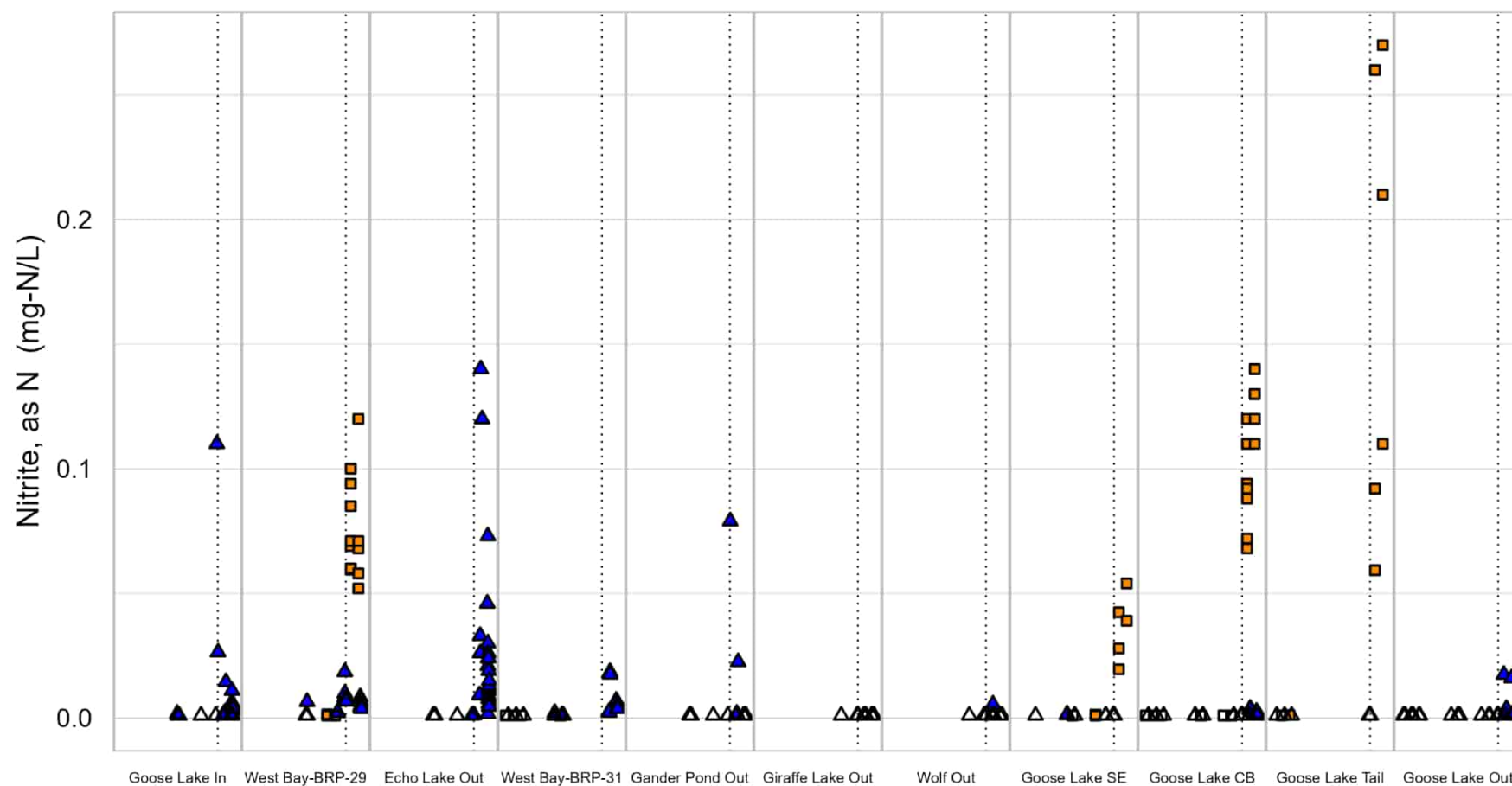


Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-2: Nitrate Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025

F4.1.2 Nitrite

Nitrite exceeded the Low Action Level in April 2025 based on under-ice concentrations in West Bay and Central Basin. Spatial trends differed slightly from those observed for nitrate, as nitrite concentrations were generally similar in Goose Lake (i.e., West Bay, Central Basin and Tail), with some concentrations above 0.2 mg-N/L in 2024 and 2025 in the Tail area (Figure F3-3). Baseline nitrite concentrations were generally below the detection limit. The source(s) contributing to the increase in nitrate and nitrite are likely related, with under-ice nitrogen cycling contributing to differences in nitrogen species between areas and between seasons. In open-water conditions, inflow from Echo Lake, and, to a lesser degree, inflow from Llama and Umwelt Lakes likely contributed to elevated nitrite concentrations in Goose Lake West Bay.

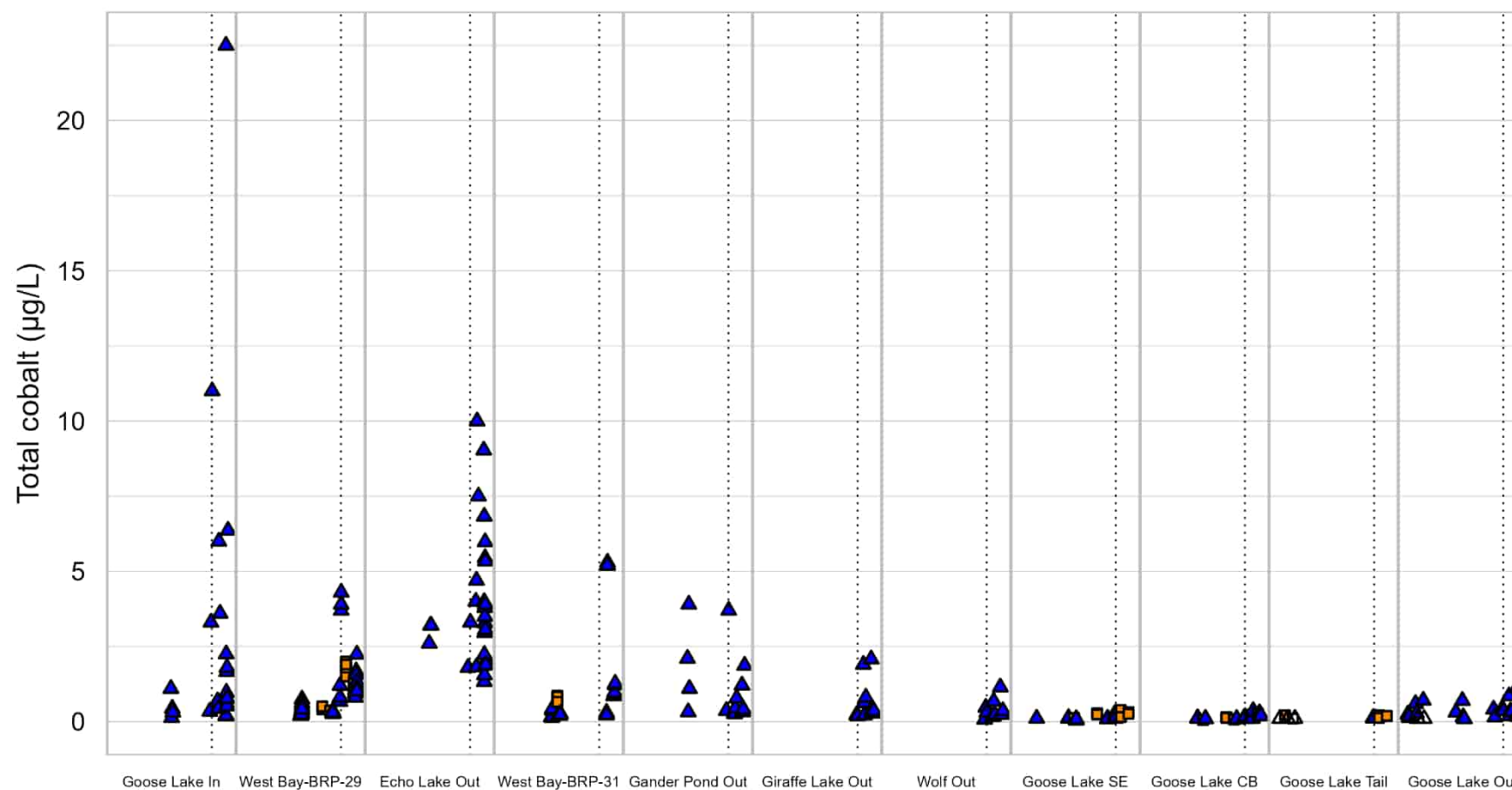


Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-3: Nitrite Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025

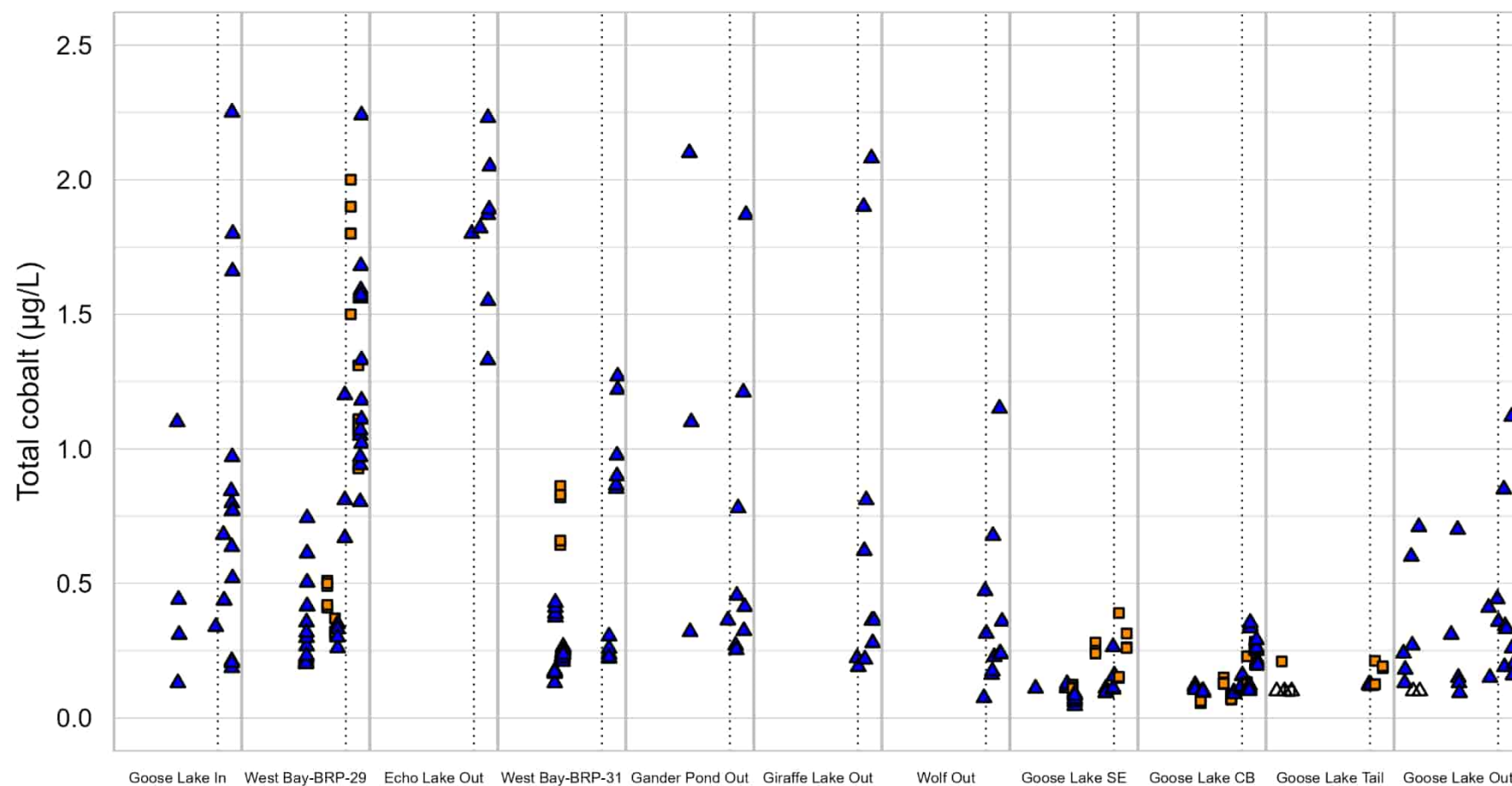
F4.1.3 Cobalt

Spatial and temporal trends for cobalt were similar to those described for nitrate, where concentrations were highest in the two most western inflows to Goose Lake, the inflow from Llama and Umwelt Lakes and the inflow from Echo Lake (Figures F3-4 to F3-7). The increase in concentration in these streams coincides with an increase in concentration at both locations in Goose Lake West Bay (BRP-29 and BRP-31). The increase in cobalt concentrations in Goose Lake Central Basin is only visible upon reduction of y-axis range (Figures F3-5 and F3-7), and although most concentrations after September 2023 in the Goose Lake outflow were similar to baseline concentrations, concentrations in two samples (i.e., May 2024 and 2025) were slightly greater than baseline concentrations. Cobalt concentrations also increased after September 2023 in under-ice conditions in West Bay (BRP-29), and Goose Lake Main Basin. No under-ice stream data were available to assess whether additional sources may be contributing to the increase in under-ice cobalt concentrations, however seasonal variability may contribute to some of the increase as seasonal increases also occurred in Reference B Lake (average total cobalt concentration in April 2025 = 0.31 µg/L and in September 2025 = 0.052 µg/L; Appendix D, Table D-3).



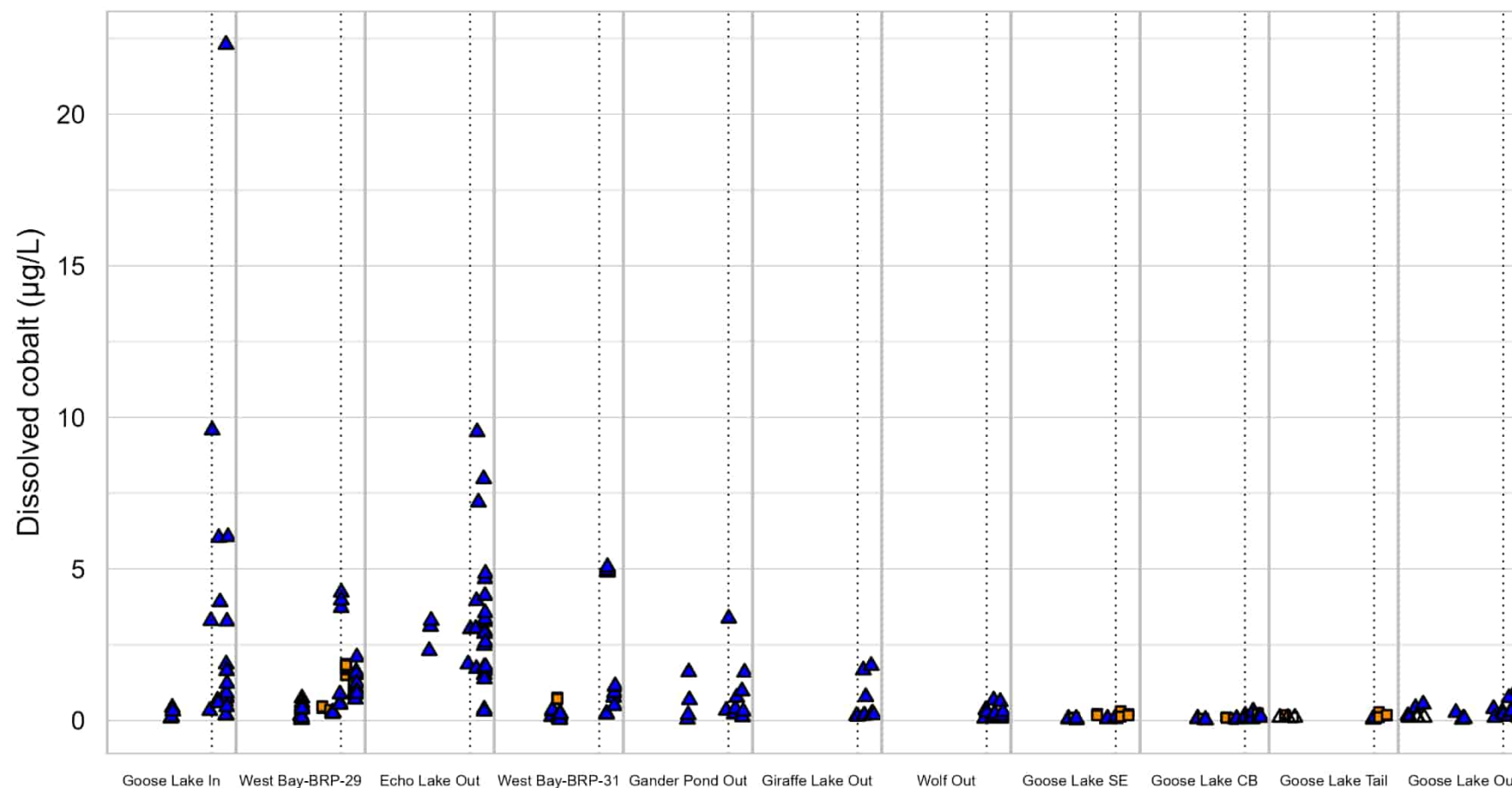
Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-4: Total Cobalt Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025



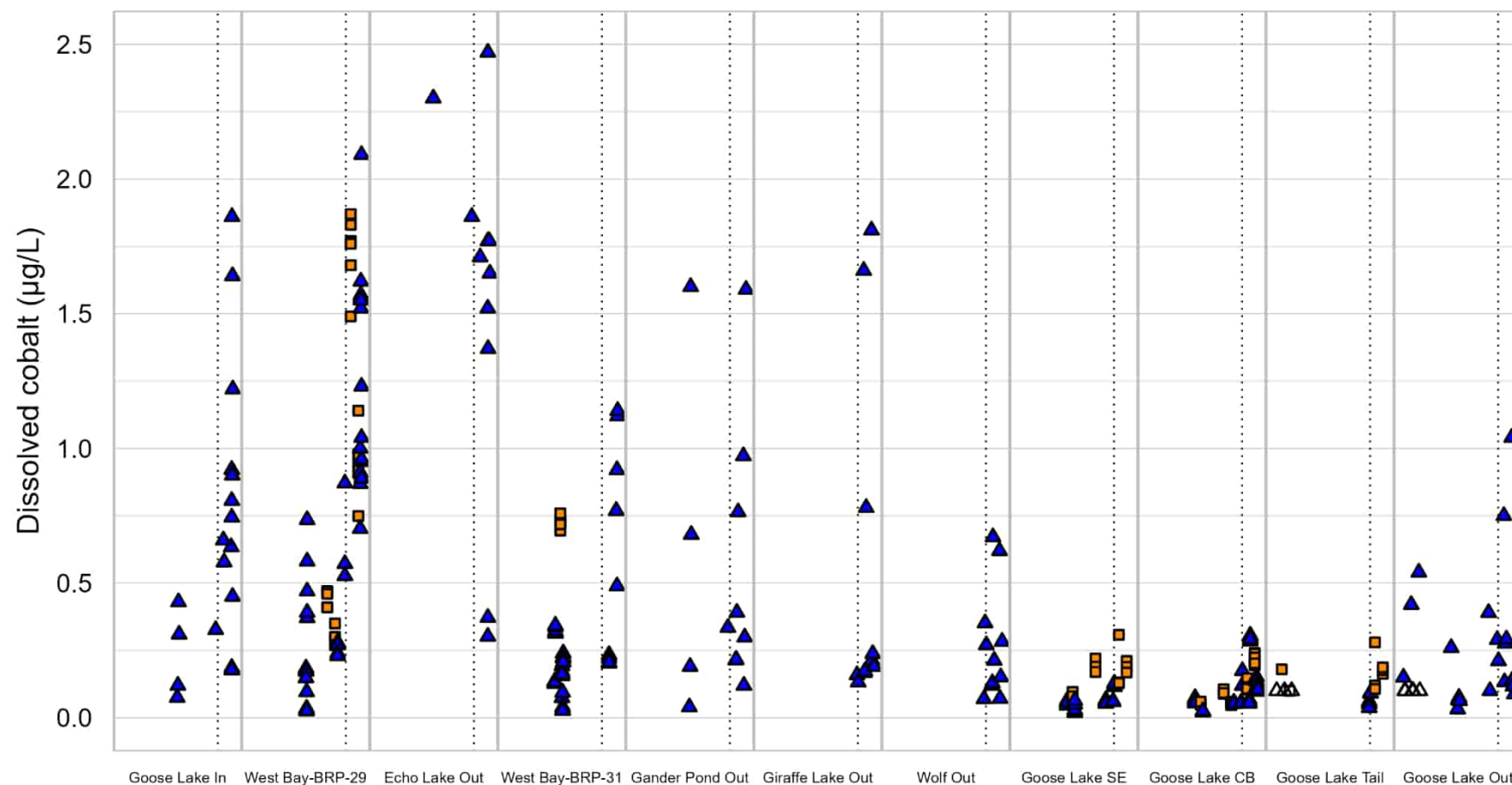
Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-5: Total Cobalt Concentrations, Truncated to 2.5 µg/L, to Better Present Data in Central Basin, in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025



Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-6: Dissolved Cobalt Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025



Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

Figure F3-7: Dissolved Cobalt Concentrations, Truncated to 2.5 µg/L, to Better Present Data in Central Basin, in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025

F5. SUMMARY AND CONCLUSIONS

The focus of the investigation was to identify factors from the Project that may have contributed to the increase in nitrate, nitrite, and total and dissolved cobalt concentrations in Goose Lake. This investigation used parameter concentrations as an indicator of potential sources.

Investigative sampling in June suggest that two main areas are likely influencing water quality in Goose Lake: water flowing to Goose Lake from the Echo Lake area, and water flowing into Goose Lake from Llama and Umwelt lakes, downstream of the haul road. Spatial and temporal plots indicate that concentrations were highest in two streams flowing into West Bay (i.e., the inflow from Llama and Umwelt Lakes and the inflow from Echo Lake) after September 2023 compared to baseline.

These results do not take into consideration the quantity of water, and thus loading, from each of these streams. While the data present the concentrations of these parameters in the streams, they do not reflect the total amount of these substances being transported into or out of Goose Lake. The actual impact on lake water quality depends not only on concentration, but also on the volume of water flowing from each source. High concentrations in a stream with low flow may contribute less to overall loading than lower concentrations in a stream with greater flow. Without assessing both concentration and flow rate, it is difficult to accurately determine the relative contributions of each stream to changes in the lake.

Contact water, seepage and/or runoff flowing into these streams appear to be the likely source of increased parameter concentrations in Goose Lake in 2024 and 2025, particularly from the inflow from Echo Lake, and the inflow from Llama and Umwelt Lakes, between the haul road and the lake inlet.

F6. REFERENCES

- B2Gold Nunavut (B2Gold Back River Corp.). 2025. Back River Project Aquatic Effects Management Plan. Version 2.1. December 2025.
- Golder (Golder Associates Ltd.). 2019. Sabine Gold & Silver Corp. Back River Project – Aquatic Baseline Synthesis Report. Appendix A to the Aquatic Effects Management Plan. Golder Document No. 18114181-047-RPT-Rev0. July 2019.
- WSP Golder (Golder Associates Ltd., a member of WSP). 2022. Sabina Gold & Silver Corp. Back River Project - 2021 Aquatic Baseline Report. WSP Document No. 21505757-116-R-Rev0-17000. June 2022.
- WSP (WSP Canada Ltd). 2023. Sabina Gold & Silver Corp. Back River Project - 2022 Aquatic Baseline Report. WSP Document No. 21505757-132-R-Rev0-17000. March 2023.
- WSP. 2024. B2Gold Back River Project - 2023 Surface Water Quality Report. WSP Document No. 22567625-151-R-Rev0-10000. April 2024.
- WSP. 2025. B2Gold Back River Project - 2024 Surface Water Quality Report. Submitted to B2Gold Back River Corp. WSP Document No. CA0035158.8381-180-Rev0-11000. March 2025.
- WSP. 2026. B2Gold Back River Project - 2025 Stream Water Quality Report. Submitted to B2Gold Back River Corp. WSP Document No. CA0054386.2807-196-R-Rev0-5000. January 2026.

ATTACHMENT F1

Tables

Table F1-1: Field Blank and Duplicate Results, 2025

Parameter	Unit	Detection Limit	Field Blank	INV-07		Duplicate Relative Percent Difference (%)
			INV-10	Sample	Duplicate	
			22-Jun-25	22-Jun-25	22-Jun-25	
Conventional Parameters						
pH ^(a)	-	-	5.5	6.3	6.3	0.0
Specific conductivity	µS/cm	2.0	<2.0	120	120	0.0
Hardness, as CaCO ₃	mg/L	0.50	<0.50	46	46	0.0
Total alkalinity, as CaCO ₃	mg/L	0.50	<0.50	3.2	3.0	6.5
Total dissolved solids (measured)	mg/L	10	<10	76	72	5.4
Total suspended solids	mg/L	0.99 - 1.0	<1.0	<1.0	<0.99	-
Turbidity	NTU	0.10	<0.10	<0.10	<0.10	-
Major Ions						
Calcium	mg/L	0.0020	0.0039	10.0	10	1.0
Chloride	mg/L	0.50	<0.50	11	11	0.0
Fluoride	mg/L	0.010	<0.010	0.019	0.020	-
Magnesium	mg/L	0.00050	<0.00050	5.1	5.0	1.2
Potassium	mg/L	0.0050	<0.0050	1.3	1.3	2.3
Sodium	mg/L	0.00050	0.00059	2.5	2.5	0.0
Sulphate	mg/L	0.50	<0.50	26	26	0.0
Cyanide						
Total cyanide	mg/L	0.00050	<0.00050	0.0020	0.0020	-
Cyanide (free)	mg/L	0.00050	<0.00050	0.0010	0.0010	-
Cyanide (WAD)	mg/L	0.00050	<0.00050	0.0015	0.0013	-
Nutrients						
Nitrate, as N	mg-N/L	0.0030	0.0038	2.1	2.1	0.0
Nitrite, as N	mg-N/L	0.0010	<0.0010	0.003	0.003	-
Total ammonia	mg-N/L	0.0050	<0.0050	0.083	0.083	0.0
Un-Ionized ammonia	mg/L	0.00050	-	<0.00050	<0.00050	-
Total Kjeldahl nitrogen	mg-N/L	0.020	<0.020	<0.20	<0.20	-
Total nitrogen	mg-N/L	0.020	<0.020	2.3	2.3	0.0
Total phosphorus	mg-P/L	0.0010	<0.0010	<0.0010	<0.0010	-
Dissolved phosphorus	mg-P/L	0.0010	<0.0010	<0.0010	<0.0010	-
Total organic carbon	mg/L	0.50	<0.50	3.2	3.0	6.5
Dissolved organic carbon	mg/L	0.50	<0.50	3.4	3.6	5.7
Reactive silica	mg/L	0.05	0.13	1.1	1.1	0.0
Total Metals						
Aluminum	µg/L	0.10	<0.10	35	36	2.8
Arsenic	µg/L	0.0050	<0.0050	0.25	0.26	2.3
Barium	µg/L	0.0080	<0.0080	18	18	0.6
Cadmium	µg/L	0.0030	<0.0030	0.027	0.026	2.7

Table F1-1: Field Blank and Duplicate Results, 2025

Parameter	Unit	Detection Limit	Field Blank	INV-07		Duplicate Relative Percent Difference (%)
			INV-10	Sample	Duplicate	
			22-Jun-25	22-Jun-25	22-Jun-25	
Chromium	µg/L	0.020	<0.020	0.17	0.19	11.4
Cobalt	µg/L	0.0040	<0.0040	0.77	0.77	0.3
Copper	µg/L	0.020	<0.020	2.8	2.8	0.4
Iron	µg/L	1.0	<1.0	9.9	9.6	3.1
Lead	µg/L	0.0030	<0.0030	0.0062	0.0073	-
Manganese	µg/L	0.0040	0.025	16	16	0.6
Mercury	µg/L	0.00010	<0.00010	0.0018	0.0019	7.0
Molybdenum	µg/L	0.0050	<0.0050	0.015	0.015	-
Nickel	µg/L	0.0150	<0.015	7.8	7.9	1.3
Selenium	µg/L	0.010	<0.010	0.043	0.073	-
Silver	µg/L	0.0020	<0.0020	<0.0020	<0.0020	-
Strontium	µg/L	0.0080	0.014	50	50	1.6
Thallium	µg/L	0.00080	<0.00080	0.0046	0.0050	8.4
Uranium	µg/L	0.00050	<0.00050	0.012	0.014	14.9
Vanadium	µg/L	0.0050	<0.0050	0.021	0.023	-
Zinc	µg/L	0.060	<0.060	2.8	2.8	0.7

Table F1-1: Field Blank and Duplicate Results, 2025

Parameter	Unit	Detection Limit	Field Blank	INV-07		Duplicate Relative Percent Difference (%)
			INV-10	Sample	Duplicate	
			22-Jun-25	22-Jun-25	22-Jun-25	
Dissolved Metals						
Aluminum	µg/L	0.10	0.12	34	33	3.0
Arsenic	µg/L	0.0050	<0.0050	0.25	0.25	0.0
Barium	µg/L	0.0080	<0.0080	17	18	2.8
Cadmium	µg/L	0.0030	<0.0030	0.026	0.025	3.1
Chromium	µg/L	0.020	<0.020	0.21	0.18	18.5
Cobalt	µg/L	0.0040	<0.0040	0.74	0.74	0.3
Copper	µg/L	0.020	<0.020	2.7	2.8	3.0
Iron	µg/L	1.0	<1.0	2.0	2.0	-
Lead	µg/L	0.0030	<0.0030	0.0045	0.0035	-
Manganese	µg/L	0.0040	<0.0040	15	15	0.7
Mercury	µg/L	0.00010	<0.00010	0.0016	0.0018	9.6
Molybdenum	µg/L	0.0050	<0.0050	0.015	0.018	-
Nickel	µg/L	0.015	<0.015	8.0	8.1	1.5
Selenium	µg/L	0.010	<0.010	0.058	0.054	7.1
Silver	µg/L	0.0020	<0.0020	0.0028	0.0027	-
Strontium	µg/L	0.0080	<0.0080	49	51	2.4
Thallium	µg/L	0.00080	<0.00080	0.0050	0.0043	14.9
Uranium	µg/L	0.00050	<0.00050	0.011	0.010	7.0
Vanadium	µg/L	0.0050	<0.0050	0.025	0.023	-
Zinc	µg/L	0.060	<0.060	2.7	2.7	2.2

Note: Values greater than five times the method detection limit are shown in bold.

(a) The data quality objective for pH is a difference between duplicates less than 0.3 pH units; the value reported represents the pH value difference.

mg-N/L = milligrams per litre as nitrogen; mg-P/L = milligrams per litre as phosphorus; WAD = weak acid dissociable; - = not calculated.

Table F1-2: Water Quality Results for Investigation Stations, June 2025

Parameter	Unit	Detection Limits	INV-01 22-Jun-25	INV-02 22-Jun-25	INV-03 22-Jun-25	INV-04 22-Jun-25	INV-05 22-Jun-25	INV-06 22-Jun-25	INV-07 22-Jun-25	INV-09 22-Jun-25
Field measured										
pH	-	-	7.2	6.3	6.2	6.2	6.3	5.3	6.2	6.6
Specific conductivity	µS/cm	-	60	222	64	63	63	710	119	87
Temperature	°C	-	7.5	9.4	6.0	5.8	6.8	5.8	7.1	15.6
Dissolved oxygen	%	-	73	81	82	82	74	62	96	68
Oxidation reduction potential	mV	-	-12	72	74	85	8.4	75	80	53
Turbidity	NTU	-	3.5	6.9	5.5	8.3	3.7	10	4.9	16
Conventional Parameters										
pH	-		6.3	6.6	6.4	6.4	6.4	5.9	6.3	6.7
Specific conductivity	µS/cm	2.0	43	240	67	63	61	750	120	85
Hardness, as CaCO ₃	mg/L	0.50	18	74	26	24	23	314	46	36
Total alkalinity, as CaCO ₃	mg/L	0.50	3.2	7.6	5.1	4.7	4.4	1.5	3.2	11
Total dissolved solids (measured)	mg/L	10	44	160	40	40	36	490	76	88
Total suspended solids	mg/L	0.99 - 1.0	<1	<1	2.2	1.8	<1	<0.99	<1	<1
Turbidity	NTU	0.10	<0.1	2.6	0.12	<0.1	<0.1	0.14	<0.1	5.2
Major Ions										
Calcium	mg/L	0.0020	3.3	14	5.0	4.9	4.6	71	10.0	6.0
Chloride	mg/L	0.50	<0.5	20	4.1	3.4	2.9	98	11	4.2
Fluoride	mg/L	0.010	0.019	0.039	0.018	0.021	0.018	0.020	0.019	0.033
Magnesium	mg/L	0.00050	2.4	9.5	3.2	2.9	2.8	33	5.1	5.0
Potassium	mg/L	0.0050	0.35	3.3	0.72	0.64	0.61	5.4	1.3	1.6
Sodium	mg/L	0.00050	0.90	2.7	1.7	1.5	1.5	6.4	2.5	2.2
Sulphate	mg/L	0.50 - 2.5	13	45	15	15	14	170	26	18
Cyanide										
Total cyanide	mg/L	0.00050	0.00059	0.0019	0.00060	<0.0005	<0.0005	0.0044	0.0020	0.0011
Cyanide (free)	mg/L	0.00050	0.00067	0.0011	<0.0005	<0.0005	<0.0005	0.0041	0.0010	0.00073
Cyanide (WAD)	mg/L	0.00050	0.00060	0.0013	0.00055	<0.0005	<0.0005	0.0041	0.0015	0.00063
Nutrients										
Nitrate, as N	mg-N/L	0.0030 - 0.40	<0.003	6.8	0.74	0.60	0.54	9.7	2.1	0.19
Nitrite, as N	mg-N/L	0.0010	<0.001	0.026	<0.001	<0.001	<0.001	0.0063	0.0030	0.0017
Total ammonia	mg-N/L	0.0050 - 0.025	<0.005	3.5	<0.005	<0.005	<0.005	0.55	0.083	0.072
Un-ionized ammonia	mg/L	0.00050	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Kjeldahl nitrogen	mg-N/L	0.020 - 0.40	0.28	4.3	0.17	0.17	0.14	<0.4	<0.2	0.80
Total nitrogen	mg-N/L	0.020 - 0.20	0.28	11	0.91	0.77	0.68	9.4	2.3	0.99
Total phosphorus	mg-P/L	0.0010	0.0032	0.0026	<0.001	<0.001	<0.001	0.0023	<0.001	0.017
Dissolved phosphorus	mg-P/L	0.0010	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0084
Total organic carbon	mg/L	0.50	6.6	10.0	3.2	3.0	3.3	11	3.2	14
Dissolved organic carbon	mg/L	0.50	7.6	10.0	3.2	3.0	3.0	11	3.4	13
Reactive silica	mg/L	0.050 - 0.10	2.9	2.2	0.89	0.73	0.85	6.9	1.1	4.0
Total Metals										
Aluminum	µg/L	0.10	117	139	52	37	74	192	35	191
Arsenic	µg/L	0.0050	1.6	0.92	2.8	0.70	0.27	0.57	0.25	3.8
Barium	µg/L	0.0080	6.3	29	10	10	12	75	18	20
Cadmium	µg/L	0.0030	0.011	0.026	0.011	0.0070	0.0093	0.14	0.027	0.021
Chromium	µg/L	0.020	0.32	0.58	0.16	0.12	0.27	0.30	0.17	0.92
Cobalt	µg/L	0.0040	0.21	1.3	0.80	0.19	0.21	23	0.77	6.8
Copper	µg/L	0.020	4.3	5.4	2.7	2.4	2.5	8.4	2.8	4.9
Iron	µg/L	1.0	89	206	45	23	90	105	9.9	2,410

Table F1-2: Water Quality Results for Investigation Stations, June 2025

Parameter	Unit	Detection Limits	INV-01	INV-02	INV-03	INV-04	INV-05	INV-06	INV-07	INV-09
			22-Jun-25	22-Jun-25	22-Jun-25	22-Jun-25	22-Jun-25	22-Jun-25	22-Jun-25	22-Jun-25
Lead	µg/L	0.0030	0.034	0.090	0.30	0.021	0.028	0.062	0.0062	0.18
Manganese	µg/L	0.0040	2.8	21	6.2	1.3	1.7	417	16	99
Mercury	µg/L	0.00010	0.00465	0.00389	0.00304	0.00194	0.00227	0.00299	0.00178	0.01370
Molybdenum	µg/L	0.0050	0.025	0.17	0.044	0.019	0.017	0.054	0.015	0.12
Nickel	µg/L	0.015	8.8	18	7.0	4.3	4.1	26	7.8	12
Selenium	µg/L	0.010	0.025	0.17	<0.01	0.023	0.010	0.37	0.043	0.053
Silver	µg/L	0.0020	<0.002	<0.002	<0.002	<0.002	<0.002	0.046	<0.002	0.0033
Strontium	µg/L	0.0080	12	63	23	22	21	241	50	29
Thallium	µg/L	0.00080	0.0027	0.013	0.0048	0.0020	0.0035	0.033	0.0046	0.011
Uranium	µg/L	0.00050	0.034	0.050	0.033	0.013	0.017	0.047	0.012	0.061
Vanadium	µg/L	0.0050	0.057	0.21	0.073	0.038	0.11	0.14	0.021	1.2
Zinc	µg/L	0.060	1.6	5.1	85	1.1	1.4	13	2.8	2.1
Dissolved Metals										
Aluminum	µg/L	0.10	113	98	34	33	35	181	34	142
Arsenic	µg/L	0.0050	1.6	0.86	2.8	0.70	0.25	0.53	0.25	3.1
Barium	µg/L	0.0080	6.2	28	10.0	10	10	75	17	18
Cadmium	µg/L	0.0030	0.013	0.024	0.0096	0.010	0.0089	0.13	0.026	0.010
Chromium	µg/L	0.020	0.26	0.47	0.10	0.10	0.098	0.24	0.21	0.77
Cobalt	µg/L	0.0040	0.19	0.37	0.81	0.18	0.18	22	0.74	0.30
Copper	µg/L	0.020	4.1	5.0	2.6	2.4	2.3	8.1	2.7	4.2
Iron	µg/L	1.0	17	39	11	5.9	4.6	46	2.0	1,510
Lead	µg/L	0.0030	0.012	0.018	0.070	0.010	0.0090	0.050	0.0045	0.086
Manganese	µg/L	0.0040	2.3	7.2	6.0	1.3	1.3	408	15	0.57
Mercury	µg/L	0.00010	0.0051	0.0044	0.0029	0.0024	0.0028	0.0028	0.0016	0.012
Molybdenum	µg/L	0.0050	0.025	0.17	0.034	0.017	0.012	0.049	0.015	0.11
Nickel	µg/L	0.015	8.7	18	7.1	4.4	4.1	26	8.0	11
Selenium	µg/L	0.010	0.030	0.13	0.027	0.024	0.019	0.41	0.058	0.077
Silver	µg/L	0.0020	<0.002	0.0030	<0.002	<0.002	0.0031	0.014	0.0028	0.0032
Strontium	µg/L	0.0080	12	62	23	22	21	238	49	28
Thallium	µg/L	0.00080	0.0035	0.011	0.0056	0.0030	0.0024	0.033	0.0050	0.011
Uranium	µg/L	0.00050	0.029	0.044	0.029	0.011	0.011	0.040	0.011	0.052
Vanadium	µg/L	0.0050	0.054	0.11	0.042	0.032	0.030	0.12	0.025	0.76
Zinc	µg/L	0.060	1.5	4.6	82	1.0	1.1	12	2.7	1.3

mg-N/L = milligrams per litre as nitrogen; mg-P/L = milligrams per litre as phosphorus; WAD = weak acid dissociable; - = no units or not applicable.

Table F1-3: Water Quality Results from Operational Sampling of BRP-18, 2024 and 2025

Report type	Customized report											
Client	b2gold_back											
Project	b2gold_back											
Date	-	-	25-May-2024	26-Jun-2024	21-Jun-2025	03-Jul-2025	13-Jul-2025	27-Jul-2025	29-Jul-2025	07-Aug-2025	10-Aug-2025	
Time	-	-	12:40:00	-	11:00:00	14:30:00	11:00:00	13:40:00	09:10:00	09:00:00	13:50:00	
Station	-	-	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	
Lab Job Number	-	-	YL2400500	YL2400770	C557592	C560106	C562712	C566053	C566779	C568801	C569351	
Sample ID	-	-	YL2400500-002	YL2400770-002	DNX339	DOM061	DPC333	DPW663	DQA914	DQM801	DQP999	
Sample Type	-	-	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	
Depth/Height (m)	-	-										
Datum	-	-	-	-	-	-	-	-	-	-	-	
Display Name	Lowest Detection Limit	Unit										
Alkalinity (PP as CaCO ₃)	0.5	mg/L	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Alkalinity (total as CaCO ₃)	0.5	mg/L	4.3	4.5	4.1	3.69	4.52	4.06	3.49	3.44	2.69	
Alkalinity, bicarbonate (as CaCO ₃)	1	mg/L	4.3	4.5								
Alkalinity, carbonate (as CaCO ₃)	1	mg/L	1	1								
Alkalinity, hydroxide (as CaCO ₃)	1	mg/L	1	1								
Aluminum (Al)-Dissolved	0.0001	mg/L	0.0374	0.0179	0.043	0.0592	0.0342	0.0224	0.027	0.0598	0.0351	
Aluminum (Al)-Total	0.0001	mg/L	0.0568	0.0184	0.0394	0.0833	0.0389	0.0309	0.0284	0.0311	0.0541	
Ammonia (N)-Total	0.005	mg/L	0.0607	0.0083	0.14	1.3	0.088	0.23	0.005	0.05	0.18	
Antimony (Sb)	0.003	mg/kg			0.0185			0.0179				
Antimony (Sb)-Dissolved	0.000003	mg/L	0.0000105	0.0000101	0.000022	0.0005	0.0005	0.0000184	0.0005	0.0005	0.0005	
Antimony (Sb)-Total	0.000005	mg/L	0.0000116	0.0000114		0.0005	0.0005		0.0005	0.0005	0.0005	
Arsenic (As)	0.005	mg/kg			0.29			0.269				
Arsenic (As)-Dissolved	0.000005	mg/L	0.000292	0.00018	0.000264	0.00034	0.0003	0.00026	0.00027	0.00033	0.00031	
Arsenic (As)-Total	0.00001	mg/L	0.00032	0.000187		0.00041	0.00033		0.0003	0.00032	0.00035	
Barium (Ba)	0.008	mg/kg			17.4			22.5				
Barium (Ba)-Dissolved	0.000008	mg/L	0.00989	0.0162	0.0175	0.0248	0.0262	0.0218	0.0196	0.0382	0.0214	
Barium (Ba)-Total	0.00002	mg/L	0.0102	0.0155		0.0292	0.0269		0.0195	0.0215	0.0261	
Beryllium (Be)	0.0015	mg/kg			0.0052			0.004				
Beryllium (Be)-Dissolved	0.0000015	mg/L	0.0000052	0.0000046	0.0000067	0.0001	0.0001	0.0000045	0.0001	0.0001	0.0001	
Beryllium (Be)-Total	0.000002	mg/L	0.0000058	0.0000049		0.0001	0.0001		0.0001	0.0001	0.0001	
Bicarbonate (HCO ₃)	0.5	mg/L			5	4.5	5.51	4.95	4.25	4.2	3.28	
Bismuth (Bi)-Dissolved	0.000001	mg/L	0.000001	0.000001	0.000001	0.001	0.001	0.000001	0.001	0.001	0.001	
Bismuth (Bi)-Total	0.000001	mg/L	0.000001	0.000001	0.000001	0.001	0.001	0.000001	0.001	0.001	0.001	
Boron (B)-Dissolved	0.0001	mg/L	0.005	0.005	0.00316	0.05	0.05	0.00339	0.05	0.05	0.05	
Boron (B)-Total	0.0001	mg/L	0.005	0.005	0.0028	0.05	0.05	0.00375	0.05	0.05	0.05	
Bromide	0.05	mg/L	0.05	0.05								
Cadmium (Cd)	0.003	mg/kg			0.0269			0.0344				
Cadmium (Cd)-Dissolved	0.0000025	mg/L	0.0000184	0.0000247	0.000025	0.000038	0.000052	0.0000301	0.000034	0.000106	0.000041	
Cadmium (Cd)-Total	0.0000025	mg/L	0.00002	0.0000218		0.000066	0.000053		0.000041	0.000036	0.000055	
Calcium (Ca)-Dissolved	0.002	mg/L	4.54	8.82	9.83	9.48	9.92	12.8	8.66	14.5	9.09	
Calcium (Ca)-Total	0.002	mg/L	4.76	9.1	9.36	11.3	9.93	13.3	9.04	9.23	9.89	
Carbon, dissolved organic [DOC]-Dissolved	0.5	mg/L	6.08	4.72								
Carbon, total organic [TOC]-Total	0.5	mg/L	6.61	2.91								
Carbonate (CO ₃)	0.5	mg/L			0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Cesium (Cs)-Dissolved	0.000005	mg/L	0.0000098	0.0000106								
Cesium (Cs)-Total	0.000005	mg/L	0.0000113	0.00001								
Chloride (Cl)-Dissolved	0.5	mg/L	6.5	13.7	9.9	7.2	8.1	16	9.8	9.6	11	
Chromium (Cr)-Dissolved	0.00002	mg/L	0.000132	0.000154	0.000299	0.001	0.001	0.00021	0.001	0.001	0.001	
Chromium (Cr)-Total	0.00004	mg/L	0.000186	0.000137		0.001	0.001		0.001	0.001	0.001	
Chromium (Cr)-Total	0.02	mg/kg			0.232			0.251				
Cobalt (Co)	0.004	mg/kg			0.636			1.66				
Cobalt (Co)-Dissolved	0.000004	mg/L	0.000659	0.000578	0.000921	0.00186	0.0009	0.00164	0.00045	0.00327	0.00122	
Cobalt (Co)-Total	0.000005	mg/L	0.000681	0.000437		0.00225	0.00097		0.00052	0.00077	0.0018	
Conductivity	1	µS/cm	57.2	97.8	130	149	128	160	116	123	139	
Copper (Cu)	0.02	mg/kg			2.67			2.42				
Copper (Cu)-Dissolved	0.00002	mg/L	0.00204	0.00182	0.00267	0.00313	0.00242	0.00228	0.0024	0.00318	0.00262	
Copper (Cu)-Total	0.00005	mg/L	0.00223	0.0019		0.00346	0.00276		0.0026	0.00274	0.00318	
Cyanide (CN)-Free	0.0005	mg/L	0.005	0.005	0.00097	0.00181	0.0016	0.0017	0.0007	0.00074	0.0011	
Cyanide (CN)-Strong Acid Dissoc.	0.0005	mg/L	0.005	0.005	0.00249	0.0049	0.00327	0.00282	0.0011	0.00112	0.00175	
Cyanide (CN)-Weak Acid Dissoc.	0.0005	mg/L	0.005	0.005	0.00101	0.0032	0.00221	0.00213	0.0007	0.00093	0.00141	
Field Temperature	-	deg. C			5.6	9.3	9.3	8.6	8.9	10.4	13	
Fluoride (F)	0.01	mg/L	0.02	0.023	0.025	0.022	0.025	0.019	0.015	0.022	0.022	
Gallium (Ga)-Dissolved	0.00005	mg/L	0.00005	0.00005								
Gallium (Ga)-Total	0.00005	mg/L	0.00005	0.00005								
Hardness (CaCO ₃)-Dissolved	0.5	mg/L	19.4	36.4	45.9	48.3	49.5	61.2	43.3	72.2	45	

Table F1-3: Water Quality Results from Operational Sampling of BRP-18, 2024 and 2025

Report type	Customized report										
Client	b2gold_back										
Project	b2gold_back										
Date	-	-	25-May-2024	26-Jun-2024	21-Jun-2025	03-Jul-2025	13-Jul-2025	27-Jul-2025	29-Jul-2025	07-Aug-2025	10-Aug-2025
Time	-	-	12:40:00	-	11:00:00	14:30:00	11:00:00	13:40:00	09:10:00	09:00:00	13:50:00
Station	-	-	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18
Lab Job Number	-	-	YL2400500	YL2400770	C557592	C560106	C562712	C566053	C566779	C568801	C569351
Sample ID	-	-	YL2400500-002	YL2400770-002	DNX339	DOM061	DPC333	DPW663	DQA914	DQM801	DQP999
Sample Type	-	-	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Depth/Height (m)	-	-	-	-	-	-	-	-	-	-	-
Datum	-	-	-	-	-	-	-	-	-	-	-
Display Name	Lowest Detection Limit	Unit									
Hardness (CaCO ₃)-Total	0.5	mg/L			42	55.9	49	63.2	45.5	45.9	50.1
Hydroxide (OH)	0.5	mg/L			0.5	0.5	0.5	0.5	0.5	0.5	0.5
Iron (Fe)-Dissolved	0.0005	mg/L	0.0262	0.00495	0.0105	0.0186	0.0098	0.0049	0.0083	0.0111	0.0094
Iron (Fe)-Total	0.0005	mg/L	0.0505	0.00599	0.016	0.045	0.016	0.0122	0.01	0.015	0.033
Kjeldahl nitrogen, total [TKN]	0.05	mg/L	0.367	0.258							
Lanthanum (La)-Dissolved	0.00001	mg/L	0.000559	0.00039							
Lanthanum (La)-Total	0.00001	mg/L	0.000577	0.00036							
Lead (Pb)	0.003	mg/kg			0.0136			0.0111			
Lead (Pb)-Dissolved	0.000003	mg/L	0.0000134	0.0000064	0.0000164	0.0002	0.0002	0.0000107	0.0002	0.0002	0.0002
Lead (Pb)-Total	0.000005	mg/L	0.0000299	0.0000167		0.0002	0.0002		0.0002	0.0002	0.0002
Lithium (Li)-Dissolved	0.00005	mg/L	0.00073	0.00119	0.00104	0.002	0.002	0.00142	0.002	0.0021	0.002
Lithium (Li)-Total	0.00005	mg/L	0.00071	0.00117	0.00112	0.002	0.002	0.00141	0.002	0.002	0.002
Magnesium (Mg)-Dissolved	0.0005	mg/L	1.96	3.5	5.2	5.99	6.02	7.1	5.27	8.74	5.42
Magnesium (Mg)-Total	0.0005	mg/L	2.07	3.56	4.53	6.74	5.87	7.3	5.56	5.55	6.16
Manganese (Mn)-Dissolved	0.000004	mg/L	0.0102	0.0113	0.0257	0.0239	0.0203	0.0344	0.0091	0.0726	0.0249
Manganese (Mn)-Total	0.000004	mg/L	0.0105	0.00774	0.0138	0.029	0.0203	0.0353	0.0097	0.0177	0.037
Mercury (Hg)-Dissolved	0.0000001	mg/L	0.00000236	0.00000136	0.00000221	0.0000019	0.0000019	0.00000147	0.0000019	0.0000019	0.0000019
Mercury (Hg)-Total	0.0000001	mg/L	0.00000273	0.00000136	0.00000303	0.0000022	0.0000022	0.00000176	0.0000019	0.0000019	0.0000019
Molybdenum (Mo)	0.005	mg/kg			0.0238			0.0383			
Molybdenum (Mo)-Dissolved	0.000005	mg/L	0.000012	0.000012	0.0000201	0.001	0.001	0.0000368	0.001	0.001	0.001
Molybdenum (Mo)-Total	0.00001	mg/L	0.000016	0.000011		0.001	0.001		0.001	0.001	0.001
Nickel (Ni)	0.015	mg/kg			7.13			11			
Nickel (Ni)-Dissolved	0.000015	mg/L	0.00056	0.00684	0.00758	0.0094	0.0093	0.0108	0.0079	0.0156	0.009
Nickel (Ni)-Total	0.00002	mg/L	0.00585	0.00661		0.0107	0.0097		0.0086	0.0092	0.0116
Niobium (Nb)-Dissolved	0.0001	mg/L	0.0001	0.0001							
Niobium (Nb)-Total	0.0001	mg/L	0.0001	0.0001							
Nitrate (as N)	0.005	mg/L	0.244	0.847	2.3	3.7	2.6	2.2	1.6	1.8	2.3
Nitrate (NO ₃)-Dissolved	0.044	mg/L			10	17	12	9.6	7	8.1	10
Nitrate plus Nitrite (N)	0.01	mg/L			2.3	3.7	2.6	2.2	1.6	1.8	2.3
Nitrite (as N)	0.001	mg/L	0.0012	0.001	0.0016	0.011	0.0037	0.005	0.001	0.001	0.0038
Nitrite (NO ₂)-Dissolved	0.0033	mg/L			0.005	0.036	0.012	0.016	0.0033	0.0033	0.013
Nitrogen (N)-Total	0.02	mg/L			2.2	5.5	2.7	2.2	1.7	2	2.4
Organic Carbon (C)-Dissolved	0.2	mg/L			3.4	3.5	3.1	3.1	3.5	3.3	3.2
Organic Carbon (C)-Total	0.2	mg/L			3.3	3.7	3.7	3.6	3.2	3.2	3.3
Orthophosphate (as P)-Dissolved	0.001	mg/L	0.001	0.001							
Orthophosphate (P)	0.001	mg/L			0.01			0.001			
pH	-	pH Units	6.82	6.87	5.95	6.37	6.16	6.27	6.07	6.31	6.29
pH-Field	-	pH			6.09	5.85	5.6	6.92	5.71	5.94	5.8
Phosphorus (P)-Total	0.001	mg/L	0.01	0.01	0.001	0.002	0.001	0.001	0.0062	0.0013	0.0014
Phosphorus (P)-Dissolved	0.001	mg/L	0.01	0.01	0.001			0.001			
Potassium (K)-Dissolved	0.005	mg/L	0.631	0.847	1.39	1.92	1.47	1.55	1.11	2.15	1.33
Potassium (K)-Total	0.005	mg/L	0.65	0.839	1.18	2.27	1.46	1.57	1.19	1.22	1.54
Redox Potential-Field	-	mV				256	191		311	340	101
Rhenium (Re)-Dissolved	0.000005	mg/L	0.000005	0.000005							
Rhenium (Re)-Total	0.000005	mg/L	0.000005	0.000005							
Rubidium (Rb)-Dissolved	0.000005	mg/L	0.00156	0.00191							
Rubidium (Rb)-Total	0.000005	mg/L	0.00169	0.00179							
Selenium (Se)	0.01	mg/kg			0.06			0.08			
Selenium (Se)-Dissolved	0.00001	mg/L	0.000032	0.00004	0.000066	0.00013	0.0001	0.000073	0.0001	0.00014	0.0001
Selenium (Se)-Total	0.000025	mg/L	0.000027	0.000037		0.00019	0.0001		0.0001	0.0001	0.0001
Silica-Reactive	0.05	mg/L			1.2	1.6		1.7		1.3	1.4
Silicate (as SiO ₂)	0.5	mg/L	1.16	1.26							
Silicon (Si)-Dissolved	0.0012	mg/L	0.55	0.62	0.466	0.69	0.58	0.476	0.48	0.92	0.51
Silicon (Si)-Total	0.0012	mg/L	0.575	0.604	0.469	0.85	0.58	0.507	0.51	0.52	0.64
Silver (Ag)	0.002	mg/kg			0.0023			0.0055			

Table F1-3: Water Quality Results from Operational Sampling of BRP-18, 2024 and 2025

Report type	Customized report										
Client	b2gold_back										
Project	b2gold_back										
Date	-	-	25-May-2024	26-Jun-2024	21-Jun-2025	03-Jul-2025	13-Jul-2025	27-Jul-2025	29-Jul-2025	07-Aug-2025	10-Aug-2025
Time	-	-	12:40:00	-	11:00:00	14:30:00	11:00:00	13:40:00	09:10:00	09:00:00	13:50:00
Station	-	-	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18	BRP-18
Lab Job Number	-	-	YL2400500	YL2400770	C557592	C560106	C562712	C566053	C566779	C568801	C569351
Sample ID	-	-	YL2400500-002	YL2400770-002	DNX339	DOM061	DPC333	DPW663	DQA914	DQM801	DQP999
Sample Type	-	-	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Depth/Height (m)	-	-	-	-	-	-	-	-	-	-	-
Datum	-	-	-	-	-	-	-	-	-	-	-
Display Name	Lowest Detection Limit	Unit									
Silver (Ag)-Dissolved	0.000002	mg/L	0.000002	0.000002	0.0000037	0.00002	0.00002	0.000042	0.00002	0.00002	0.00002
Silver (Ag)-Total	0.000002	mg/L	0.000022	0.000002		0.00002	0.00002		0.00002	0.00002	0.00002
Sodium (Na)-Dissolved	0.0005	mg/L	0.896	1.25	2.74	3.05	2.63	2.83	2.34	3.81	2.58
Sodium (Na)-Total	0.0005	mg/L	0.955	1.26	2.33	3.7	2.7	2.86	2.46	2.49	2.91
Strontium (Sr)-Dissolved	0.000008	mg/L	0.0218	0.0466	0.0527	0.04	0.043	0.0555	0.0363	0.0624	0.0398
Strontium (Sr)-Total	0.000008	mg/L	0.0233	0.0457	0.0459	0.0451	0.0432	0.0571	0.0363	0.0391	0.0466
Sulfide, total (as H ₂ S)	0.0016	mg/L	0.0016	0.0016							
Sulfide, total (as S)	0.0015	mg/L	0.0015	0.0015							
Sulphate (SO ₄)-Dissolved	0.3	mg/L	8.08	13.5	26	38	32	36	28	29	32
Sulphide-Total	0.0018	mg/L			0.002			0.002			
Sulphur (S)-Dissolved	0.001	mg/L	2.74	4.74	7.51	10.6	10.4	10.6	8.6	15	9.1
Sulphur (S)-Total	0.001	mg/L	2.71	4.5	9.15	13.2	10.2	11.1	9.3	9.5	10.7
Tantalum (Ta)-Dissolved	0.0001	mg/L	0.0001	0.0001							
Tantalum (Ta)-Total	0.0001	mg/L	0.0001	0.0001							
Tellurium (Te)-Dissolved	0.00001	mg/L	0.00001	0.00001							
Tellurium (Te)-Total	0.00001	mg/L	0.00001	0.00001							
Thallium (Tl)	0.0008	mg/kg			0.00438			0.0074			
Thallium (Tl)-Dissolved	0.0000008	mg/L	0.0000028	0.0000033	0.00000555	0.00001	0.00001	0.00000806	0.00001	0.00001	0.00001
Thallium (Tl)-Total	0.000001	mg/L	0.0000031	0.0000026		0.000011	0.00001		0.00001	0.00001	0.00001
Thorium (Th)-Dissolved	0.000005	mg/L	0.0000211	0.0000075							
Thorium (Th)-Total	0.000005	mg/L	0.0000201	0.0000056							
Tin (Sn)	0.005	mg/kg			0.005			0.0225			
Tin (Sn)-Dissolved	0.000005	mg/L	0.00001	0.00001	0.000005	0.005	0.005	0.000005	0.005	0.005	0.005
Tin (Sn)-Total	0.00001	mg/L	0.00001	0.00001		0.005	0.005		0.005	0.005	0.005
Titanium (Ti)-Dissolved	0.00003	mg/L	0.000134	0.00005	0.000416	0.005	0.005	0.00003	0.005	0.005	0.005
Titanium (Ti)-Total	0.00003	mg/L	0.000455	0.000089	0.000231	0.005	0.005	0.000497	0.005	0.005	0.005
Total Dissolved Solids Calculated	1	mg/L	29	71	69	88	75	90	64	79	74
Total Dissolved Solids Measured	10	mg/L			68	100	84	140	76	100	76
Total Kjeldahl Nitrogen (Calc)-Total	0.02	mg/L			0.2	1.8	0.2	0.2	0.2	0.2	0.2
Total Suspended Solids	0.99	mg/L	3	3	2.6	1	1	1	1	1	1
Tungsten (W)-Dissolved	0.00001	mg/L	0.00001	0.00001							
Tungsten (W)-Total	0.00001	mg/L	0.00001	0.00001							
Turbidity	0.1	NTU	0.61	0.12	0.1	0.14	0.1	0.18	0.1	0.1	0.1
Un-ionized Ammonia	0.0005	mg/L			0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Uranium (U)	0.0005	mg/kg			0.0131			0.0108			
Uranium (U)-Dissolved	0.0000005	mg/L	0.0000122	0.0000072	0.0000137	0.0001	0.0001	0.00000908	0.0001	0.0001	0.0001
Uranium (U)-Total	0.000001	mg/L	0.000014	0.0000078		0.0001	0.0001		0.0001	0.0001	0.0001
Vanadium (V)	0.005	mg/kg			0.0287			0.0324			
Vanadium (V)-Dissolved	0.000005	mg/L	0.000036	0.000019	0.0000341	0.005	0.005	0.0000226	0.005	0.005	0.005
Vanadium (V)-Total	0.00001	mg/L	0.000071	0.000025		0.005	0.005		0.005	0.005	0.005
Yttrium (Y)-Dissolved	0.00001	mg/L	0.000192	0.000136							
Yttrium (Y)-Total	0.00001	mg/L	0.000198	0.000127							
Zinc (Zn)	0.06	mg/kg			2.49			3.34			
Zinc (Zn)-Dissolved	0.00006	mg/L	0.00196	0.00266	0.00264	0.005	0.0068	0.00363	0.005	0.0082	0.0052
Zinc (Zn)-Total	0.0001	mg/L	0.00218	0.00331		0.005	0.005		0.0061	0.005	0.0053
Zirconium (Zr)-Dissolved	0.000008	mg/L	0.000074	0.000039	0.000071	0.00011	0.00011	0.0000635	0.0001	0.00011	0.0001
Zirconium (Zr)-Total	0.000008	mg/L	0.000082	0.000035	0.0000961	0.00011	0.00011	0.0000551	0.0001	0.0001	0.0001

Notes: Blue underlined values in blue were equal or below the detection limit. Values are shown as the detection limit. Table is presented as provided.

Source: LeGoffe 2025

Table F1-4: Water Quality Results from Operational Sampling of BRP-G-03, 2025

Report type	Customized report															
Client	b2gold_back															
Project	b2gold_back															
Date	-	-	18-Jun-2025	24-Jun-2025	27-Jun-2025	01-Jul-2025	08-Jul-2025	17-Jul-2025	22-Jul-2025	29-Jul-2025	01-Aug-2025	06-Aug-2025	13-Aug-2025	19-Aug-2025	26-Aug-2025	
Time	-	-	09:00:00	11:05:00	10:05:00	10:10:00	11:15:00	09:45:00	14:30:00	09:40:00	13:50:00	09:40:00	09:30:00	15:10:00	10:40:00	
Station	-	-	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	
Lab Job Number	-	-	C556571	C557889	C558888	C559713	C561664	C564285	C564979	C566777	C567957	C568625	C570584	C572171	C573970	
Sample ID	-	-	DNQ780	DNZ509	DOF649	DOJ637	DOV816	DPL395	DPO845	DQA912	DQI377	DQL654	DQY208	DRI078	DRU593	
Sample Type	-	-	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	
Depth/Height (m)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Datum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Display Name	Lowest Detection Limit															
Unit																
Alkalinity (PP as CaCO ₃)	0.5	mg/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Alkalinity (Total as CaCO ₃)	0.5	mg/L	8.13	8.08	8.17	5.67	7.18	8.75	10.4	12.7	14.4	29.1	37.6	38.9	20.9	
Aluminum (Al)-Dissolved	0.003	mg/L	0.0987	0.102	0.111	0.133	0.117	0.0964	0.0986	0.0936	0.0976	0.0841	0.0638	0.0879	0.0842	
Aluminum (Al)-Total	0.003	mg/L	0.147	0.164	0.379	0.189	0.16	0.185	0.14	0.187	0.733	0.143	0.0949	0.106	0.13	
Ammonia (N)-Total	0.005	mg/L	3.5	2.8	1.9	3.1	1.4	1.4	0.61	0.38	0.4	0.43	0.19	0.31	1.1	
Antimony (Sb)-Dissolved	0.0005	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
Antimony (Sb)-Total	0.0005	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
Arsenic (As)-Dissolved	0.0001	mg/L	0.00086	0.00075	0.00125	0.00118	0.00096	0.00084	0.00082	0.00062	0.00093	0.00111	0.00068	0.0007	0.00134	
Arsenic (As)-Total	0.0001	mg/L	0.00102	0.00092	0.00191	0.00119	0.00101	0.00088	0.00085	0.00088	0.00222	0.00125	0.00087	0.00081	0.00156	
Barium (Ba)-Dissolved	0.001	mg/L	0.0295	0.0292	0.0256	0.0253	0.0369	0.0433	0.036	0.038	0.0406	0.0407	0.0353	0.0372	0.031	
Barium (Ba)-Total	0.001	mg/L	0.0298	0.0316	0.0282	0.028	0.0369	0.0443	0.0335	0.0383	0.0431	0.0389	0.0395	0.0405	0.0308	
Beryllium (Be)-Dissolved	0.0001	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	
Beryllium (Be)-Total	0.0001	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	
Bicarbonate (HCO ₃)	0.5	mg/L	9.92	9.86	9.97	6.91	8.76	10.7	12.7	15.5	17.6	35.6	45.9	47.5	25.5	
Bismuth (Bi)-Dissolved	0.001	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Bismuth (Bi)-Total	0.001	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Boron (B)-Dissolved	0.05	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Boron (B)-Total	0.05	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Cadmium (Cd)-Dissolved	0.00001	mg/L	0.000029	0.000038	0.000033	0.000021	0.00007	0.000055	0.000054	0.000046	0.00006	0.000052	0.000035	0.000043	0.000032	
Cadmium (Cd)-Total	0.00001	mg/L	0.000037	0.000042	0.000036	0.000019	0.000061	0.000069	0.000057	0.000055	0.000059	0.000059	0.000039	0.000045	0.000028	
Calcium (Ca)-Dissolved	0.05	mg/L	16.5	15.5	14	12.8	17.3	21	19.8	20.1	24.9	26.4	22.7	21.7	21.6	
Calcium (Ca)-Total	0.05	mg/L	16.9	16.1	14.8	13.8	17.3	22.4	19.4	20.6	25.3	26.1	24.9	23.1	21.1	
Carbonate (CO ₃)	0.5	mg/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Chloride (Cl)-Dissolved	0.5	mg/L	22	17	16	9.2	10	15	15	17	20	20	18	19	13	
Chromium (Cr)-Dissolved	0.001	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Chromium (Cr)-Total	0.001	mg/L	0.001	0.001	0.0013	0.001	0.001	0.001	0.001	0.001	0.0024	0.001	0.001	0.001	0.001	
Cobalt (Co)-Dissolved	0.0002	mg/L	0.00152	0.00171	0.00177	0.00137	0.00287	0.00326	0.00334	0.00412	0.00467	0.00355	0.00258	0.00485	0.00177	
Cobalt (Co)-Total	0.0002	mg/L	0.00187	0.00182	0.00223	0.00155	0.00296	0.00379	0.0035	0.00545	0.00598	0.0039	0.00306	0.00534	0.00189	
Conductivity	1	µS/cm	246	229	220	213	306	272	281	321	344	332	315	298		
Copper (Cu)-Dissolved	0.0002	mg/L	0.00467	0.00579	0.00455	0.00534	0.00638	0.00609	0.00595	0.00537	0.00541	0.00649	0.00529	0.00606	0.00645	
Copper (Cu)-Total	0.0005	mg/L	0.00581	0.00584	0.00597	0.00591	0.00627	0.00633	0.0062	0.00603	0.00761	0.00722	0.00618	0.00675	0.00674	
Field Temperature	-	deg. C	5.4	9.6	8.5	13.3	10.7	7.1	12.4	8.4	7.5	8.9	9	11.6		
Fluoride (F)	0.01	mg/L	0.041	0.034	0.037	0.038	0.043	0.03	0.02	0.042	0.05	0.053	0.027	0.027	0.052	
Hardness (CaCO ₃)-Dissolved	0.5	mg/L	78.4	78.5	74.5	67.1	91.5	112	109	113	131	140	127	122	121	
Hardness (CaCO ₃)-Total	0.5	mg/L	83.1	80.3	80	73.5	91.5	129	111	115	136	145	143	136	118	
Hydroxide (OH)	0.5	mg/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Iron (Fe)-Dissolved	0.005	mg/L	0.109	0.118	0.179	0.142	0.122	0.145	0.183	0.181	0.189	0.229	0.176	0.311	0.279	
Iron (Fe)-Total	0.01	mg/L	0.183	0.235	0.61	0.222	0.207	0.292	0.31	0.415	1.13	0.377	0.259	0.407	0.409	
Lead (Pb)-Dissolved	0.0002	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	
Lead (Pb)-Total	0.0002	mg/L	0.0002	0.0002	0.00025	0.0002	0.0002	0.0002	0.0002	0.0002	0.00035	0.0002	0.0002	0.0002	0.0002	
Lithium (Li)-Dissolved	0.002	mg/L	0.0033	0.0036	0.0036	0.0033	0.0042	0.0047	0.0034	0.0033	0.0046	0.0037	0.0026	0.0028	0.0042	
Lithium (Li)-Total	0.002	mg/L	0.0037	0.0036	0.0044	0.0034	0.0045	0.0038	0.0038	0.0035	0.0058	0.0033	0.0032	0.0027	0.0038	
Magnesium (Mg)-Dissolved	0.05	mg/L	9.07	9.69	9.59	8.53	11.7	14.4	14.5	15.2	16.8	18	17.2	16.6	16.3	
Magnesium (Mg)-Total	0.05	mg/L	9.95	9.74	10.5	9.52	11.8	17.8	15.3	15.5	17.6	19.5	19.6	18.9	15.7	
Manganese (Mn)-Dissolved	0.001	mg/L	0.0372	0.0378	0.035	0.0235	0.0742	0.0748	0.0709	0.08	0.121	0.0741	0.0409	0.0944	0.0289	
Manganese (Mn)-Total	0.001	mg/L	0.0418	0.0389	0.0416	0.0247	0.0743	0.0893	0.0886	0.0957	0.137	0.0793	0.0489	0.102	0.0294	
Molybdenum (Mo)-Dissolved	0.001	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Molybdenum (Mo)-Total	0.001	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Nickel (Ni)-Dissolved	0.001	mg/L	0.018	0.0208	0.0177	0.0198	0.0272	0.0284	0.0262	0.0234	0.027	0.0277	0.0216	0.0237	0.0253	
Nickel (Ni)-Total	0.001	mg/L	0.0216	0.0208	0.02	0.0216	0.0266	0.0287	0.0267	0.0231	0.0307	0.025	0.026	0.026	0.0257	
Nitrate (as N)	0.2	mg/L	6.8	6.3	3.8	7.1	6.7	6.5	4.4	4.1	5	4.2	4.6	2.3	6.8	
Nitrate (NO ₃)-Dissolved	0.89	mg/L	30	28	17	31	30	29	19	18	22	19	20	10	30	
Nitrate plus Nitrite (N)	0.2	mg/L	6.8	6.4	3.8	7.1	6.8	6.5	4.4	4.2	5.1	4.3	4.6	2.3	6.8	
Nitrite (as N)	0.001	mg/L	0.021	0.026	0.03	0.024	0.026	0.024	0.0089	0.0077	0.019	0.013	0.0058	0.0046	0.015	
Nitrite (NO ₂)-Dissolved	0.0033	mg/L	0.069	0.085	0.1	0.08	0.084	0.079	0.029	0.025	0.063	0.042	0.019	0.015	0.048	
Nitrogen (N)-Total	0.1	mg/L	9.4	9.7	6.1	11	8.5	7.4	5.2	4.4	5.8	4.7	5.6	3.2	8.6	
Organic Carbon (C)-Dissolved	0.2	mg/L	10	11	9.1											

Table F1-4: Water Quality Results from Operational Sampling of BRP-G-03, 2025

Report type	Customized report														
Client	b2gold_back														
Project	b2gold_back														
Date	-	-	18-Jun-2025	24-Jun-2025	27-Jun-2025	01-Jul-2025	08-Jul-2025	17-Jul-2025	22-Jul-2025	29-Jul-2025	01-Aug-2025	06-Aug-2025	13-Aug-2025	19-Aug-2025	26-Aug-2025
Time	-	-	09:00:00	11:05:00	10:05:00	10:10:00	11:15:00	09:45:00	14:30:00	09:40:00	13:50:00	09:40:00	09:30:00	15:10:00	10:40:00
Station	-	-	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03	BRP-G-03
Lab Job Number	-	-	C556571	C557889	C558898	C559713	C561664	C564285	C564979	C566777	C567957	C568625	C570584	C572171	C573970
Sample ID	-	-	DNQ780	DNZ509	DOF649	DOJ637	DOV816	DPL395	DPO845	DQA912	DQI377	DQL654	DQY208	DRI078	DRU593
Sample Type	-	-	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Depth/Height (m)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Datum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display Name	Lowest Detection Limit	Unit													
Silicon (Si)-Dissolved	0.1	mg/L	1.17	0.89	1.88	2.12	1.34	1.05	1.04	1.11	1.57	1.4	1.08	1.41	2.73
Silicon (Si)-Total	0.1	mg/L	1.28	1.07	2.52	2.28	1.41	1.28	1.08	1.26	2.44	1.39	1.19	1.47	2.6
Silver (Ag)-Dissolved	0.00002	mg/L	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>
Silver (Ag)-Total	0.00002	mg/L	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.000032</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>	<u>0.00002</u>
Sodium (Na)-Dissolved	0.05	mg/L	2.46	2.28	2.31	2.02	2.97	3.74	3.97	4.37	4.19	5.02	5.36	5.38	4.46
Sodium (Na)-Total	0.05	mg/L	2.81	2.68	2.39	2.5	2.98	4.48	4.22	4.46	4.52	5.37	5.88	5.88	4.43
Strontium (Sr)-Dissolved	0.001	mg/L	0.0713	0.0675	0.056	0.053	0.0731	0.0789	0.0764	0.0794	0.098	0.101	0.0851	0.0839	0.0801
Strontium (Sr)-Total	0.001	mg/L	0.0729	0.0669	0.059	0.0565	0.0715	0.0904	0.0722	0.0794	0.0972	0.103	0.0963	0.0889	0.0835
Sulphate (SO ₄)-Dissolved	0.5	mg/L	45	45	53	48	62	85	73	78	90	100	93	84	79
Sulphur (S)-Dissolved	3	mg/L	13.8	13.3	15.4	19.7	19.7	26.6	24.8	25.7	28.7	32.6	28.1	27.6	26.2
Sulphur (S)-Total	3	mg/L	14	14.1	14.6	14.9	19.2	29.6	24.8	26.7	29.3	32.2	32	30.3	25.2
Thallium (Tl)-Dissolved	0.00001	mg/L	0.000013	0.000013	<u>0.00001</u>	<u>0.00001</u>	0.000021	0.00002	0.000019	0.000019	0.000017	0.000017	0.000015	0.00002	0.000016
Thallium (Tl)-Total	0.00001	mg/L	0.000015	0.000017	<u>0.00001</u>	0.000011	0.000018	0.000027	0.000016	0.000021	0.000019	0.000019	0.000015	0.00002	0.000014
Tin (Sn)-Dissolved	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Tin (Sn)-Total	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Titanium (Ti)-Dissolved	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Titanium (Ti)-Total	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	0.0065	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	0.0132	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Total Dissolved Solids, Calculated	10	mg/L	140	130	120	120	180	160	170	190	240	210	190	200	180
Total Dissolved Solids, Measured	10	mg/L	170	130	140	140	180	160	170	190	240	210	190	200	180
Total Kjeldahl Nitrogen (Calc)-Total	0.2	mg/L	2.6	3.4	2.3	3.9	1.8	0.87	0.84	0.28	0.78	0.45	0.95	0.9	1.8
Total Oil and Grease	2	mg/L	<u>2</u>	3	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	4	<u>2</u>	3	3	<u>2</u>	<u>2</u>	3
Total Suspended Solids	0.97	mg/L	1.1	4.8	2.5	1	1.9	83	34	11	13	2.5	1	1.1	2.8
Turbidity	0.1	NTU	2.3	2.4	9.6	0.18	0.11	14	6.4	2	15	2.8	2.5	2	3.8
Un-ionized Ammonia	0.0005	mg/L	0.0011	0.00086	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0029
Uranium (U)-Dissolved	0.0001	mg/L	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>
Uranium (U)-Total	0.0001	mg/L	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>	0.00011	0.0001	<u>0.0001</u>	<u>0.0001</u>	<u>0.0001</u>
Vanadium (V)-Dissolved	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Vanadium (V)-Total	0.005	mg/L	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>	<u>0.005</u>
Zinc (Zn)-Dissolved	0.005	mg/L	0.0056	0.0075	0.0056	0.0068	0.0128	0.0127	0.0118	0.0137	0.0156	0.0149	0.0068	0.0074	0.0082
Zinc (Zn)-Total	0.005	mg/L	0.0063	0.0073	0.0063	0.0054	0.0111	0.0134	0.0103	0.0091	0.0152	0.0149	0.0082	0.0075	0.0073
Zirconium (Zr)-Dissolved	0.0001	mg/L	0.00038	0.0004	0.00035	0.00039	0.0004	0.00038	0.0004	0.00038	0.00035	0.00047	0.00037	0.00053	0.0005
Zirconium (Zr)-Total	0.0001	mg/L	0.00038	0.00038	0.00059	0.0004	0.00038	0.0004	0.00038	0.00038	0.00069	0.0005	0.00041	0.0005	0.00048

Notes: Blue underlined values in blue were equal or below the detection limit. Values are shown as the detection limit. Table is presented as provided.

Source: LeGoffe 2025

Table F1-5: Data Sources and Station Grouping for the Spatial and Temporal Analysis

Date	Station	Area ^(a)	Reference
Apr/14/2011	GOOSE CENTRAL DEEP	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/14/2011	GOOSE CENTRAL SHALLOW	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/17/2011	GOOSE UPSTREAM SHALLOW	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jun/18/2011	GOOSE OF (REP 1)	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/07/2011	GOOSE CENTRAL SHALLOW (1M) LA	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/16/2011	GOOSE OF REP1	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/17/2011	GOOSE LAKE TAIL REP1 (1M)	Goose Lake Tail	Baseline sampling (Golder 2019)
Aug/07/2011	GOOSE NECK REP 1 (1M) LAKE	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/08/2011	GOOSE OF REP1	Goose Lake Out	Baseline sampling (Golder 2019)
Apr/11/2012	GOOSE LAKE CENTRAL (1M)	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/11/2012	GOOSE LAKE TAIL (1M)	Goose Lake Tail	Baseline sampling (Golder 2019)
Apr/11/2012	West Bay-BRP-31 (1M)	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jun/18/2012	GOOSE OF REP1	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/17/2012	GOOSE LAKE CENTRAL (1M)	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/07/2012	GOOSE OF REP 1	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/18/2012	GOOSE LAKE TAIL (1M)	Goose Lake Tail	Baseline sampling (Golder 2019)
Aug/14/2012	West Bay-BRP-31 (1M)	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/19/2012	GOOSE OF REP 1	Goose Lake Out	Baseline sampling (Golder 2019)
Apr/13/2013	GOOSECENT (1M)	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/14/2013	GOOSETAILNEW (1M)	Goose Lake Tail	Baseline sampling (Golder 2019)
Apr/10/2013	GOOSENECK (0M)	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jun/12/2013	GOOSEOF	Goose Lake Out	Baseline sampling (Golder 2019)
Jul/21/2013	GOOCENT (1M)	Goose Lake CB	Baseline sampling (Golder 2019)
Jul/24/2013	GOOSEOF	Goose Lake Out	Baseline sampling (Golder 2019)
Jul/20/2013	GOOSTH (1M)	Goose Lake SE	Baseline sampling (Golder 2019)
Jul/20/2013	GOOSETAIL NEW (1M)	Goose Lake Tail	Baseline sampling (Golder 2019)
Jul/21/2013	GOONECK (1M)	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/13/2017	BRP-32-01	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2017	BRP-32-02	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2017	BRP-32-03	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2017	BRP-32-05	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2017	BRP-32-04	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/12/2017	BRP-34	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/14/2017	BRP-33-01	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/14/2017	BRP-33-02	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/14/2017	BRP-33-03	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/05/2017	BRP-31-01	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/05/2017	BRP-31-02	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/07/2017	BRP-31-05	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/07/2017	BRP-31-04	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/07/2017	BRP-31-03	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/03/2017	BRP-31-01	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/03/2017	BRP-31-02	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/03/2017	BRP-31-03	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/03/2017	BRP-31-04	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/03/2017	BRP-31-05	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSECENT-1	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSECENT-2	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSECENT-3	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSECENT-4	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSECENT-5	Goose Lake CB	Baseline sampling (Golder 2019)
Apr/27/2018	GOOSESTH-1	Goose Lake SE	Baseline sampling (Golder 2019)
Apr/27/2018	GOOSESTH-2	Goose Lake SE	Baseline sampling (Golder 2019)
Apr/27/2018	GOOSESTH-3	Goose Lake SE	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSESTH-4	Goose Lake SE	Baseline sampling (Golder 2019)
Apr/28/2018	GOOSESTH-5	Goose Lake SE	Baseline sampling (Golder 2019)
Apr/25/2018	BRP-31-10	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/25/2018	BRP-31-9	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/25/2018	BRP-31-6	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/25/2018	BRP-31-8	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/25/2018	BRP-31-7	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jun/11/2018	BRP-19	Echo Lake Out	Baseline sampling (Golder 2019)
Jun/11/2018	BRP-23	Gander Pond Out	Baseline sampling (Golder 2019)
Jun/11/2018	BRP-18	Goose Lake In	Baseline sampling (Golder 2019)
Jun/11/2018	BRP-34A	Goose Lake Out	Baseline sampling (Golder 2019)
Jul/14/2018	BRP-23	Gander Pond Out	Baseline sampling (Golder 2019)
Jul/14/2018	BRP-18	Goose Lake In	Baseline sampling (Golder 2019)
Jul/14/2018	BRP-34A	Goose Lake Out	Baseline sampling (Golder 2019)
Jul/13/2018	BRP-29-5	West Bay-BRP-29	Baseline sampling (Golder 2019)
Jul/13/2018	BRP-29-3	West Bay-BRP-29	Baseline sampling (Golder 2019)
Jul/16/2018	BRP-29-1	West Bay-BRP-29	Baseline sampling (Golder 2019)
Jul/16/2018	BRP-29-2	West Bay-BRP-29	Baseline sampling (Golder 2019)
Jul/16/2018	BRP-29-4	West Bay-BRP-29	Baseline sampling (Golder 2019)
Jul/11/2018	BRP-31-1	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jul/11/2018	BRP-31-2	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jul/12/2018	BRP-31-3	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jul/12/2018	BRP-31-4	West Bay-BRP-31	Baseline sampling (Golder 2019)
Jul/12/2018	BRP-31-5	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/11/2018	BRP-19	Echo Lake Out	Baseline sampling (Golder 2019)
Aug/11/2018	BRP-23	Gander Pond Out	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-32-1	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-32-2	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-32-3	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-32-4	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-32-5	Goose Lake CB	Baseline sampling (Golder 2019)
Aug/11/2018	BRP-18	Goose Lake In	Baseline sampling (Golder 2019)
Aug/11/2018	BRP-34-A	Goose Lake Out	Baseline sampling (Golder 2019)
Aug/08/2018	BRP-33-1	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/08/2018	BRP-33-2	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/09/2018	BRP-33-3	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/09/2018	BRP-33-4	Goose Lake SE	Baseline sampling (Golder 2019)

Table F1-5: Data Sources and Station Grouping for the Spatial and Temporal Analysis

Date	Station	Area ^(a)	Reference
Aug/10/2018	BRP-33-5	Goose Lake SE	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-29-1	West Bay-BRP-29	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-29-2	West Bay-BRP-29	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-29-3	West Bay-BRP-29	Baseline sampling (Golder 2019)
Aug/13/2018	BRP-29-4	West Bay-BRP-29	Baseline sampling (Golder 2019)
Aug/15/2018	BRP-29-5	West Bay-BRP-29	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-31-1	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-31-2	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-31-3	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-31-4	West Bay-BRP-31	Baseline sampling (Golder 2019)
Aug/12/2018	BRP-31-5	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/09/2018	BRP-19	Echo Lake Out	Baseline sampling (Golder 2019)
Sep/09/2018	BRP-23	Gander Pond Out	Baseline sampling (Golder 2019)
Sep/09/2018	BRP-18	Goose Lake In	Baseline sampling (Golder 2019)
Sep/09/2018	BRP-34 (1)	Goose Lake Out	Baseline sampling (Golder 2019)
Sep/07/2018	BRP-29-4	West Bay-BRP-29	Baseline sampling (Golder 2019)
Sep/07/2018	BRP-29-5	West Bay-BRP-29	Baseline sampling (Golder 2019)
Sep/07/2018	BRP-29-3	West Bay-BRP-29	Baseline sampling (Golder 2019)
Sep/07/2018	BRP-29-2	West Bay-BRP-29	Baseline sampling (Golder 2019)
Sep/07/2018	BRP-29-1	West Bay-BRP-29	Baseline sampling (Golder 2019)
Sep/06/2018	BRP-31-1	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/06/2018	BRP-31-2	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/06/2018	BRP-31-3	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/06/2018	BRP-31-4	West Bay-BRP-31	Baseline sampling (Golder 2019)
Sep/06/2018	BRP-31-5	West Bay-BRP-31	Baseline sampling (Golder 2019)
Apr/15/2021	BRP-32-1	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/15/2021	BRP-32-4	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/15/2021	BRP-32-2	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/15/2021	BRP-32-5	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/15/2021	BRP-32-3	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/15/2021	BRP-32-3B	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-1	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-2	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-3	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-2-B	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-4	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/11/2021	BRP-33-5	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Apr/15/2021	GLTL-T	Goose Lake Tail	Baseline sampling (WSP Golder 2022)
Apr/15/2021	GLTL-B	Goose Lake Tail	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-1	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-3	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-2	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-2-B	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-6-T	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-6-B	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-4	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Apr/13/2021	BRP-29-5	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Echo Lake Outflow	Echo Lake Out	Baseline sampling (WSP Golder 2022)
Jul/24/2021	Echo Lake Outflow	Echo Lake Out	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Gander Pond Outflow	Gander Pond Out	Baseline sampling (WSP Golder 2022)
Jul/24/2021	Gander Pond Outflow	Gander Pond Out	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Giraffe Lake Outflow	Giraffe Lake Out	Baseline sampling (WSP Golder 2022)
Jul/25/2021	Giraffe Lake Outflow	Giraffe Lake Out	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-23-T	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-32-B	Goose Lake CB	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Llama Lake Outflow	Goose Lake In	Baseline sampling (WSP Golder 2022)
Jul/24/2021	Llama Lake Outflow	Goose Lake In	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Goose Lake Outflow	Goose Lake Out	Baseline sampling (WSP Golder 2022)
Jul/24/2021	Goose Lake Outflow	Goose Lake Out	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-33-T	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-33-B	Goose Lake SE	Baseline sampling (WSP Golder 2022)
Jul/26/2021	GLTL-T	Goose Lake Tail	Baseline sampling (WSP Golder 2022)
Jul/26/2021	GLTL-B	Goose Lake Tail	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-29 (SHALLOW)-T	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-29 (SHALLOW)-B	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-29 (DEEP)-T	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Jul/26/2021	BRP-29 (DEEP)-B	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Jul/05/2021	Wolf Outflow	Wolf Out	Baseline sampling (WSP Golder 2022)
Jul/25/2021	Wolf Outflow	Wolf Out	Baseline sampling (WSP Golder 2022)
Sep/04/2021	Echo Lake Outflow	Echo Lake Out	Baseline sampling (WSP Golder 2022)
Sep/04/2021	Gander Pond Outflow	Gander Pond Out	Baseline sampling (WSP Golder 2022)
Sep/04/2021	Giraffe Lake Outflow	Giraffe Lake Out	Baseline sampling (WSP Golder 2022)
Sep/04/2021	Llama Lake Outflow	Goose Lake In	Baseline sampling (WSP Golder 2022)
Sep/03/2021	Goose Lake Outflow	Goose Lake Out	Baseline sampling (WSP Golder 2022)
Sep/03/2021	BRP-29-6-B	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Sep/03/2021	BRP-29-6-T	West Bay-BRP-29	Baseline sampling (WSP Golder 2022)
Sep/04/2021	Wolf Outflow	Wolf Out	Baseline sampling (WSP Golder 2022)
Apr/10/2022	BRP-32-1	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/10/2022	BRP-32-2	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/10/2022	BRP-32-3	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/10/2022	BRP-32-3-BOTTOM	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/10/2022	BRP-32-4	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/10/2022	BRP-32-5	Goose Lake CB	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-33-3-BOTTOM	Goose Lake SE	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-33-3-TOP	Goose Lake SE	Baseline sampling (WSP 2023)
Apr/12/2022	GLTL-TOP	Goose Lake Tail	Baseline sampling (WSP 2023)
Apr/12/2022	GLTL-BOTTOM	Goose Lake Tail	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-1	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-2	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-2-BOTTOM	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-3	West Bay-BRP-29	Baseline sampling (WSP 2023)

Table F1-5: Data Sources and Station Grouping for the Spatial and Temporal Analysis

Date	Station	Area ^(a)	Reference
Apr/14/2022	BRP-29-4	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-5	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-6-TOP	West Bay-BRP-29	Baseline sampling (WSP 2023)
Apr/14/2022	BRP-29-6-BOTTOM	West Bay-BRP-29	Baseline sampling (WSP 2023)
Jun/07/2022	BRP-34	Goose Lake Out	Baseline sampling (WSP 2023)
Aug/09/2022	BRP-32-1	Goose Lake CB	Baseline sampling (WSP 2023)
Aug/09/2022	BRP-32-2	Goose Lake CB	Baseline sampling (WSP 2023)
Aug/09/2022	BRP-32-3	Goose Lake CB	Baseline sampling (WSP 2023)
Aug/09/2022	BRP-32-4	Goose Lake CB	Baseline sampling (WSP 2023)
Aug/09/2022	BRP-32-5	Goose Lake CB	Baseline sampling (WSP 2023)
Aug/10/2022	BRP-34-A	Goose Lake Out	Baseline sampling (WSP 2023)
Aug/10/2022	BRP-33-2	Goose Lake SE	Baseline sampling (WSP 2023)
Aug/10/2022	BRP-33-3	Goose Lake SE	Baseline sampling (WSP 2023)
Aug/10/2022	BRP-33-4	Goose Lake SE	Baseline sampling (WSP 2023)
Aug/10/2022	BRP-33-5	Goose Lake SE	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-33-1	Goose Lake SE	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-29-1	West Bay-BRP-29	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-29-2	West Bay-BRP-29	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-29-3	West Bay-BRP-29	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-29-4	West Bay-BRP-29	Baseline sampling (WSP 2023)
Aug/13/2022	BRP-29-5	West Bay-BRP-29	Baseline sampling (WSP 2023)
May/29/2023	Goose Lake Inflow from Echo Lake	Echo Lake Out	Stream sampling (WSP 2024)
May/28/2023	Goose Lake Inflow from Gander Pond	Gander Pond Out	Stream sampling (WSP 2024)
May/29/2023	Goose Lake Inflow from Llama Lake	Goose Lake In	Stream sampling (WSP 2024)
May/28/2023	Goose Lake Inflow from Wolf Lake	Wolf Out	Stream sampling (WSP 2024)
Jul/21/2023	Goose Lake Inflow from Giraffe Lake	Giraffe Lake Out	Stream sampling (WSP 2024)
Jul/19/2023	GLCB-T	Goose Lake CB	AEMP sampling (WSP 2024)
Jul/19/2023	GLCB-M	Goose Lake CB	AEMP sampling (WSP 2024)
Jul/19/2023	GLCB-B	Goose Lake CB	AEMP sampling (WSP 2024)
Jul/21/2023	Goose Lake Inflow from Llama Lake	Goose Lake In	Stream sampling (WSP 2024)
Jul/20/2023	Goose Lake Outflow	Goose Lake Out	Stream sampling (WSP 2024)
Jul/19/2023	GLSE-T	Goose Lake SE	AEMP sampling (WSP 2024)
Jul/19/2023	GLSE-M	Goose Lake SE	AEMP sampling (WSP 2024)
Jul/19/2023	GLSE-B	Goose Lake SE	AEMP sampling (WSP 2024)
Jul/20/2023	GLTL-T	Goose Lake Tail	AEMP sampling (WSP 2024)
Jul/20/2023	GLTL-M	Goose Lake Tail	AEMP sampling (WSP 2024)
Jul/20/2023	GLTL-B	Goose Lake Tail	AEMP sampling (WSP 2024)
Jul/20/2023	GLWB-T	West Bay-BRP-29	AEMP sampling (WSP 2024)
Jul/20/2023	GLWB-M	West Bay-BRP-29	AEMP sampling (WSP 2024)
Jul/20/2023	GLWB-B	West Bay-BRP-29	AEMP sampling (WSP 2024)
Jul/21/2023	Goose Lake Inflow from Wolf Lake	Wolf Out	Stream sampling (WSP 2024)
Sep/16/2023	Goose Lake Inflow from Echo Lake	Echo Lake Out	Stream sampling (WSP 2024)
Sep/16/2023	Goose Lake Inflow from Gander Pond	Gander Pond Out	Stream sampling (WSP 2024)
Sep/15/2023	Goose Lake Inflow from Giraffe Lake	Giraffe Lake Out	Stream sampling (WSP 2024)
Sep/14/2023	GLCB-T	Goose Lake CB	AEMP sampling (WSP 2024)
Sep/14/2023	GLCB-M	Goose Lake CB	AEMP sampling (WSP 2024)
Sep/14/2023	GLCB-B	Goose Lake CB	AEMP sampling (WSP 2024)
Sep/16/2023	Goose Lake Inflow from Llama Lake	Goose Lake In	Stream sampling (WSP 2024)
Sep/15/2023	Goose Lake Outflow	Goose Lake Out	Stream sampling (WSP 2024)
Sep/14/2023	GLSE-T	Goose Lake SE	AEMP sampling (WSP 2024)
Sep/14/2023	GLSE-M	Goose Lake SE	AEMP sampling (WSP 2024)
Sep/14/2023	GLSE-B	Goose Lake SE	AEMP sampling (WSP 2024)
Sep/14/2023	GLTL-T	Goose Lake Tail	AEMP sampling (WSP 2024)
Sep/14/2023	GLTL-M	Goose Lake Tail	AEMP sampling (WSP 2024)
Sep/14/2023	GLTL-B	Goose Lake Tail	AEMP sampling (WSP 2024)
Sep/14/2023	GLWB-T	West Bay-BRP-29	AEMP sampling (WSP 2024)
Sep/14/2023	GLWB-M	West Bay-BRP-29	AEMP sampling (WSP 2024)
Sep/14/2023	GLWB-B	West Bay-BRP-29	AEMP sampling (WSP 2024)
Sep/15/2023	Goose Lake Inflow from Wolf Lake	Wolf Out	Stream sampling (WSP 2024)
Apr/20/2024	BRP-32-1	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/20/2024	BRP-32-4	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/20/2024	BRP-32-5	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/20/2024	BRP-32-2	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/20/2024	BRP-32-3	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/21/2024	GLCB-T	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/21/2024	GLCB-M	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/21/2024	GLCB-B	Goose Lake CB	AEMP sampling (WSP 2025)
Apr/17/2024	GLSE-T	Goose Lake SE	AEMP sampling (WSP 2025)
Apr/17/2024	GLSE-M	Goose Lake SE	AEMP sampling (WSP 2025)
Apr/17/2024	GLSE-B	Goose Lake SE	AEMP sampling (WSP 2025)
Apr/17/2024	GLTL-T	Goose Lake Tail	AEMP sampling (WSP 2025)
Apr/17/2024	GLTL-M	Goose Lake Tail	AEMP sampling (WSP 2025)
Apr/17/2024	GLTL-B	Goose Lake Tail	AEMP sampling (WSP 2025)
Apr/19/2024	BRP-29A-1	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/19/2024	BRP-29A-3	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/19/2024	BRP-29A-2	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/19/2024	BRP-29A-4	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/19/2024	BRP-29A-5	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/21/2024	GLWB-T	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/21/2024	GLWB-M	West Bay-BRP-29	AEMP sampling (WSP 2025)
Apr/21/2024	GLWB-B	West Bay-BRP-29	AEMP sampling (WSP 2025)
May/25/2024	BRP-19	Echo Lake Out	Stream sampling (WSP 2025)
May/27/2024	BRP-23	Gander Pond Out	Stream sampling (WSP 2025)
May/26/2024	GIROF	Giraffe Lake Out	Stream sampling (WSP 2025)
May/29/2024	GIROF	Giraffe Lake Out	Stream sampling (WSP 2025)
May/25/2024	BRP-18	Goose Lake In	Stream sampling (WSP 2025)
May/25/2024	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
May/27/2024	BRP-34	Goose Lake Out	Stream sampling (WSP 2025)
May/27/2024	WOLFOF	Wolf Out	Stream sampling (WSP 2025)
Jun/24/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jun/26/2024	BRP-19	Echo Lake Out	Stream sampling (WSP 2025)

Table F1-5: Data Sources and Station Grouping for the Spatial and Temporal Analysis

Date	Station	Area ^(a)	Reference
Jun/26/2024	BRP-23	Gander Pond Out	Stream sampling (WSP 2025)
Jun/27/2024	GIROF	Giraffe Lake Out	Stream sampling (WSP 2025)
Jun/26/2024	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jun/26/2024	BRP-18	Goose Lake In	Stream sampling (WSP 2025)
Jun/27/2024	BRP-34	Goose Lake Out	Stream sampling (WSP 2025)
Jun/26/2024	WOLFOF	Wolf Out	Stream sampling (WSP 2025)
Jul/25/2024	BRP-19	Echo Lake Out	Stream sampling (WSP 2025)
Jul/25/2024	BRP-23	Gander Pond Out	Stream sampling (WSP 2025)
Jul/24/2024	GIROF	Giraffe Lake Out	Stream sampling (WSP 2025)
Jul/25/2024	BRP-18	Goose Lake In	Stream sampling (WSP 2025)
Jul/24/2024	BRP-34	Goose Lake Out	Stream sampling (WSP 2025)
Jul/24/2024	WOLFOF	Wolf Out	Stream sampling (WSP 2025)
Aug/03/2024	BRP-32-1	Goose Lake CB	AEMP sampling (WSP 2025)
Aug/03/2024	BRP-32-2	Goose Lake CB	AEMP sampling (WSP 2025)
Aug/03/2024	BRP-32-3	Goose Lake CB	AEMP sampling (WSP 2025)
Aug/03/2024	BRP-32-4	Goose Lake CB	AEMP sampling (WSP 2025)
Aug/03/2024	BRP-32-5	Goose Lake CB	AEMP sampling (WSP 2025)
Aug/04/2024	BRP-31-1	West Bay-BRP-31	AEMP sampling (WSP 2025)
Aug/04/2024	BRP-31-2	West Bay-BRP-31	AEMP sampling (WSP 2025)
Aug/04/2024	BRP-31-3	West Bay-BRP-31	AEMP sampling (WSP 2025)
Aug/04/2024	BRP-31-4	West Bay-BRP-31	AEMP sampling (WSP 2025)
Aug/04/2024	BRP-31-5	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/22/2024	BRP-19	Echo Lake Out	Stream sampling (WSP 2025)
Sep/22/2024	BRP-23	Gander Pond Out	Stream sampling (WSP 2025)
Sep/22/2024	GIROF	Giraffe Lake Out	Stream sampling (WSP 2025)
Sep/18/2024	BRP-32-1	Goose Lake CB	AEMP sampling (WSP 2025)
Sep/18/2024	BRP-32-2	Goose Lake CB	AEMP sampling (WSP 2025)
Sep/18/2024	BRP-32-3	Goose Lake CB	AEMP sampling (WSP 2025)
Sep/18/2024	BRP-32-4	Goose Lake CB	AEMP sampling (WSP 2025)
Sep/18/2024	BRP-32-5	Goose Lake CB	AEMP sampling (WSP 2025)
Sep/21/2024	BRP-18	Goose Lake In	Stream sampling (WSP 2025)
Sep/22/2024	BRP-34	Goose Lake Out	Stream sampling (WSP 2025)
Sep/19/2024	BRP-31-1	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/19/2024	BRP-31-2	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/19/2024	BRP-31-3	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/19/2024	BRP-31-4	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/19/2024	BRP-31-5	West Bay-BRP-31	AEMP sampling (WSP 2025)
Sep/21/2024	WOLFOF	Wolf Out	Stream sampling (WSP 2025)
Apr/15/2025	GLCB-T	Goose Lake CB	AEMP sampling (this report)
Apr/15/2025	GLCB-M	Goose Lake CB	AEMP sampling (this report)
Apr/15/2025	GLCB-B	Goose Lake CB	AEMP sampling (this report)
Apr/18/2025	BRP-32-1	Goose Lake CB	AEMP sampling (this report)
Apr/18/2025	BRP-32-2	Goose Lake CB	AEMP sampling (this report)
Apr/18/2025	BRP-32-3	Goose Lake CB	AEMP sampling (this report)
Apr/18/2025	BRP-32-4	Goose Lake CB	AEMP sampling (this report)
Apr/18/2025	BRP-32-5	Goose Lake CB	AEMP sampling (this report)
Apr/15/2025	GLSE-T	Goose Lake SE	AEMP sampling (this report)
Apr/15/2025	GLSE-M	Goose Lake SE	AEMP sampling (this report)
Apr/15/2025	GLSE-B	Goose Lake SE	AEMP sampling (this report)
Apr/15/2025	GLTL-T	Goose Lake Tail	AEMP sampling (this report)
Apr/15/2025	GLTL-M	Goose Lake Tail	AEMP sampling (this report)
Apr/15/2025	GLTL-B	Goose Lake Tail	AEMP sampling (this report)
Apr/17/2025	GLWB-T	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	GLWB-M	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	GLWB-B	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	BRP-29A-1	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	BRP-29A-2	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	BRP-29A-3	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	BRP-29A-4	West Bay-BRP-29	AEMP sampling (this report)
Apr/17/2025	BRP-29A-5	West Bay-BRP-29	AEMP sampling (this report)
May/27/2025	BRP-19	Echo Lake Out	Stream sampling (WSP 2026)
May/27/2025	BRP-23	Gander Pond Out	Stream sampling (WSP 2026)
May/29/2025	GIROF	Giraffe Lake Out	Stream sampling (WSP 2026)
May/27/2025	BRP-18	Goose Lake In	Stream sampling (WSP 2026)
May/29/2025	BRP-34	Goose Lake Out	Stream sampling (WSP 2026)
May/28/2025	WOLFOF	Wolf Out	Stream sampling (WSP 2026)
Jun/18/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jun/21/2025	BRP-19	Echo Lake Out	Stream sampling (WSP 2026)
Jun/22/2025	INV-02	Echo Lake Out	Investigative sampling (Table F1-2)
Jun/22/2025	INV-09	Echo Lake Out	Investigative sampling (Table F1-2)
Jun/27/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jun/21/2025	BRP-23	Gander Pond Out	Stream sampling (WSP 2026)
Jun/20/2025	GIROF	Giraffe Lake Out	Stream sampling (WSP 2026)
Jun/21/2025	BRP-18	Goose Lake In	Stream sampling (WSP 2026)
Jun/21/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jun/22/2025	INV-01	Goose Lake In	Investigative sampling (Table F1-2)
Jun/22/2025	INV-03	Goose Lake In	Investigative sampling (Table F1-2)
Jun/22/2025	INV-05	Goose Lake In	Investigative sampling (Table F1-2)
Jun/22/2025	INV-04	Goose Lake In	Investigative sampling (Table F1-2)
Jun/22/2025	INV-06	Goose Lake In	Investigative sampling (Table F1-2)
Jun/22/2025	INV-07	Goose Lake In	Investigative sampling (Table F1-2)
Jun/20/2025	BRP-34	Goose Lake Out	Stream sampling (WSP 2026)
Jun/21/2025	WOLFOF	Wolf Out	Stream sampling (WSP 2026)
Jul/01/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jul/08/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jul/17/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jul/22/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jul/27/2025	BRP-19	Echo Lake Out	Stream sampling (WSP 2026)
Jul/29/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Jul/28/2025	BRP-23	Gander Pond Out	Stream sampling (WSP 2026)
Jul/26/2025	GIROF	Giraffe Lake Out	Stream sampling (WSP 2026)

Table F1-5: Data Sources and Station Grouping for the Spatial and Temporal Analysis

Date	Station	Area ^(a)	Reference
Jul/08/2025	BRP-32-1	Goose Lake CB	AEMP sampling (this report)
Jul/08/2025	BRP-32-2	Goose Lake CB	AEMP sampling (this report)
Jul/08/2025	BRP-32-3	Goose Lake CB	AEMP sampling (this report)
Jul/11/2025	BRP-32-4	Goose Lake CB	AEMP sampling (this report)
Jul/11/2025	BRP-32-5	Goose Lake CB	AEMP sampling (this report)
Jul/03/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jul/13/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jul/27/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jul/27/2025	BRP-18	Goose Lake In	Stream sampling (WSP 2026)
Jul/29/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Jul/27/2025	BRP-34	Goose Lake Out	Stream sampling (WSP 2026)
Jul/08/2025	BRP-29A-5	West Bay-BRP-29	AEMP sampling (this report)
Jul/08/2025	BRP-29A-1	West Bay-BRP-29	AEMP sampling (this report)
Jul/08/2025	BRP-29A-2	West Bay-BRP-29	AEMP sampling (this report)
Jul/08/2025	BRP-29A-3	West Bay-BRP-29	AEMP sampling (this report)
Jul/08/2025	BRP-29A-4	West Bay-BRP-29	AEMP sampling (this report)
Jul/08/2025	BRP-31-3	West Bay-BRP-31	Investigative sampling (this report)
Jul/08/2025	BRP-31-4	West Bay-BRP-31	Investigative sampling (this report)
Jul/27/2025	WOLFOF	Wolf Out	Stream sampling (WSP 2026)
Aug/01/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Aug/06/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Aug/13/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Aug/19/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Aug/26/2025	BRP-G-03	Echo Lake Out	Environmental monitoring (Table F1-4)
Aug/13/2025	BRP-32-3	Goose Lake CB	AEMP sampling (this report)
Aug/13/2025	BRP-32-4	Goose Lake CB	AEMP sampling (this report)
Aug/13/2025	BRP-32-5	Goose Lake CB	AEMP sampling (this report)
Aug/13/2025	BRP-32-1	Goose Lake CB	AEMP sampling (this report)
Aug/13/2025	BRP-32-2	Goose Lake CB	AEMP sampling (this report)
Aug/07/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Aug/10/2025	BRP-18	Goose Lake In	Environmental monitoring (Table F1-3)
Aug/12/2025	BRP-29A-1	West Bay-BRP-29	AEMP sampling (this report)
Aug/12/2025	BRP-29A-3	West Bay-BRP-29	AEMP sampling (this report)
Aug/12/2025	BRP-29A-2	West Bay-BRP-29	AEMP sampling (this report)
Aug/12/2025	BRP-29A-4	West Bay-BRP-29	AEMP sampling (this report)
Aug/12/2025	BRP-29A-5	West Bay-BRP-29	AEMP sampling (this report)
Aug/12/2025	BRP-31-4	West Bay-BRP-31	Investigative sampling (this report)
Aug/14/2025	BRP-31-3	West Bay-BRP-31	Investigative sampling (this report)
Sep/26/2025	BRP-19	Echo Lake Out	Stream sampling (WSP 2026)
Sep/26/2025	BRP-23	Gander Pond Out	Stream sampling (WSP 2026)
Sep/28/2025	GIROF	Giraffe Lake Out	Stream sampling (WSP 2026)
Sep/13/2025	BRP-32-1	Goose Lake CB	AEMP sampling (this report)
Sep/14/2025	BRP-32-2	Goose Lake CB	AEMP sampling (this report)
Sep/14/2025	BRP-32-3	Goose Lake CB	AEMP sampling (this report)
Sep/14/2025	BRP-32-4	Goose Lake CB	AEMP sampling (this report)
Sep/14/2025	BRP-32-5	Goose Lake CB	AEMP sampling (this report)
Sep/26/2025	BRP-18	Goose Lake In	Stream sampling (WSP 2026)
Sep/27/2025	BRP-34	Goose Lake Out	Stream sampling (WSP 2026)
Sep/10/2025	BRP-29A-1	West Bay-BRP-29	AEMP sampling (this report)
Sep/10/2025	BRP-29A-2	West Bay-BRP-29	AEMP sampling (this report)
Sep/10/2025	BRP-29A-3	West Bay-BRP-29	AEMP sampling (this report)
Sep/13/2025	BRP-29A-4	West Bay-BRP-29	AEMP sampling (this report)
Sep/13/2025	BRP-29A-5	West Bay-BRP-29	AEMP sampling (this report)
Sep/13/2025	BRP-31-4	West Bay-BRP-31	Investigative sampling (this report)
Sep/13/2025	BRP-31-3	West Bay-BRP-31	Investigative sampling (this report)
Sep/26/2025	WOLFOF	Wolf Out	Stream sampling (WSP 2026)

Note: AEMP sampling may also refer to sampling to support the Hydrodynamic Model.
(a) The area refers to main areas used in plots for Appendix F and shown in Figure F2-2.

ATTACHMENT F2

**Photographs from June 2025
Investigative Sampling**



Figure 1: Station INV-1, June 2025



Figure 2: Station INV-2, June 2025



Figure 3: Station INV-3, June 2025



Figure 4: Station INV-4, June 2025



Figure 5: Station INV-5, June 2025



Figure 6: Station INV-6, June 2025



Figure 7: Station INV-7, June 2025



Figure 8: Station INV-9, June 2025



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